08-2015

CAPACITORS; CAPACITORS, RECTIFIERS, DETECTORS, SWITCHING DEVICES, LIGHT-SENSITIVE OR TEMPERATURE-SENSITIVE DEVICES OF THE ELECTROLYTIC TYPE

Kondensatoren; Kondensatoren, Gleichrichter, Detektoren, Schaltvorrichtungen, lichtempfindliche oder temperaturempfindliche Bauelemente des elektrolytischen Typs

CAPACITOR STRUCTURE AND CAPACITOR USING THE SAME

Embodiments of the present invention provide a capacitor structure. The capacitor structure comprises: a first plurality of metal plates (P31, P33, P35; P51, P53, P55; P61, P63, P65) that are vertically disposed with their surfaces being parallel to each other; a second plurality of metal plates (P32, P34, P36; P52, P54, P56; P62, P64, P66) that are interdigitated with the first plurality of metal plates with their surfaces being parallel to the surfaces of the first plurality of metal plates; a first port (Port1) electrically connected to each of the first plurality of metal plates (P31, P33, P35; P51, P53, P55; P61, P63, P65) through a first plurality of port connecting strips (S1, S3, S5) and via a first port via interconnection (V31, V51, V61); and a second port (Port2) electrically connected to each of the second plurality of metal plates (P32, P34, P36; P52, P54, P56; P62, P64, P66) through a second plurality of port connecting strips (S2, S4, S6) and via a second port via interconnection (V32, V52, V62). The first plurality of metal plates (P31, P33, P35; P51, P53, P55; P61, P63, P65) is connected together at an end of each of the first plurality of metal plates opposite to the end at which the first port is connected. The second plurality of metal plates (P32, P34, P36; P52, P54, P56; P62, P64, P66) is connected together at an end of each of the second plurality of metal plates opposite to the end at which the second port is connected. A direction in which the first plurality of port connecting strips extends (S1, S3, S5) is in a certain angle with the direction in which the second plurality of port connecting strips (S2, S4, S6) extends.

Publication: **WO 2015113215 A1 20150806**

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Prio:

Appl.No: CN2014071685

IPC: H01G 4/30 2006.01 (IA)

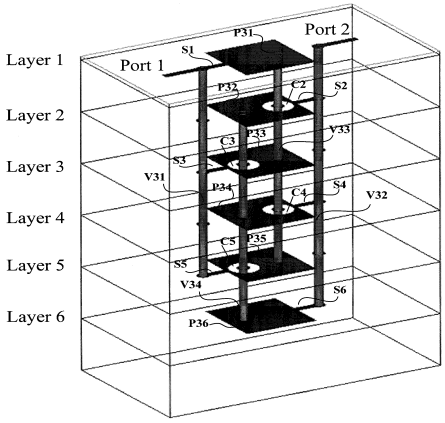

Figure 3

ELECTROLYTE SOLUTION FOR DRIVING ELECTROLYTIC CAPACITOR

Provided is an electrolyte solution for driving an aluminum electrolytic capacitor, especially one for medium and high voltages, which has high withstand voltage and excellent long service life characteristics at high temperatures. An electrolyte solution for driving an electrolytic capacitor, which is characterized in that a salt of a compound that has an aromatic ring wherein at least one group containing a carboxyl group is substituted, said group containing a carboxyl group being substituted to the aromatic ring via a carbon atom or an oxygen atom, is dissolved in an organic solvent.

Publication: **WO 2015114931 A1 20150806**

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Chemical Industries, Limited P&D Center, 11-1, Mizutani Higashi 3-chome, Fujimi-shi, Saitama, 3540013, JP; AIKAWA, Nobuya, c/o Tomiyama Pure Chemical Industries, Limited P&D Center, 11-1, Mizutani Higashi 3-chome, Fujimi-shi, Saitama, 3540013, JP; NAKAMURA, Tomohiro, c/o Tomiyama Pure Chemical Industries, Limited P&D Center, 11-1, Mizutani Higashi 3-chome, Fujimi-shi, Saitama, 3540013, JP

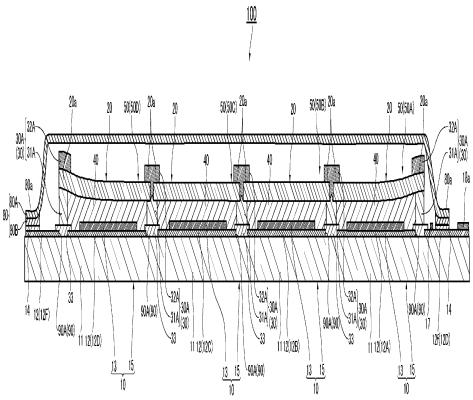
Prio: JP 20140128 2014-013735
Appl.No: JP2014081435
IPC: H01G 9/035 2006.01 (IA)

PHOTOELECTRIC CONVERSION ELEMENT

This photoelectric conversion element has at least one photoelectric conversion cell. The photoelectric conversion cell has: a first base material having a transparent substrate; a second base material facing the first base material; and an oxide semiconductor layer that is provided between the first base material and the second base material. At least one photoelectric conversion cell has a sealing section that connects together the first base material and the second base material of at least the one photoelectric conversion cell, and the sealing section has a first sealing section that is provided between the first base material and the second base material. The first sealing section has an annular outer sealing section, and at least one inner sealing section, which is provided on the inner side of the outer sealing section so as to form the same number of cell spaces as the photoelectric conversion cells, and the thickness of the outer sealing section is more than that of the inner sealing section.

Publication: WO 2015115607 A1 20150806

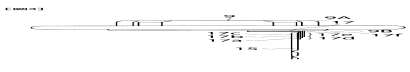
Applicant: FUJIKURA LTD., 5-1, kiba 1-chome, Koto-ku, Tokyo, 1358512, JP
Inventor: KITSUDA Mami, c/o Fujikura Ltd., Sakura Works, 1440, Mutsuzaki, Sakura-shi, Chiba, 2858550, JP
Prio: JP 20140130 2014-015430
Appl.No: JP2015052712
IPC: H01G 9/20 2006.01 (IA)



CONNECTION STRUCTURE FOR COLLECTOR AND CAPACITOR PROVIDED WITH CONNECTION STRUCTURE

&X03000;Provided is a connection structure for a collector that minimizes electrical resistance, and reduces the likelihood of weld defects. Said structure can also be applied to a capacitor such as a lithium ion capacitor. A collector (7) is connected to a lid member (9) via first and second leads (15, 17). The first lead (15) extends from the collector (7) of an electrode plate group accommodated in a case body (3), and the second lead (17) comprises three aluminum plates having one end fixed to the bottom surface of the lid member (9). A stepped part (17d) in which the end parts of the three aluminum plates are formed in a mutually displaced state is provided to an end part of the second lead (17). The first lead (15) and the second lead (17) are welded before attaching the lid member (9) to the case body (3). If the welding is performed at a position set apart from the planned position, some or all of the stepped part (17d) formed by the three aluminum plates provided at the other end of the second lead (17) disappears during welding, making it possible, even visually, to readily detect faulty welding.

Publication: WO 2015115641 A1 20150806



Applicant: SHIN-KOBE ELECTRIC MACHINERY CO.,LTD., 8-1,Akashi-cho, Chuo-ku, Tokyo, 1040044, JP
Inventor: KURAMOCHI Ken; MASUI Takafumi
Prio: JP 20140203 2014-018715
Appl.No: JP2015052822
IPC: H01G 11/74 2013.01 (IA)

WINDING-TYPE STACKED BODY FOR CONDENSER WITH HIGH CAPACITANCE AND STACKED WINDING-TYPE CONDENSER USING SAME

The purpose of the present invention is to provide a winding-type stacked body for a condenser capable of realizing a high capacitance and a high degree of resistance to voltage. The purpose is accomplished by a winding-type stacked body for a condenser, comprising a metal layer and a dielectric layer, wherein the dielectric layer exists on the metal layer, two metal layers having the dielectric layers constitute a pair and are stacked and wound to configure the winding-type stacked body, which comprises no plastic film.

Publication: WO 2015115878 A1 20150806

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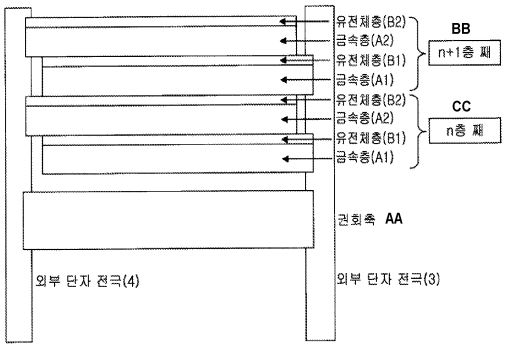
Prio: JP 20140203 2014-018708, JP 20150203 2015-019006
Appl.No: KR2015001120
IPC: H01G 4/30 2006.01 (IA)



3, 4 ... External terminal electrode
A1, A2 ... Metal layer
B1, B2 ... Dielectric layer
AA ... Winding shaft
BB .. $(n+1)^{th}$ layer
CC ... n^{th} layer

CATALYTIC CARBON COUNTER ELECTRODE FOR DYE-SENSITIZED SOLAR CELLS

A carbon catalyst layer for electrolyte based tri-iodide/iodine redox couples includes amorphous carbon, oxygen, silicon, tin and fluorine. The catalyst layer can be coated on a transparent conducting oxide (TCO) glass substrate for use as a counter electrode in a dye- sensitized solar cell (DSSC). By annealing the coated carbon catalyst layer at a temperature between approximately 250 - 650 °C (e.g., 300 - 600 °C) to establish an appropriate sp3 orbital fraction, the carbon catalyst layer can have low electrical resistivity, high electro-catalytic activity, and excellent photoelectric conversion efficiency, which has been measured as 98.32% of that of a DSSC having a conventional platinum catalyst based counter electrode.

Publication: WO 2015116007 A1 20150806

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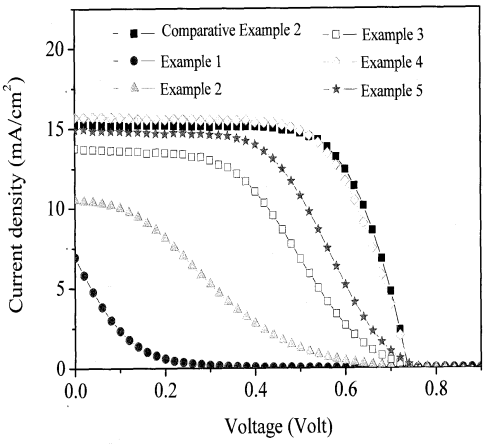

FIG. 4

Prio: TH 20140130 1401000811
Appl.No: TH2015000004
IPC: H01G 9/20 2006.01 (IA)

PATTERNED ELECTRODE CONTACTS FOR OPTOELECTRONIC DEVICES

The present invention relates to a micropillar array structure comprising : - a substrate; and - an array of micropillars provided on a surface of the substrate, wherein: - the micropillars are substantially transparent to light, and - the height of micropillars is at most 500 µm. The micropillar array structures of the invention can be used in optoelectronic devices such as solar cells.

Publication: WO 2015117658 A1 20150813

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Prio:
Appl.No: EP2014052358
IPC: H01G 9/20 2006.01 (IA)

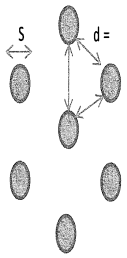

Figure 5a

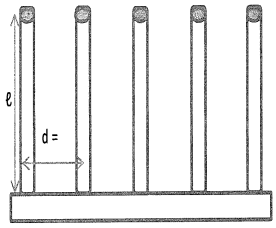

Figure 5b

PROCESS FOR PRODUCING THIN-FILM POLYMER LAMINATED FILM CAPACITOR, AND THIN-FILM POLYMER LAMINATED FILM CAPACITOR

A process for producing a thin-film polymer laminated film capacitor, including a laminate production step which comprises: conducting a resin thin-film layer formation step and a metal thin-film layer formation step on a rotating drum alternately repeatedly; and thus forming, on the rotating drum, a laminate in which resin thin-film layers and metal thin-film layers are alternately laminated. The resin thin-film layer formation step comprises: evaporating a monomer in a vacuum chamber to form a monomer layer; irradiating the monomer layer with an electron beam to cure the monomer layer; and thus forming a resin thin-film layer. The metal thin-film layer formation step comprises evaporating a metal material to form a metal thin-film layer. In the resin thin-film layer formation step, the monomer layer is formed using a dimethacrylate compound having an alicyclic hydrocarbon skeleton as the monomer, said dimethacrylate compound being represented by chemical formula (1) [wherein A is an organic group that contains an alicyclic hydrocarbon]. The present invention can enhance the hardness of the resin thin-film layers sufficiently, thus enabling the production of a thin-film polymer laminated film capacitor having desired performance.

Publication: WO 2015118693 A1 20150813

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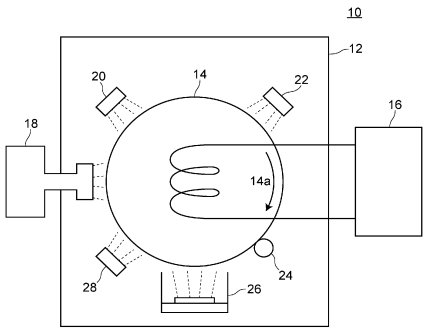
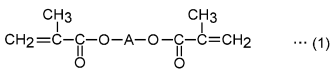
Prio:
Appl.No: JP2014053103
IPC: H01G 4/18 2006.01 (IA)





CAPACITOR

The present invention provides a capacitor that has high mechanical strength. The capacitor according to the present invention comprises: a porous metal substrate; a dielectric layer that is formed upon the porous metal substrate; an upper electrode that is formed upon the dielectric layer; a first terminal electrode that is electrically connected to the porous metal substrate; and a second terminal electrode that is electrically connected to the upper electrode. The porous metal substrate has a high-porosity part and low-porosity parts, the low-porosity parts being located at a pair of side-surface parts that are opposite each other on the porous metal substrate.

Publication: WO 2015118901 A1 20150813

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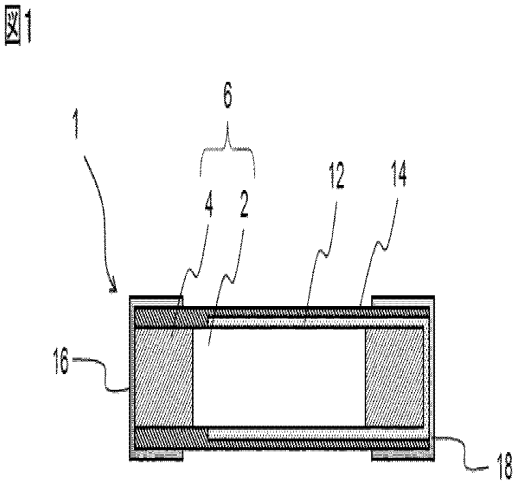
Prio: JP 20140207 2014-022623

Appl.No: JP2015050524

IPC: H01G 9/055 2006.01 (IA)



CAPACITOR

&X03000;The present invention provides a high-reliability capacitor in which the effect of impurities on the surface of a porous metal substrate is reduced and the leakage current decreases. This capacitor has a porous metal substrate, a first buffer layer formed by atomic layer deposition on the porous metal substrate, a dielectric layer formed by atomic layer deposition on the first buffer layer, and an upper electrode formed on the dielectric layer.

Publication: WO 2015118902 A1 20150813

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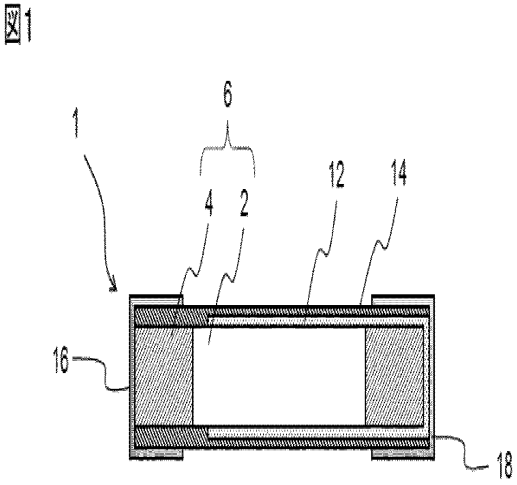
Prio: JP 20140207 2014-022624

Appl.No: JP2015050526

IPC: H01G 9/052 2006.01 (IA)



CARRIER AND PHOTOELECTRIC CONVERSION ELEMENT

&X03000;This carrier carries a pigment (A) and a co-adsorbent (B) represented by the following general formula (1). (In the formula, ring A represents a 5- or 6- membered heterocycle which may be further condensed; the hydrogen atom in ring A may be substituted by a hydrocarbon group which may have a substituent, a halogen atom, a cyano group, a nitro group, a &X02012;OR2 group, or a &X02012;SR2 group; Z represents a divalent aliphatic hydrocarbon group interrupted 0-3 times by &X02012;O&X02012; or the like; Z1 represents a divalent aromatic group; R1 represents a carboxylic acid group, a sulfonic acid group, a phosphoric acid group, or a phosphonic acid group; R2 and R3 represent a hydrocarbon group which may have a hydrogen atom or a substituent; Anm- represents an m-valent anion; m represents an integer of 1 or 2; and p represents a coefficient for maintaining a neutral electric charge).

Publication: WO 2015118986 A1 20150813

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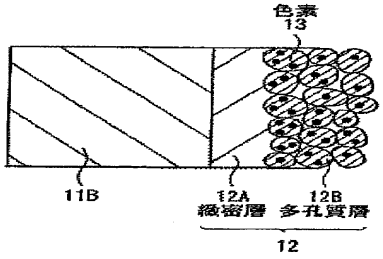
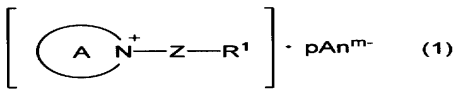
Prio: JP 20140206 2014-021257

Appl.No: JP2015052034

IPC: H01G 9/20 2006.01 (IA)

[図2]





12A Dense layer
12B Porous layer
13 Pigment

SOLID ELECTROLYTIC CAPACITOR AND PRODUCTION METHOD FOR SAME

Provided are a solid electrolytic capacitor having superior properties during high pressure use of 80V or more, and a production method for the same. A solid electrolyte layer is formed on a capacitor element, around which a positive electrode foil and a negative electrode foil are wound with a separator therebetween, using a conductive polymer dispersion in which conductive polymer particles are dispersed in a solvent, and the solid electrolytic capacitor is formed by a gap inside the capacitor element on which the solid electrolyte layer is formed being filled with an electrolytic solution containing, as a solute, less than 9wt% of a salt of a composite compound of an inorganic acid and an organic acid.

Publication: WO 2015119020 A1 20150813

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Prio: JP 20140205 2014-020718, JP 20141128 2014-242367

Appl.No: JP2015052395

IPC: H01G 9/028 2006.01 (IA)

POWER STORAGE DEVICE

A power storage device wherein a housing case for housing an electrode group comprises a first main wall (11) and a second main wall (12) facing each other, a first side wall (13) and a second side wall (14) laterally linking the first main wall (11) and the second main wall (12) to each other, a top wall provided with an external terminal, and a bottom wall (16). The electrode group is housed in a housing case (1) in a state in which both end surfaces with respect to the direction in which positive electrode plates and negative electrode plates are layered face the inner surface of the first main wall (11) and the inner surface of the second main wall (12), respectively. A plurality of positive electrode tabs provided nearer the first side wall (13) than the positive electrode plates and a plurality of negative electrode tabs provided nearer the second side wall (14) than the negative electrode plates protrude from the end surface of the electrode group facing the top wall (15). A recess (17) indented to the position between the positive electrode tab and the negative electrode tab is formed on the top wall (15) of the housing case (1).

Publication: WO 2015119027 A1 20150813

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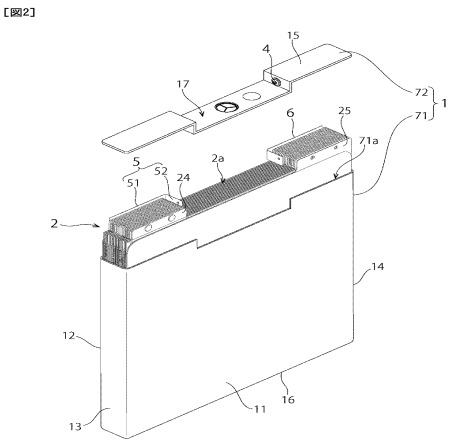
Prio: JP 20140205 2014-020668

Appl.No: JP2015052439

IPC: H01G 11/78 2013.01 (IA)



SOLID ELECTROLYTIC CAPACITOR AND MANUFACTURING METHOD THEREOF

Provided is a solid electrolytic capacitor with excellent ESR characteristics at high temperatures, and a manufacturing method thereof. Using a conductive polymer dispersion obtained by dispersing particles of a conductive polymer in a solvent, a solid electrolyte layer is formed on a capacitor element comprising a positive electrode foil and a negative electrode foil wound with a separator interposed therebetween, and an electrolytic solution which contains the ammonium salt of an aromatic carboxylic acid as a solute is filled in a gap portion inside of the capacitor element on which the solid electrolytic layer was formed, thereby configuring the solid electrolytic capacitor.

Publication: WO 2015119047 A1 20150813

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Inventor: KOSEKI, Kazuya, C/O NIPPON CHEMI-CON CORPORATION, 5-6-4, Osaki, Shinagawa-ku, Tokyo, 1418605, JP; SAKAKURA, Masao, C/O NIPPON CHEMI-CON CORPORATION, 5-6-4, Osaki, Shinagawa-ku, Tokyo, 1418605, JP

Prio: JP 20140205 2014-020723

Appl.No: JP2015052625

IPC: H01G 9/028 2006.01 (IA)

CAPACITOR BUILT INTO HOUSING

The present invention relates to a capacitor built into a housing, and comprises: capacitor devices (100) having a dielectric film wound and formed thereon and conductive thermal spray surfaces formed on both sides thereof; a housing case (200) including device housing spaces (H) built therein and arranged in which the capacitor devices (100) are laid side by side in a plurality of rows; and first and second bus bar forming portions (300) electrically connected to the thermal spray surfaces of the capacitor devices (100). The housing case (200) comprises: a floor plate (10) having a plurality of partitioning walls (15) formed projecting vertically along a longitudinal direction so as to partition and form the device housing spaces (H) in which the capacitor devices (200) are housed; elongated sidewall plates (20) facing the thermal spray surfaces of the capacitor devices (200); and cross wall plates (30 and 40) connecting both respective ends of the elongated sidewall plates (20).

Publication: WO 2015119342 A1 20150813

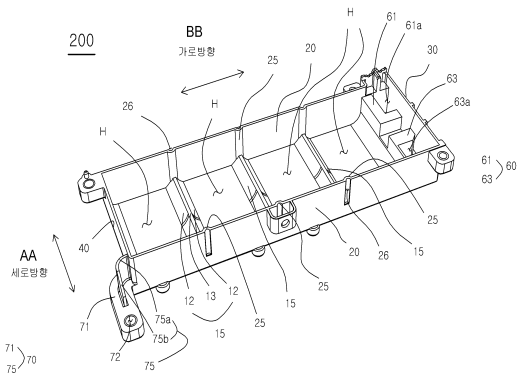
Applicant: NEWINTECH CO., LTD., 243, Eumbongmyeon-ro, Eumbongmyeon, Asan-si, Chungcheongnam-do 336-864, KR

Inventor: PARK, Dae-Jin, 1107, 103, Daejoo fiore apart, 257-8, Seobu-daero, Dongnam-gu, Cheonan-si, Chungcheongnam-do 330-940, KR; JEON, Young-Won, 87-8, Sucheol-gil, Yesan-eup, Yesan-gun, Chungcheongnam-do 340-805, KR; PARK, Chang-Keun, 35-17, Sapgyojaetteul-gil, Sapgyo-eup, Yesan-gun, Chungcheongnam-do 340-901, KR; HAN, Ki-Ju, 1203, 102, Prugio apart, 93, Chungmu-ro, Seobuk-gu, Cheonan-si, Chungcheongnam-do 331-965, KR; PARK, Jin-A, 201, Ilwoojutaek 16-1, Uyeong 3-gil, Dongnam-gu, Cheonan-si, Chungcheongnam-do 330-930, KR

Prio: KR 20140204 10-2014-0012344

Appl.No: KR2014006886

IPC: H01G 4/224 2006.01 (IA)



AA ... Longitudinal direction
BB ... Horizontal direction

HIGH PERFORMANCE LITHIUM BATTERY ELECTRODES BY SELF-ASSEMBLY PROCESSING

Disclosed are methods and processes for producing electrochemical devices having well-organized nanostructures or microstructures. In one aspect, the present invention discloses a simple, cheap, and fast nanotechnology-based manufacturing process for fabricating high performance electrodes. The present processing technique is highly versatile and can be applied to diverse materials systems for anode and cathode electrodes.

Publication: WO 2015119843 A1 20150813

Applicant: THE REGENTS OF THE UNIVERSITY OF MICHIGAN, Technology Management Office, Wolverine Tower, Room 2071, 3003 S. State Street, Ann Arbor, MI 48109, US

Inventor: LU, Wei, 2325 Lancashire Dr. 1A, Ann Arbor, MI 48105, US

Prio: US 20140204 61/935,526

Appl.No: US2015013653

IPC: H01G 9/004 2006.01 (IA)

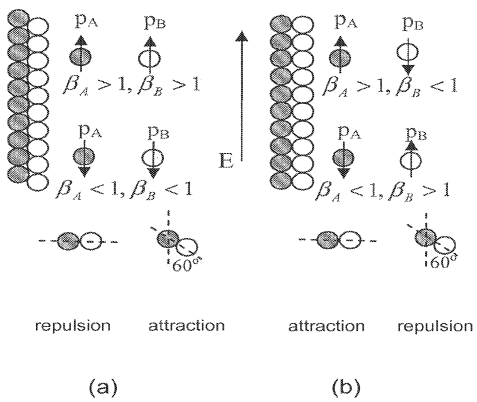


FIG. 5

SYSTEM AND METHOD FOR CLAMPING A WORK PIECE

A clamping system and a method of clamping a work piece are disclosed. The clamping system has an electrostatic clamp and a high-impedance voltmeter ("HIV"). The electrostatic clamp may include a platen and a plurality of electrodes embedded in the platen. In use, at least some of the embedded electrodes provide one side of a capacitor and a work piece provides another side of the capacitor in order to hold the work piece relative to the platen when at least some of the embedded electrodes are electrically charged. The HIV is electrically connected to at least some of the embedded electrodes.

Publication: WO 2015120419 A1 20150813

Applicant: TREK, INC., 190 Walnut Street, Lockport, NY 14094, US

Inventor: UEHARA, Toshio, 3-9-10-612 Takaidohigashi, Suginami-ku, Tokyo, 168-0072, JP; MCANN, Peter, 319 South Avenue, Medina, NY 14103, US; HERMAN, Donnie, 9 Ward Park, Grand Island, NY 14072, US

Prio: US 20140207 61/937,050

Appl.No: US2015015078

IPC: H01G 7/02 2006.01 (IA)

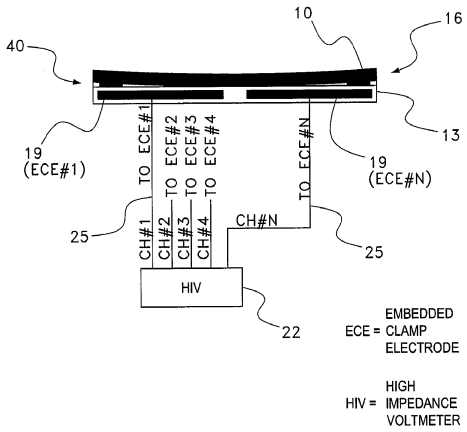


Fig. 1

ELECTROCHEMICAL DEVICE, AND PRODUCTION METHOD

[Problem] To provide an electrochemical device and a production method, with which peeling between an electrode adhesive layer and a case can be suppressed. [Solution] This electrochemical device (100) is provided with: a case (10); an electrical storage element (13); and an adhesive layer (19). The case (10) is provided with: terminal parts (14); a case main body (11) provided with a first inner surface (11a) having the terminal parts (14) provided thereto; and a conductive lid (12) which is bonded to the case main body (11), and which is provided with a second inner surface (12a) that faces the first inner surface (11a). The electrical storage element (13) is provided with: a first electrode (13a) which is fixed to the first inner surface (11a); and a second electrode (13b) which is fixed to the second inner surface (12a), and which faces the first electrode (13a) with an electrolyte solution provided therebetween. The adhesive layer (19) is configured from a cured product of a conductive adhesive material, said cured product being provided with at least one cavity portion (19c). Furthermore, the adhesive layer (19) electrically connects the first electrode (13a) and the terminal parts (14), and is disposed between the first electrode (13a) and the first inner surface (11a).

Publication: WO 2015122420 A1 20150820

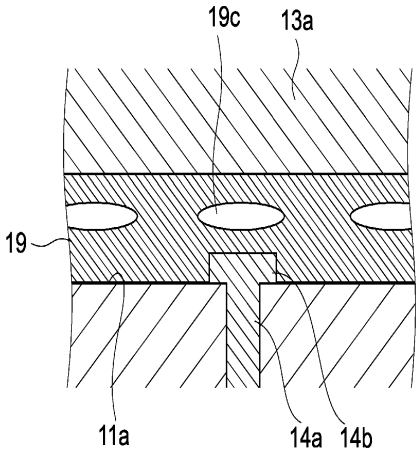
Applicant: TAIYO YUDEN CO., LTD., 16-20, Ueno 6-chome, Taito-ku, Tokyo, 1100005, JP

Inventor: HAGIWARA, Naoto, c/o Taiyo Yuden Co., Ltd., 16-20, Ueno 6-chome, Taito-ku, Tokyo, 1100005, JP; ITO, Yuriko, c/o Taiyo Yuden Co., Ltd., 16-20, Ueno 6-chome, Taito-ku, Tokyo, 1100005, JP; TAKAHASHI, Hiroki, c/o Taiyo Yuden Co., Ltd., 16-20, Ueno 6-chome, Taito-ku, Tokyo, 1100005, JP; ISHIDA, Katsuei, c/o Taiyo Yuden Co., Ltd., 16-20, Ueno 6-chome, Taito-ku, Tokyo, 1100005, JP

Prio: JP 20140213 2014-025253, JP 20140213 2014-025251, JP 20140227 2014-036303

Appl.No: JP2015053730

IPC: H01G 11/28 2013.01 (IA)



ELECTRIC MODULE AND MANUFACTURING METHOD FOR ELECTRIC MODULE

An electric module characterized by being provided with: a photoelectrode in which a semiconductor layer is formed on a first substrate on which a first conductive film is formed; a counter electrode provided with a second substrate on which a second conductive film is formed; and an electrolyte, and in that the photoelectrode and the counter electrode are bonded and sealed so as to form an internal space therebetween, the electrolyte is filled into the internal space, at least part of a sealed portion between the photoelectrode and the counter electrode is formed by bonding the first conductive film and the second conductive film by a sealing member, the first conductive film and/or the second conductive film extends to the outside of the internal space beyond the sealing member while being electrically continuous from the internal space, and a conductive material is disposed on the surface of an extension portion while enabling continuity with the portion.

Publication: WO 2015122532 A1 20150820

Applicant: SEKISUI CHEMICAL CO., LTD., 4-4, Nishitemma 2-chome, Kita-ku, Osaka-shi, Osaka, 5308565, JP

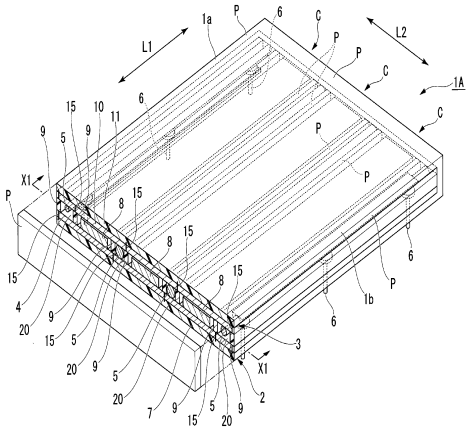
Inventor: OOTSUKA Tomohiro, c/o SEKISUI CHEMICAL CO., LTD., 32, Wadai, Tsukuba-shi, Ibaraki, 3004292, JP

Prio: JP 20140217 2014-027962

Appl.No: JP2015054268

IPC: H01G 9/20 2006.01 (IA)

[図1]



DIELECTRIC MATERIAL AND CAPACITOR COMPRISING THE DIELECTRIC MATERIAL

A dielectric material suitable for use in an electronic component includes bismuth ferrite, strontium titanate and an additive. The additive comprises barium titanate. The barium titanate reduces the temperature capacitance change of the dielectric material and allows for increased working voltages. The material is useful for the construction of capacitors, and particularly capacitors intended for use at high temperatures. Also provided are a capacitor including the dielectric material, methods of manufacturing the dielectric material and the capacitor, and the use of an additive to improve the lifetime and/or reduce the dissipation factor of a capacitor.

Publication: WO 2015124698 A1 20150827

Applicant: SYFER TECHNOLOGY LIMITED, Old Stoke Road, Arminghall, Norwich Norfolk NR14 8SQ, GB

Inventor: ALBERTSEN, Knuth, C/O Euro Support Advanced Materials B.V, B.V. Liessentstraat 9F, NL-5405 AH Uden, NL; ELLMORE, Angela, C/O Syfer Technology Limited, Old Stoke Road, Arminghall, Norwich Norfolk NR14 8SQ, GB

Prio: GB 20140221 1403117.3

Appl.No: EP2015053549

IPC: H01G 4/12 2006.01 (IA)

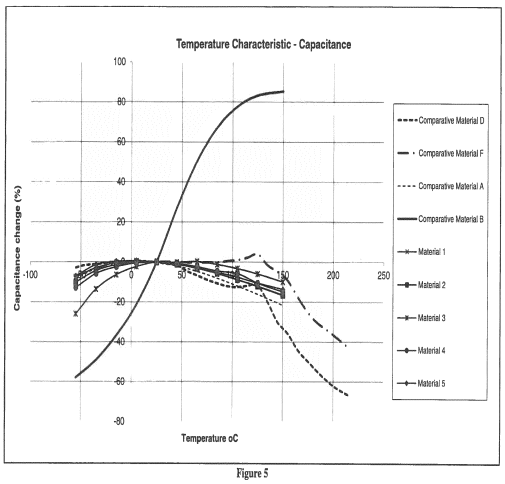


Figure 5

FILM CAPACITOR AND MANUFACTURING METHOD THEREFOR

This film capacitor (1) is provided with a film capacitor element (2), a bus bar (4) connected to the film capacitor element (2), and an exterior member (5) that covers the film capacitor element (2) and the bus bar (4). The exterior member (5) is formed from a metal laminate film (6) that has first resin layers (6a) on the surface facing the film capacitor element (2). Portions of the bus bar (4) are led out to the outside of the external member (5), and a second resin layer (7) that includes an acid-modified resin is formed between the first resin layers (6a) and the bus bar (4) at lead-out portions (30) of the external member (5) at which the portions of the bus bar (4) are lead out from the external member (5).

Publication: WO 2015125436 A1 20150827

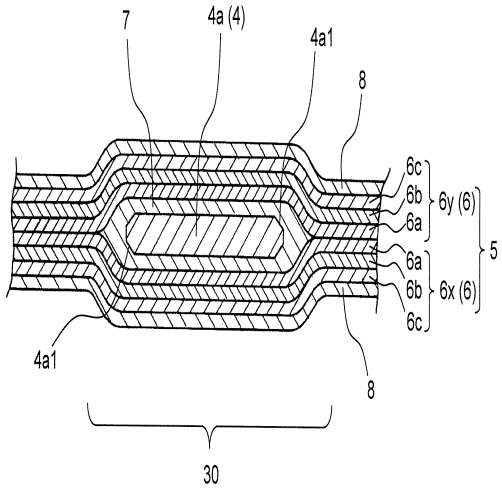
Applicant: PANASONIC INTELLECTUAL PROPERTY MANAGEMENT CO., LTD., 1-61, Shiromi 2-chome, Chuo-ku, Osaka-shi, Osaka, 5406207, JP

Inventor: ICHINOSE, Tsuyoshi; MATSUI, Hiromasa; TAKEOKA, Hiroki

Prio: JP 20140219 2014-029218

Appl.No: JP2015000551

IPC: H01G 4/224 2006.01 (IA)



CAPACITOR AND METHOD FOR CHARGING AND DISCHARGING SAME

This capacitor comprises a positive electrode, a negative electrode, a separator that is interposed between the positive electrode and the negative electrode, and an electrolyte. The positive electrode comprises a positive electrode collector and a positive electrode active material that is supported by the positive electrode collector. The positive electrode active material contains activated carbon, and this activated carbon has a carboxyl group. The desorption amount of carboxyl groups per unit mass of the activated carbon if heated from 300°C to 500°C is 0.03 μmol/g or less. This capacitor has an upper limit voltage (Vu) for charging and discharging. The upper limit voltage (Vu) of a lithium ion capacitor is 4.2 V or more, while the upper limit voltage (Vu) of an electric double layer capacitor is 3.3 V or more.

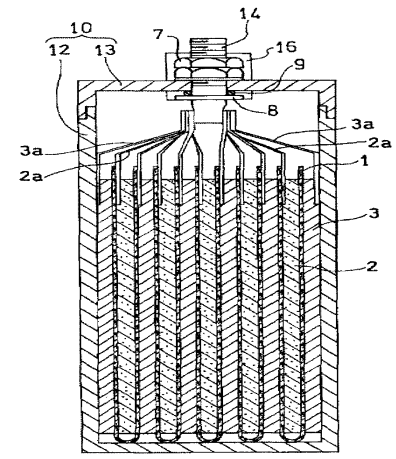
Publication: WO 2015125594 A1 20150827

Applicant: SUMITOMO ELECTRIC INDUSTRIES,LTD., 5-33, Kitahama 4-chome, Chuo-ku, Osaka-shi, Osaka, 5410041, JP

Inventor: OKUNO, Kazuki, c/o Itami Works of Sumitomo Electric Industries, Ltd., 1-1, Koyakita 1-chome, Itami-shi, Hyogo, 6640016, JP; TAKAHASHI, Kenji, c/o Itami Works of Sumitomo Electric Industries, Ltd., 1-1, Koyakita 1-chome, Itami-shi, Hyogo, 6640016, JP; TAKEYAMA, Tomoharu, c/o Itami Works of Sumitomo Electric Industries, Ltd., 1-1, Koyakita 1-chome, Itami-shi, Hyogo, 6640016, JP; OGAWA, Mitsuyasu, c/o Itami Works of Sumitomo Electric Industries, Ltd., 1-1, Koyakita 1-chome, Itami-shi, Hyogo, 6640016, JP; MAJIMA, Masatoshi, c/o Itami Works of Sumitomo Electric Industries, Ltd., 1-1, Koyakita 1-chome, Itami-shi, Hyogo, 6640016, JP

Prio: JP 20140219 2014-029366

[図1]



Appl.No: JP2015052812
IPC: H01G 11/42 2013.01 (IA)

LIGHT POWER GENERATION MODULE

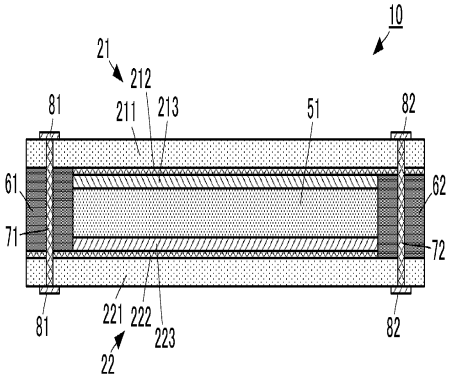
This light power generation module (10) is provided with a working electrode substrate (21) and a counter electrode substrate (22) having the same outer shape. The working electrode substrate (21) and the counter electrode substrate (22) are arranged so as to face each other with the sides overlapping each other when viewed in plan, and are bonded with each other by an UV curable sealing material (60). The sealing material (60) is formed into an annular shape having a predetermined width along the sides of the working electrode substrate (21) and the counter electrode substrate (22). A photoelectric conversion layer (213) is formed in a region of the working electrode substrate (21), said region being surrounded by the sealing material (60). A catalyst layer (223) is formed in a region of the counter electrode substrate (22), said region being surrounded by the sealing material (60). An electrolyte layer (51) is arranged in a space surrounded by the photoelectric conversion layer (213), the catalyst layer (223) and the sealing material (60).

Publication: WO 2015125609 A1 20150827

Applicant: MURATA MANUFACTURING CO., LTD., 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto, 6178555, JP

Inventor: NAKAI, Yasuharu, c/o Murata Manufacturing Co., Ltd., 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto, 6178555, JP; WADA, Yoshifumi, c/o Murata Manufacturing Co., Ltd., 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto, 6178555, JP; MIYOSHI, Masako, c/o Murata Manufacturing Co., Ltd., 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto, 6178555, JP; KURATANI, Yasuhiro, c/o Murata Manufacturing Co., Ltd., 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto, 6178555, JP

FIG02



Prio: JP 20140219 2014-029042
Appl.No: JP2015053174
IPC: H01G 9/20 2006.01 (IA)

STORAGE DEVICE AND CHARGING/DISCHARGING DEVICE

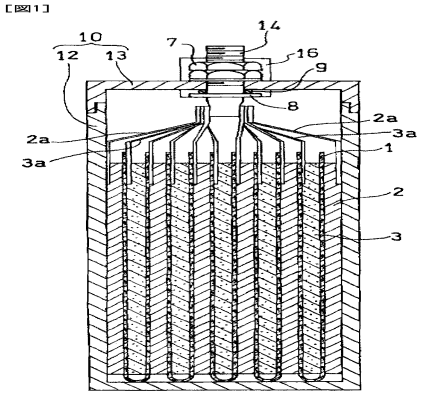
A storage device which includes an electrolyte, a positive electrode containing a positive electrode active material, a negative electrode containing a negative electrode active material, and a separator between the positive electrode and the negative electrode, and in which: the electrolyte contains anions and cations; the cations contain at least lithium ions; the positive electrode active material contains a first carbonaceous material and a second carbonaceous material; the first carbonaceous material expresses a capacity due to a first reaction in which the anions are adsorbed and desorbed; and the second carbonaceous material expresses a capacity due to a second reaction in which the anions are occluded and discharged.

Publication: WO 2015125647 A1 20150827

Applicant: SUMITOMO ELECTRIC INDUSTRIES,LTD., 5-33, Kitahama 4-chome, Chuo-ku, Osaka-shi, Osaka, 5410041, JP

Inventor: MAJIMA, Masatoshi, c/o Itami Works of Sumitomo Electric Industries, Ltd., 1-1, Koyakita 1-chome, Itami-shi, Hyogo, 6640016, JP; OKUNO, Kazuki, c/o Itami Works of Sumitomo Electric Industries, Ltd., 1-1, Koyakita 1-chome, Itami-shi, Hyogo, 6640016, JP

Prio: JP 20140218 2014-028761



Appl.No: JP2015053521
IPC: H01G 11/32 2013.01 (IA)

ELECTRONIC COMPONENT AND MOUNTING STRUCTURE FOR THE ELECTRONIC COMPONENT

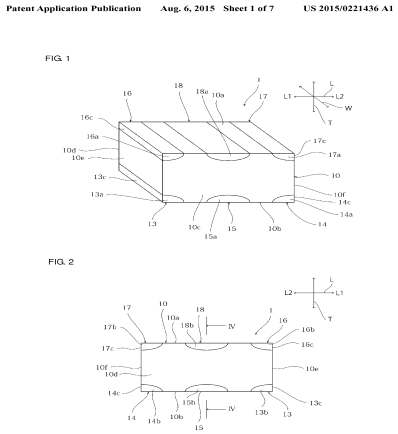
A first terminal electrode extends from a second principal surface onto first and second side surfaces and a first end surface such as not to reach a first principal surface. A second terminal electrode extends from the second principal surface onto the first and second side surfaces and a second end surface such as not to reach the first principal surface. A third terminal electrode extends from the second principal surface onto the first and second side surfaces such as not to reach the first principal surface.

Publication: US 20150221436 A1 20150806

Applicant: Murata Manufacturing Co., Ltd., Nagaokakyo-shi, JP

Inventor: Takanobu, KATSUYAMA, Nagaokakyo-shi, JP; Yasunari, NAKAMURA, Nagaokakyo-shi, JP; Naoto, MURANISHI, Nagaokakyo-shi, JP; Masaaki, TANIGUCHI, Nagaokakyo-shi, JP; Takashi, SAWADA, Nagaokakyo-shi, JP

Prio: JP 20140131 2014-016446
Appl.No: US14549824
IPC: H01G 2/06 2006.01 (IA)



MULTILAYER CERAMIC ELECTRONIC COMPONENT, MANUFACTURING METHOD THEREOF AND BOARD HAVING THE SAME MOUNTED THEREON

A multilayer ceramic electronic component may include: a ceramic body in which dielectric layers containing plate-shaped dielectric grains are stacked; and internal electrodes disposed on the dielectric layers within the ceramic body. The dielectric layer may contain dielectric grains, plate-shaped surfaces of which have an angle of 20° or less with regard to a boundary surface between the dielectric layer and the internal electrode.

Publication: US 20150221437 A1 20150806

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., Suwon-Si, KR; SAMSUNG ELECTRO-MECHANICS CO., LTD., Suwon-Si, KR

Inventor: Sun Ho, YOON, Suwon-Si, KR; Hang Kyu, CHO, Suwon-Si, KR; Han Soung, JEONG, Suwon-Si, KR; Hyo Jung, KIM, Suwon-Si, KR

Prio: KR 20140206 10-2014-0013769
Appl.No: US14258876
IPC: H01G 4/12 2006.01 (IA)

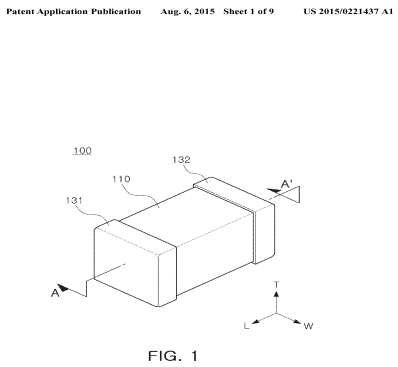


FIG. 1

DIELECTRIC COMPOSITION TO BE SINTERED AT LOW TEMPERATURE, MULTILAYER CERAMIC ELECTRONIC COMPONENT CONTAINING THE SAME, AND METHOD OF MANUFACTURING THE MULTILAYER CERAMIC ELECTRONIC COMPONENT

A dielectric composition to be sintered at low temperature may include BaTiO3 as a major component; and (1-x)Li2O-xCuO as a minor component, wherein x is 0.1 to 0.9, and the minor component is contained in a content of 0.1 mol % to 2.0 mol % based on 100 mol % of the major component.

Publication: US 20150221438 A1 20150806

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., Suwon-Si, KR; SAMSUNG ELECTRO-MECHANICS CO., LTD., Suwon-Si, KR

Inventor: Jong Bong, LIM, Suwon-Si, KR; Seok Hyun, YOON, Suwon-Si, KR; Doo Young, KIM, Suwon-Si, KR; Sang Huk, KIM, Suwon-Si, KR

Prio: KR 20140204 10-2014-0012381

Appl.No: US14258969

IPC: H01G 4/12 2006.01 (IA)

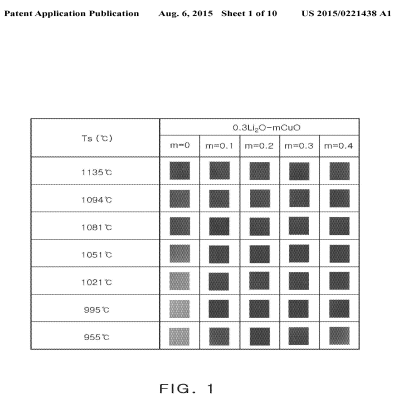


FIG. 1

PLASTIC FILM HAVING A HIGH VOLTAGE BREAKDOWN

A stretched film includes a dispersion of at least one polyester and/or polycarbonate in a matrix of at least one polyester and/or polycarbonate different from the first polyester and/or polycarbonate, the percentage by weight of the dispersed polyester and/or polycarbonate in the dispersion being less than 50% and the dispersed polyester and/or polycarbonate being in the form of platelets. The stretched film can be used as a dielectric in a capacitor.

Publication: US 20150221439 A1 20150806

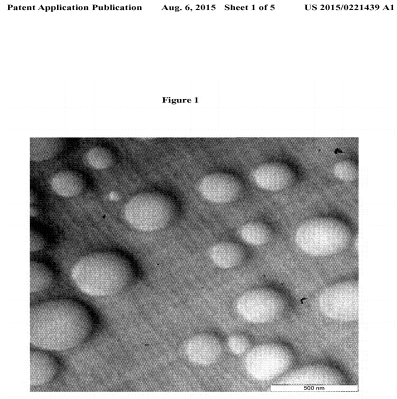
Applicant: DuPont Teijin Films U.S. Limited Partnership, Chester, US

Inventor: Alexis, Grosrenaud, Hautcharage, LU; Lucien, Schosseler, Luxembourg, LU

Prio: EP 20080411 08290360.0

Appl.No: US14688402

IPC: H01G 4/14 2006.01 (IA)



MULTILAYER CAPACITOR AND METHOD OF MANUFACTURING THE SAME

Disclosed herein is a multilayer capacitor comprising: a laminate in which a plurality of first sheets and second sheets are alternately laminated, wherein the first sheets and the second sheets are disposed in a direction perpendicular to a mounting surface; a first inner electrode formed on the first sheets, wherein the first electrode is exposed through upper, lower, and first lateral surfaces of the laminate; a second inner electrode that is formed on the second sheets and has a horizontally symmetrical shape with respect to the first inner electrode; a sealing portion encapsulating the first and second inner electrodes exposed through two lateral surfaces of the laminate; and an external electrode that is electrically connected to the first and second inner electrodes exposed through the upper and lower surfaces of the laminate.

Publication: US 20150221440 A1 20150806

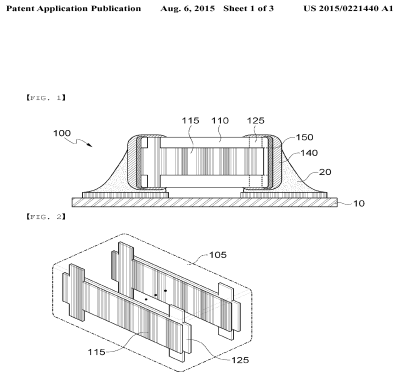
Applicant: Samsung Electro-Mechanics Co., Ltd., Suwon-si, KR

Inventor: Hae Suk, CHUNG, Seoul, KR; Jae Yeol, CHOI, Seongnam-si, KR; Hyun Woo, KIM, Suwon, KR; Dong Su, CHO, Suwon-si, KR

Prio: KR 20111004 10-2011-0100715

Appl.No: US14684096

IPC: H01G 4/224 2006.01 (IA)



ELECTRONIC COMPONENT AND MOUNTING STRUCTURE OF ELECTRONIC COMPONENT

In an electronic component, each of a distance between a first outer electrode and a third outer electrode along a length direction and a distance between a second outer electrode and the third outer electrode along a length direction is about 8% to about 13% of a dimension of the electronic component along the length direction.

Publication: US 20150221441 A1 20150806

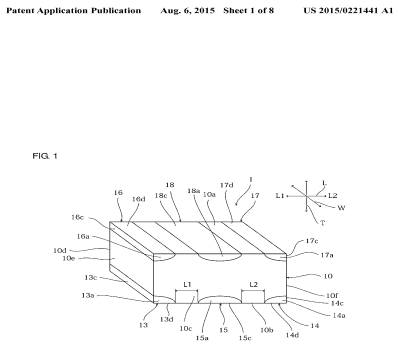
Applicant: Murata Manufacturing Co., Ltd., Nagaokakyo-shi, JP

Inventor: Takanobu, KATSUYAMA, Nagaokakyo-shi, JP; Yasunari, NAKAMURA, Nagaokakyo-shi, JP; Naoto, MURANISHI, Nagaokakyo-shi, JP; Takashi, SAWADA, Nagaokakyo-shi, JP

Prio: JP 20140131 2014-016449

Appl.No: US14547187

IPC: H01G 4/30 2006.01 (IA)



CAPACITOR HAVING AN IMPROVED LINEAR BEHAVIOR

A capacitor having improved linear properties is provided. The capacitor is compatible with manufacturing processes of components which function using BAW. The capacitor comprises a first and a second electrode (E1, E2) in a first electrically conductive layer and a third electrode (E3) in a second electric layer. A dielectric layer (DL) is arranged between the electrically conductive layers. The first electrode (E1) and the second electrode (E2) are the terminal electrodes of the capacitor.

Publication: US 20150221442 A1 20150806

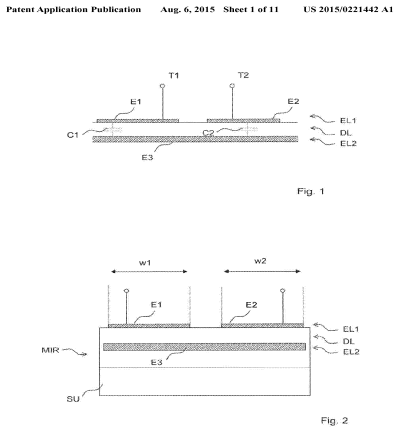
Applicant: EPCOS AG, Munich, DE

Inventor: Andreas, Link, Laaber, DE; Thomas, Metzger, Munich, DE; Edgar, Schmidhammer, Stein an der Traun, DE

Prio: DE 20120830 102012108035.6, WO 20150227 PCT/EP2013/066212

Appl.No: US14424989

IPC: H01G 4/35 2006.01 (IA)



METHOD FOR MANUFACTURING ELECTRODE FOR ALUMINUM ELECTROLYTIC CAPACITOR

A porous aluminum electrode has a porous layer formed by sintering aluminum powder on the surface of an aluminum core. The porous aluminum electrode, when subjected to a formation to a voltage of 200V or more, is boiled and then subjected to a first forming process in which formation is performed in an aqueous solution of ammonium adipate at a temperature of 80° C. or below and a second forming process in which formation is performed in a boric acid aqueous solution. When heat depolarization is first carried out, washing with water is performed for five minutes or more before heat depolarization; therefore, the porous layer is not destroyed.

Publication: US 20150221443 A1 20150806

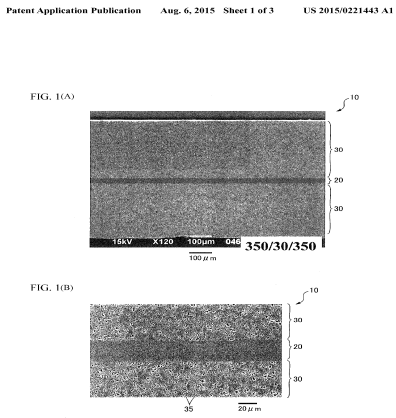
Applicant: NIPPON LIGHT METAL COMPANY, LTD., Shinagawa-ku, Tokyo, JP; TOYO ALUMINIUM KABUSHIKI KAISHA, Osaka-shi, Osaka, JP; NIPPON LIGHT METAL COMPANY, LTD., Shinagawa-ku, Tokyo, JP; TOYO ALUMINIUM KABUSHIKI KAISHA, Osaka-shi, Osaka, JP

Inventor: Masahiko, Katano, Shizuoka-shi, JP; Yuya, Yoshida, Shizuoka-shi, JP; Yoshihiro, Taguchi, Shizuoka-shi, JP; Asami, Shirai, Shizuoka-shi, JP; Yuta, Shimizu, Shizuoka-shi, JP; Toshifumi, Taira, Osaka-shi, JP; Masashi, Mehata, Osaka-shi, JP

Prio: JP 20120913 2012-201991, WO 20150213 PCT/JP2013/069950

Appl.No: US14421748

IPC: H01G 9/045 2006.01 (IA)



SOLID ELECTROLYTIC CAPACITOR MANUFACTURING METHOD

A method of manufacturing a solid electrolytic capacitor chip, which includes mounting a solid electrolytic capacitor element on the front surface side of a cathode lead of a lead frame serving as a cathode terminal; electrically connecting an anode and a cathode of the solid electrolytic capacitor element respectively to an anode terminal and the cathode terminal of the lead frame; and injecting an exterior resin from a resin injection port of a mold by transfer molding so as to seal the solid electrolytic capacitor element with the exterior resin. The resin injection port is located such that the exterior resin injected from the injection port branches and flows toward both the front surface side and the rear surface side and of the lead frame.

Publication: US 20150221444 A1 20150806

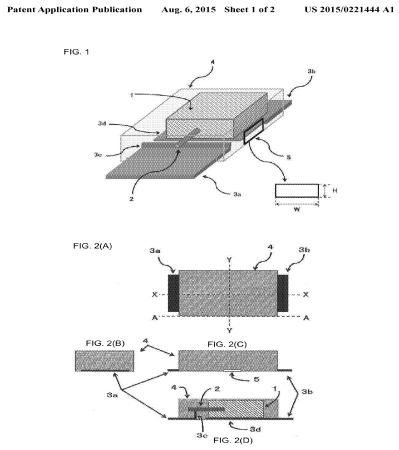
Applicant: SHOWA DENKO K.K., Tokyo, JP; SHOWA DENKO K.K., Tokyo, JP

Inventor: Kazumi, Naito, Tokyo, JP; Katsutoshi, Tamura, Tokyo, JP; Masahiro, Suzuki, Tokyo, JP

Prio: JP 20120905 2012-194876, WO 20150304 PCT/JP2013/070601

Appl.No: US14425947

IPC: H01G 9/10 2006.01 (IA)



PHOTOASSISTED HIGH EFFICIENCY CONVERSION OF CARBON-CONTAINING FUELS TO ELECTRICITY

Electricity is generated by oxidizing a carbon-containing fuel in a photoelectrochemical fuel cell via a cyclic oxidation pathway to yield carbon dioxide and water, and collecting the electrons released via the cyclic oxidation pathway to yield a flow of electrons. The cyclic oxidation pathway includes a series of reactions of which is a photooxidation reaction. Photooxidation triggers one or more dark oxidation reactions, thereby increasing the efficiency of the photoelectrochemical fuel cell.

Publication: US 20150221445 A1 20150806

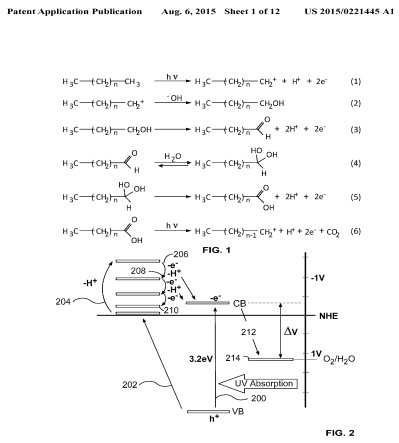
Applicant: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, OAKLAND, US; CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, US

Inventor: Clifford P., Kubiak, Del Mar, US; Mark J., Llorente, San Diego, US; Nathan S., Lewis, La Canada, US; Robert H., Coridan, Pasadena, US; Anna R., Beck, Pasadena, US

Prio: WO 20150109 PCT/US2013/049976

Appl.No: US14414083

IPC: H01G 9/20 2006.01 (IA)



DYE-SENSITIZED SOLAR CELL

The present invention provides a dye-sensitized solar cell which enhances an area of a photo electrode by arranging metal wires on a surface of a transparent substrate or a transparent conductive layer without degrading a transparency of the solar cell, allowing the metal wires to act as a collector electrode exclusively or together with a metal electrode.

Publication: US 20150221446 A1 20150806

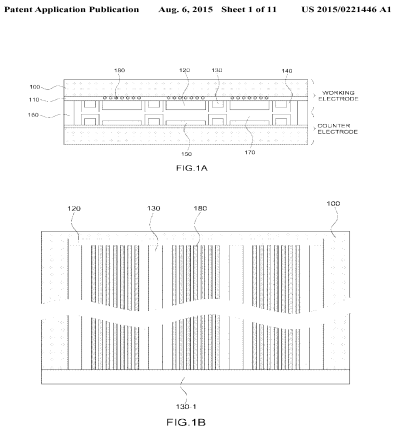
Applicant: Hyundai Motor Company, Seoul, KR

Inventor: Won Jung, Kim, Seoul, KR; Sang Hak, Kim, Seoul, KR; Mi Yeon, Song, Seoul, KR; Yong Jun, Jang, Seongnam, KR; Yong-Gu, Kim, Hwaseong, KR; In Woo, Song, Hwaseong, KR; Ji Yong, Lee, Hwaseong, KR; Ki Chun, Lee, Seoul, KR

Prio: KR 20110907 10-2011-0090571

Appl.No: US14683899

IPC: H01G 9/20 2006.01 (IA)



COMPOSITION INCLUDING LIGHT-EMITTING COMPOUND EXHIBITING AFTERGLOW

Provided is a light-emitting composition including a light-emitting compound that exhibits afterglow and represented by the following General Formula (1). where Xn represents 1-4 carboxyl groups, dihydroxybornyl groups, or the like, and Y1m represents 0-2 halogen atoms, methoxy groups, or phenyl groups.

Publication: US 20150221447 A1 20150806

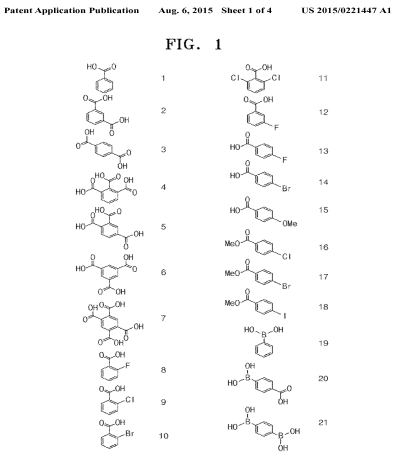
Applicant: SAMSUNG DISPLAY CO., LTD., Yongin-City, Gyeonggi-Do, KR; Tokyo Institute of Technology, Tokyo, JP

Inventor: Hideya, Yuasa, Tokyo, JP; Hiroyuki, Ohtani, Tokyo, JP; Atsushi, Shimoyama, Tokyo, JP; Shinichi, Kuno, Tokyo, JP

Prio: JP 20120828 2012-187632, WO 20150302 PCT/JP2013/072567

Appl.No: US14425241

IPC: H01G 9/20 2006.01 (IA)



POWER STORAGE DEVICE

A power storage device that includes an electrolyte retaining layer between a first internal electrode and a second internal electrode. The electrolyte retaining layer retains an electrolyte. The first internal electrode has a first current collector and a first active material layer. The first active material layer is on a surface of the first current collector, which is closer to the second internal electrode. The second internal electrode has a second current collector and a second active material layer. The second active material layer is on a surface of the second current collector, which is closer to the first internal electrode. At least one of the electrolyte retaining layer, first active material layer, and second active material layer is exposed at the first and second end surfaces of the power storage device.

Publication: US 20150221448 A1 20150806

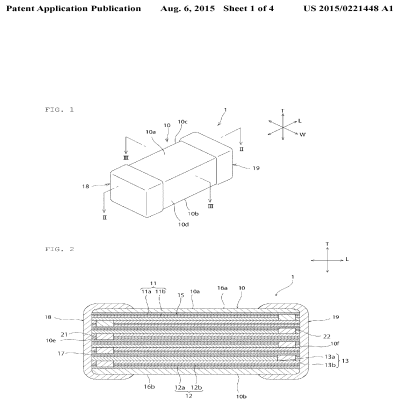
Applicant: Murata Manufacturing Co., Ltd., Nagaokakyo-shi, JP

Inventor: KEIJI, HORIKAWA, Nagaokakyo-shi, JP; Hiroki, Horiguchi, Nagaokakyo-shi, JP; Takashi, Hayashi, Nagaokakyo-shi, JP; Yasuhiko, Ueda, Nagaokakyo-shi, JP

Prio: JP 20121129 2012-260677

Appl.No: US14689891

IPC: H01G 11/28 2006.01 (IA)



CURRENT COLLECTOR, ELECTRODE STRUCTURE, AND ELECTRICAL STORAGE DEVICE

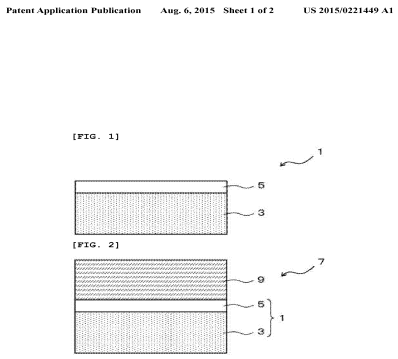
Provided is a current collector which can secure safety by certainly exhibiting the PTC function when used for an electrode structure of an electrical storage device such as non-aqueous electrolyte batteries, electrical double layer capacitors, lithium ion capacitors, and the like. Here, the current collector shall also be capable of being used for high-speed charge/discharge, having long life, being high in safety, and having excellent productivity. According to the present invention, a current collector 1 including a substrate 3, and a resin layer 5 formed on at least one side of the substrate 3, the resin layer 5 having conductivity, is provided. The current collector 1 satisfies the following conditions of: (1) a degree of swelling of the resin layer 5 with a non-aqueous electrolyte solution is 1% or more and 1000% or less at a PTC realization temperature, and (2) the PTC realization temperature is in the range from 65° C. to 200° C.

Publication: US 20150221449 A1 20150806

Applicant: UACJ Corporation, Chiyoda-ku, Tokyo, JP; UACJ Foil Corporation, Chuo-ku, Tokyo, JP; Furukawa Electric Co., Ltd., Chiyoda-ku, Tokyo, JP; UACJ CORPORATION, Chiyoda-ku, Tokyo, JP; UACJ FOIL CORPORATION, Chuo-ku, Tokyo, JP; FURUKAWA ELECTRIC CO., LTD., Chiyoda-ku, Tokyo, JP

Inventor: Sohei, Saito, Chiyoda-ku, JP; Osamu, Kato, Chiyoda-ku, JP; Yukiou, Honkawa, Chiyoda-ku, JP; Tatsuhiro, Yaegashi, Chiyoda-ku, JP; Tsugio, Kataoka, Kusatsu-shi, JP; Mitsuya, Inoue, Kusatsu-shi, JP; Satoshi, Yamabe, Kusatsu-shi, JP; Yasumasa, Morishima, Chiyoda-ku, JP; Takayori, Ito, Chiyoda-ku, JP; Hidekazu, Hara, Kusatsu-shi, JP; Takahiro, Iida, Kusatsu-shi, JP

Prio: JP 20120921 2012-207814, WO 20150310



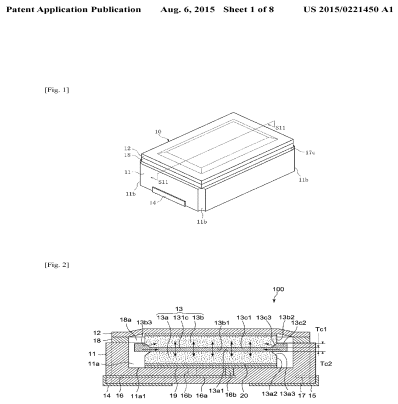
PCT/JP2013/075120
Appl.No: US14427294
IPC: H01G 11/48 2006.01 (IA)

ELECTROCHEMICAL DEVICE

An electrochemical device is provided with an electric storage element that is constituted by a first electrode sheet, a second electrode sheet, and a separate sheet installed between the two electrode sheets. The separate sheet includes: a first part (high liquid absorptivity part) sandwiched between the two electrode sheets; a second part (low liquid absorptivity part) extending outward from the two electrode sheets; and a third part (contact part) in contact with a rim surface of the second electrode sheet, whereby the electrochemical device can quickly and reliably resolve a phenomenon of the amount of electrolyte decreasing in the part of the separate sheet sandwiched between the two electrode sheets, even if the phenomenon occurs frequently.

Publication: US 20150221450 A1 20150806

Applicant: TAIYO YUDEN CO., LTD., Taito-ku, Tokyo, JP
Inventor: Naoto, Hagiwara, Takasaki-shi, JP; Kyotaro, Mano, Takasaki-shi, JP
Prio: JP 20120913 2012-201150, WO 20150218 PCT/JP2012/074148
Appl.No: US14422288
IPC: H01G 11/52 2006.01 (IA)



ELECTROLYTE SOLUTION AND ELECTROCHEMICAL DEVICE

The present invention aims to provide an electrolyte solution that is less likely to lead to an increase in resistance and realizes high capacity retention factor even after continuous application of a high voltage, and to provide an electrochemical device. The present invention provides an electrolyte solution including: a nitrile compound; and a quaternary ammonium salt, the electrolyte solution having a potassium ion content of less than 10 ppm, a moisture content of 20 ppm or less, a tertiary amine content of 30 ppm or less, a heterocyclic compound content of 30 ppm or less, and an ammonia content of 20 ppm or less.

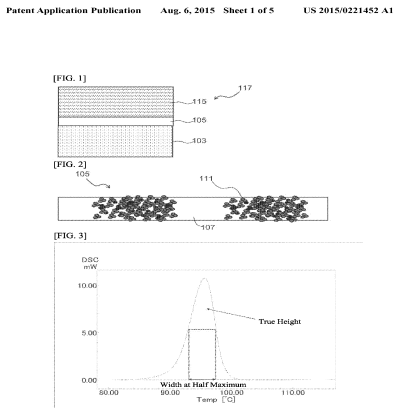
Publication: US 20150221451 A1 20150806

Applicant: DAIKIN INDUSTRIES, LTD., Osaka-shi, Osaka, JP; DAIKIN INDUSTRIES, LTD., Osaka-shi, Osaka, JP
Inventor: Kenzou, Takahashi, Settsu-shi, JP; Meiten, Koh, Settsu-shi, JP
Prio: JP 20120904 2012-194378, WO 20150209 PCT/JP2013/071478
Appl.No: US14420443
IPC: H01G 11/60 2006.01 (IA)

CURRENT COLLECTOR, ELECTRODE, SECONDARY CELL, AND CAPACITOR

Provided are a current collector which has an excellent high-rate property and exerts a sufficient safety function when employed in a secondary battery or a capacitor, as well as an electrode, a secondary battery or a capacitor in which said current collector is employed. According to the invention, a current collector is provided which comprises: metal foil; and a conductive layer with a film thickness of 0.1 μm to 10 μm formed on a surface of said metal foil. Here, said conductive layer includes a conductive material and a binder material. A melting point of said binder material is 80° C. to 150° C. Further, said binder material shows, in differential scanning calorimetry (DSC) in a range from room temperature to 200° C., one or more endothermic peaks in the heating-up process. In a case where said binder material shows two or more endothermic peaks, each difference between said peaks is 15° C. or more. Moreover, said binder material shows one or more exothermic peaks in the cooling-down process. In a case where said binder material shows only one exothermic peak, said exothermic peak falls within a range of 50 to 120° C., and a width at half maximum of said exothermic peak is 10° C. or less. On the other hand, in a case where said binder material shows two or more exothermic peaks, a maximum exothermic peak among said exothermic peaks falls within a range of 50 to 120° C., and a width at half maximum of said exothermic peak is 10° C. or less.

Publication: US 20150221452 A1 20150806



Applicant: Furukawa Electric Co., Ltd., Chiyoda-ku, Tokyo, JP; UACJ FOIL Corporation, Chuo-ku, Tokyo, JP; UACJ Corporation, Chiyoda-ku, Tokyo, JP; Furukawa Electric Co., Ltd., Chiyoda-ku, Tokyo, JP; UACJ Foil Corporation, Chuo-ku, Tokyo, JP; UACJ Corporation, Chiyoda-ku, Tokyo, JP

Inventor: Takahiro, Iida, Chiyoda-ku, JP; Yasumasa, Morishima, Chiyoda-ku, JP; Takayori, Ito, Chiyoda-ku, JP; Hidekazu, Hara, Chiyoda-ku, JP; Tsugio, Kataoka, Kusatsu-shi, JP; Mitsuya, Inoue, Kusatsu-shi, JP; Satoshi, Yamabe, Kusatsu-shi, JP; Osamu, Kato, Chiyoda-ku, JP; Yukiou, Honkawa, Chiyoda-ku, JP; Sohei, Saito, Chiyoda-ku, JP; Tatsuhiro, Yaegashi, Chiyoda-ku, JP

Prio: JP 20120713 2012-157669, WO 20150112 PCT/JP2013/069061

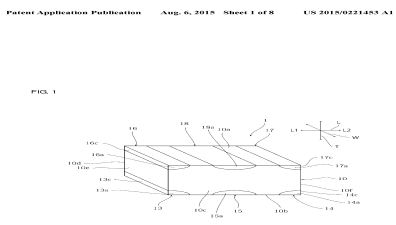
Appl.No: US14414399

IPC: H01G 11/66 2006.01 (IA)

METHOD OF MANUFACTURING ELECTRONIC COMPONENT AND ELECTRONIC-COMPONENT MANUFACTURING APPARATUS

Electroconductive paste is applied onto an electronic component body to form an external electrode by supplying the electroconductive paste to a first groove on an outer circumferential surface of a roller to extend along a circumference of the roller, disposing the electronic component body such that a second main surface of the electronic component body and an outer circumferential surface of the roller are opposed to each other while a first edge portion defined by the second main surface and a first end surface of the electronic component body is in the first groove when viewed in plan, and pressing the electronic component body against the outer circumferential surface of the roller so that the first edge portion is located in the first groove in a depth direction of the first groove.

Publication: US 20150221453 A1 20150806



Applicant: Murata Manufacturing Co., Ltd., Nagaokakyo-shi, JP

Inventor: Takashi, SAWADA, Nagaokakyo-shi, JP

Prio: JP 20140131 2014-016447, JP 20141218 2014-255818

Appl.No: US14604945

IPC: H01G 13/00 2006.01 (IA)

PEROVSKITE MATERIAL WITH ANION-CONTROLLED DIELECTRIC PROPERTIES, THIN FILM CAPACITOR DEVICE, AND METHOD FOR MANUFACTURING THE SAME

A crystalline perovskite crystalline composite paraelectric material includes nano-regions containing rich N3- anions dispersed in a nano-grain sized matrix of crystalline oxide perovskite material, wherein (ABO3-&x3b4;)α-(ABO3-&x3b4;-&x3b3;Nγ)1-&x3b1;. A represents a divalent element, B represents a tetravalent element, γ satisfies 0.005≤&x3b3;≤1.0, 1-&x3b1; satisfies 0.05≤1-&x3b1;≤0.9, and 1-&x3b1; is an area ratio between the regions containing rich N3- anions and the matrix of remaining oxide perovskite material.

Publication: US 20150228408 A1 20150813

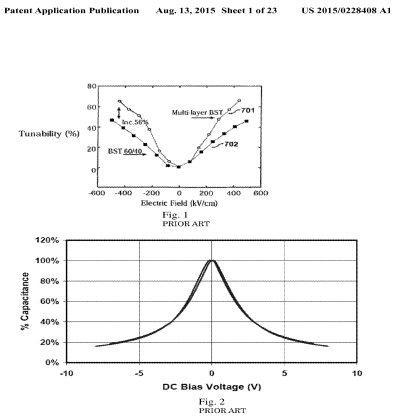
Applicant: Murata Manufacturing Co., Ltd., Nagaokakyo-shi, JP

Inventor: Ivoyl, KOUTSAROFF, Nagaokakyo-shi, JP; Shinichi, HIGAI, Nagaokakyo-shi, JP; Akira, ANDO, Nagaokakyo-shi, JP

Prio:

Appl.No: US14468840

IPC: H01G 4/08 2006.01 (IA)



MONOLITHIC CERAMIC CAPACITOR, MONOLITHIC CERAMIC CAPACITOR ARRAY, AND MONOLITHIC CERAMIC CAPACITOR MOUNTING STRUCTURE

A monolithic ceramic capacitor includes a plurality of first and second inner electrodes in a ceramic body. A direction in which the first and second inner electrodes are stacked is a stacking direction, a direction perpendicular or substantially perpendicular to the stacking direction in the ceramic body is a length direction, and a direction perpendicular or substantially perpendicular to the stacking direction and the first direction is a width direction. The ceramic body includes an effective portion, a first outer layer portion, a second outer layer portion, a first side portion, and a second side portion. A ratio A/B is about 0.04 or less when a dimension of each of the first side portion and the second side portion in the width direction is A and a dimension of the effective portion in the stacking direction is B.

Publication: US 20150228409 A1 20150813

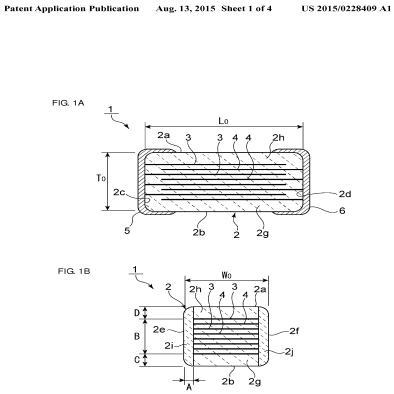
Applicant: Murata Manufacturing Co., Ltd., Nagaokakyo-shi, JP

Inventor: Yukihiro, FUJITA, Nagaokakyo-shi, JP; Tadateru, YAMADA, Nagaokakyo-shi, JP

Prio: JP 20140210 2014-023457

Appl.No: US14616787

IPC: H01G 4/33 2006.01 (IA)



METHOD AND SYSTEM FOR REDUCING AUDIBLE AND/OR ELECTRICAL NOISE FROM ELECTRICALLY OR MECHANICALLY EXCITED CAPACITORS

Devices and methods are disclosed for reducing vibration and noise from capacitor devices. The device includes a circuit board, and first and second capacitor structures. The second capacitor structure has substantially the same properties as the first and is coupled to the opposite face of a supporting structure substantially opposite of the first capacitor structure. The first and second capacitor structures can receive substantially the same excitation signals, can be electrically connected in parallel or in series. The first and second capacitor structures can be discrete capacitors, capacitor layers, stacks or arrays of multiple capacitor devices, or other capacitor structures. Stacks of multiple capacitor devices can be arranged symmetrically about the supporting structure. Arrays of multiple capacitor devices can be arranged with offsetting capacitors on the opposite face of the supporting structure substantially opposite one another.

Publication: US 20150228410 A1 20150813

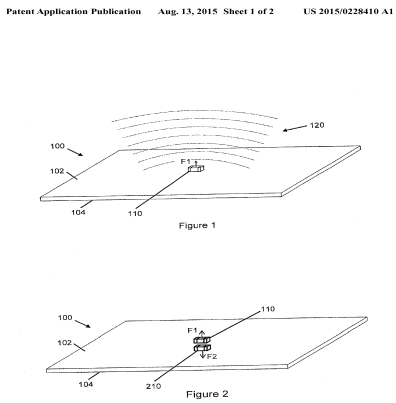
Applicant: ALLISON TRANSMISSION, INC., INDIANAPOLIS, US

Inventor: Steven D., Slagle, Indianapolis, US; James D., Shaw, Carmel, US; George C., Mimms, Indianapolis, US; Kyle E., Erickson, Avon, US

Prio:

Appl.No: US14694437

IPC: H01G 4/35 2006.01 (IA)



Capacitor Component

A capacitor component comprising a first busbar, a first electrode and a second electrode separated by a dielectric film, wherein the first electrode, the second electrode and the dielectric film are arranged in a annular ring with the first busbar arranged around the outer circumference of the annular ring, wherein the first busbar is in electrical contact with the first electrode and the first busbar includes a gap in a circumferential portion of the first busbar.

Publication: US 20150228411 A1 20150813

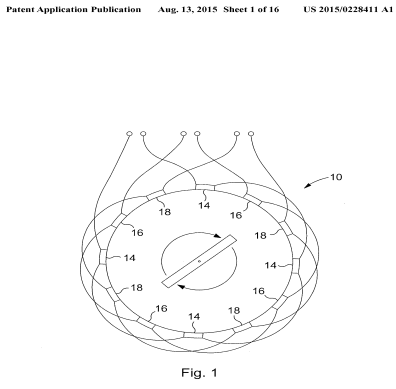
Applicant: PROTEAN ELECTRIC LIMITED, Surrey, GB; Geoffrey, Owen, Surrey, GB

Inventor: Geoffrey, Owen, Surrey, GB

Prio: GB 20120910 1216099.0, WO 20150308 PCT/IB2013/058409

Appl.No: US14426752

IPC: H01G 4/38 2006.01 (IA)



TANTALUM CAPACITOR

A tantalum capacitor may include: a body part having a cathode layer disposed as an outermost layer thereof; an anode wire buried in the body part with a portion thereof being led out from one surface of the body part; and a molded part enclosing the body part and the anode wire. The molded part formed on at least one surface of the cathode layer may have a thickness of 10 μm to 50 μm.

Publication: US 20150228412 A1 20150813

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., Suwon-Si, KR; SAMSUNG ELECTRO-MECHANICS CO., LTD., Suwon-Si, KR

Inventor: Hee Sung, CHOI, Suwon-Si, KR; Kyoung Hwan, KIM, Suwon-Si, KR

Prio: KR 20140213 10-2014-0016707

Appl.No: US14267157

IPC: H01G 9/042 2006.01 (IA)

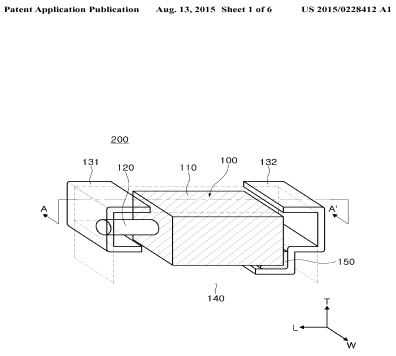


FIG. 1

SOLID ELECTROLYTIC CAPACITOR, METHOD OF MANUFACTURING THE SAME, AND CHIP-TYPE ELECTRONIC COMPONENT

A solid electrolytic capacitor may include: an anode body formed of a porous sintered material containing a tantalum powder having an average particle size of 100 nm or less; an anode wire having a portion buried in the porous sintered material in a length direction; a dielectric layer formed on a surface of the porous sintered material; and a solid electrolytic layer disposed on a surface of the dielectric layer. When a cross-sectional area of the anode wire in a thickness-width direction is defined as A1 and a cross-sectional area of the anode body in the thickness-width direction is defined as A2, 0.05≤A1/A2≤0.5 is satisfied.

Publication: US 20150228413 A1 20150813

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., Suwon-Si, KR; SAMSUNG ELECTRO-MECHANICS CO., LTD., Suwon-Si, KR

Inventor: Hee Sung, CHOI, Suwon-Si, KR; Kyoung Hwan, KIM, Suwon-Si, KR

Prio: KR 20140213 10-2014-0016709

Appl.No: US14267196

IPC: H01G 9/052 2006.01 (IA)

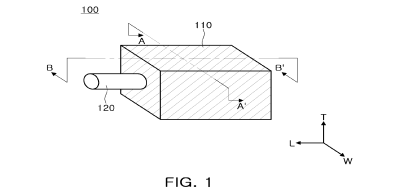


FIG. 1

DYE-SENSITIVE SOLAR CELL PASTE, POROUS LIGHT-REFLECTIVE INSULATION LAYER, AND DYE-SENSITIVE SOLAR CELL

Dye-sensitized solar cell paste which has both high light reflectivity and excellent insulation properties and is capable of forming a porous light reflective insulation layer, the porous light reflective insulation layer obtained by firing the same, and a dye-sensitized solar cell are provided. The dye-sensitized solar cell paste includes insulating particles (A) having a refractive index of 1.8 or more and a volume median particle diameter (D50) in a range of 100 nm to 5,000 nm and insulating particles (B) having a volume median particle diameter (D50) in a range of 1 nm to 30 nm.

Publication: US 20150228414 A1 20150813

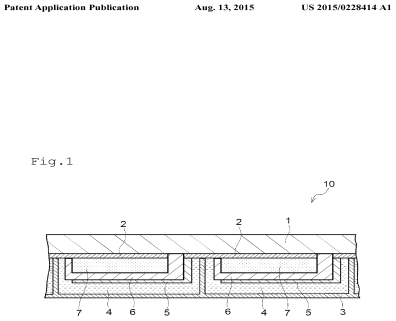
Applicant: SUMITOMO OSAK CEMENT CO., LTD., Tokyo, JP

Inventor: Teppei, Yakubo, Shisui-machi Inba-gun, JP; Shingo, Takano, Ryugasaki-shi, JP

Prio: JP 20120822 2012-183142, WO 20150220 PCT/JP2013/072338

Appl.No: US14422757

IPC: H01G 9/20 2006.01 (IA)



SOLAR CELL HAVING LIGHT-ABSORBING STRUCTURE

Provided is a solar cell including: a first electrode; a composite layer positioned on the first electrode and including a light absorber impregnated thereinto; a light absorption structure positioned on the composite layer and composed of a light absorber; a hole conductive layer positioned on the light absorption structure; and a second electrode positioned on the hole conductive layer.

Publication: US 20150228415 A1 20150813

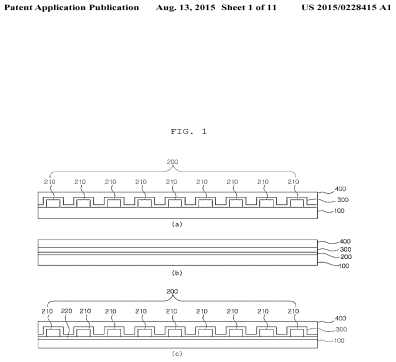
Applicant: KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY, Daejeon, KR

Inventor: Sang il, Seok, Daejeon, KR; Sang Hyuk, Im, Daejeon, KR; Jun Hong, Noh, Daejeon, KR; Jin Hyuck, Heo, Busan, KR

Prio: KR 20120912 10-2012-0101192, WO 20150311 PCT/KR2013/008270

Appl.No: US14427502

IPC: H01G 9/20 2006.01 (IA)



Polymer Frame for a Chip, Such That the Frame Comprises at Least One Via in Series with a Capacitor

A chip socket defined by an organic matrix framework, wherein the organic matrix framework comprises at least one via post layer where at least one via through the framework around the socket includes at least one capacitor comprising a lower electrode, a dielectric layer and an upper electrode in contact with the via post.

Publication: US 20150228416 A1 20150813

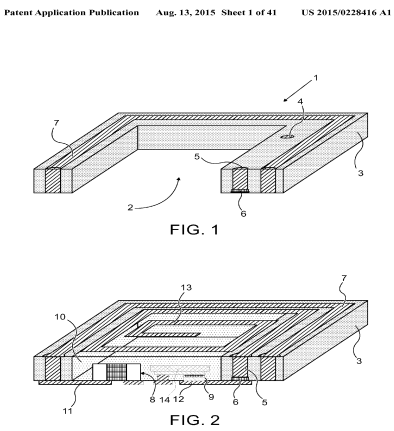
Applicant: Zhuhai Advanced Chip Carriers & Electronic Substrate Solutions Technologies Co. Ltd., Zhuhai, CN; Zhuhai Advanced Chip Carriers & Electronic Substrate Solutions Technologies Co. Ltd., Zhuhai, CN

Inventor: Dror, Hurwitz, Zhuhai, CN; Alex, Huang, Zhuhai, CN

Prio:

Appl.No: US14555633

IPC: H01G 17/00 2006.01 (IA)



Stacked Film Capacitor and Manufacturing Method of Stacked Film Capacitor

A method of manufacturing a stacked film capacitor that includes forming a plurality of first and second internal electrodes on first and second dielectric films, forming first and second separation lines between the plurality of first and second internal electrodes on the first and second dielectric films, stacking the first and second dielectric films in such a way that the first and second separation lines are arranged at positions different from each other when seen along a stacking direction to form a stack, separating the stack at the first and second separation lines into a plurality of separated stacks by applying forces in opposite directions to each other to the first and second dielectric films across the first and second separation lines, and forming first and second external electrodes connected to the first and second internal electrodes, respectively.

Publication: US 20150235766 A1 20150820

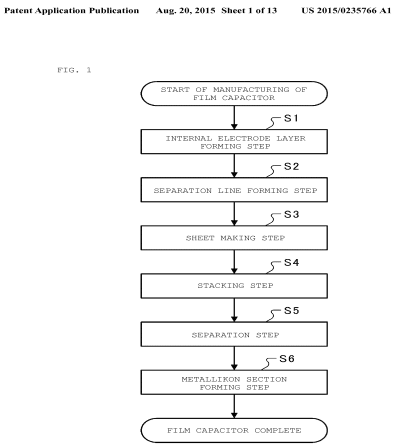
Applicant: Murata Manufacturing Co., Ltd., Nagaokakyo-shi, JP

Inventor: Shigeki, Nishiyama, Nagaokakyo-shi, JP

Prio: JP 20140220 2014-031107

Appl.No: US14626152

IPC: H01G 4/012 2006.01 (IA)

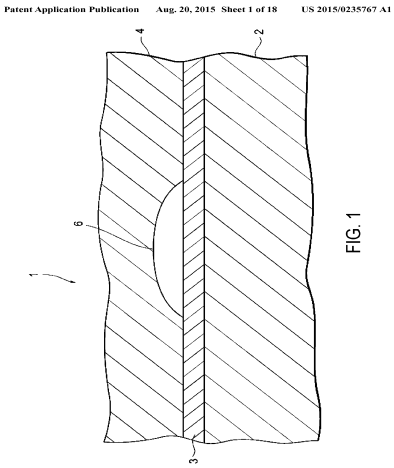


THIN FILM CAPACITOR

A thin film capacitor is provided with a lower electrode layer, a dielectric layer arranged on the lower electrode layer, and an upper electrode layer formed on the dielectric layer. An insulator patch material, circular when projected from above, is formed at a boundary of the dielectric layer and the upper electrode layer of the thin film capacitor of this invention. The circular insulator patch improves a withstand voltage, by reducing accumulation of charges.

Publication: US 20150235767 A1 20150820

Applicant: TDK CORPORATION, Tokyo, JP
Inventor: Junji, AOTANI, Tokyo, JP; Yoshihiko, YANO, Tokyo, JP; Yasunobu, OIKAWA, Tokyo, JP
Prio: JP 20131227 2013-270787, JP 20131227 2013-270788, JP 20131227 2013-270789
Appl.No: US14577392
IPC: H01G 4/06 2006.01 (IA)

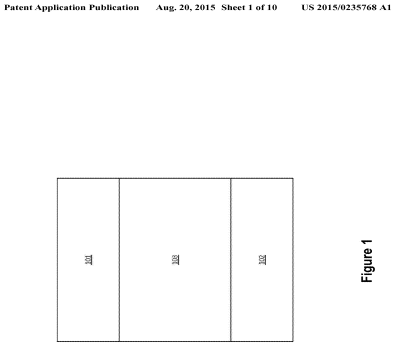


SOLID STATE ENERGY STORAGE DEVICES

Described in this patent application are devices for energy storage and methods of making and using such devices. In various embodiments, blocking layers are provided between dielectric material and the electrodes of an energy storage device. The block layers are characterized by higher dielectric constant than the dielectric material. There are other embodiments as well.

Publication: US 20150235768 A1 20150820

Applicant: QuantumScape Corporation, San Jose, US
Inventor: Tim, Holme, Mountain View, US; Friedrich B., Prinz, Woodside, US; Weston Arthur, Hermann, Palo Alto, US; Joseph, Han, Redwood City, US; Rainer, Fasching, Mill Valley, US
Prio:
Appl.No: US14700048
IPC: H01G 4/10 2006.01 (IA)



HIGH ENERGY DENSITY ELECTROSTATIC CAPACITOR

A solid state electrical energy state storage device includes multiple dielectric layers or an integral heterogeneous dielectric layer. Layers or portions of the heterogeneous layer have permittivity augmented by exposing the dielectric material to electric/magnetic fields during formation of the dielectric before complete solidification. Such exposure results in radicals and/or an ordered matrix. A dielectric for the device may contain a new xylene based polymer formed under atmospheric conditions via reaction with monatomic oxygen and provided an augmented permittivity through exposure of the polymer to a magnetic field and/or an electric field during condensation and solidification on a substrate.

Publication: US 20150235769 A1 20150820

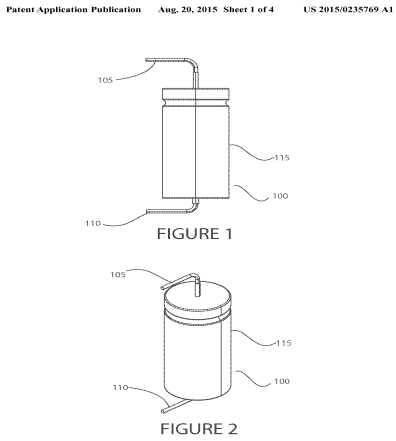
Applicant: Carver Scientific, Inc., Baton Rouge, US

Inventor: David R., Carver, Baton Rouge, US; Robert G., Carver, Baton Rouge, US; Sean W., Reynolds, Baton Rouge, US

Prio: WO 20141210 PCT/US12/72337

Appl.No: US14407068

IPC: H01G 4/14 2006.01 (IA)



METHOD FOR FILLING AT LEAST ONE CAVITY OF A MULTI-LAYER COMPONENT WITH A FILLING MATERIAL, AND MULTI-LAYER COMPONENT

The invention relates to a method for filling at least one cavity (5a, 5b) of a multi-layer component (1) with filling material (9). In a first step, the method comprises providing a main body (2) of the multi-layer component (1), the main body (2) having at least one cavity (5a, 5b). In a subsequent step, the method comprises placing the main body (2) in a chamber (11) and then generating a first pressure, the first pressure being a negative pressure. Then, a filling material (9) is arranged on the main body (2). Furthermore, the invention relates to a multi-layer component (1). The multi-layer component (1) has a main body (2) with at least one cavity (5a, 5b), wherein the cavity (5a, 5b) is filled with a filling material (9) which has a viscosity of between 200 mPas and 2000 mPas.

Publication: US 20150235770 A1 20150820

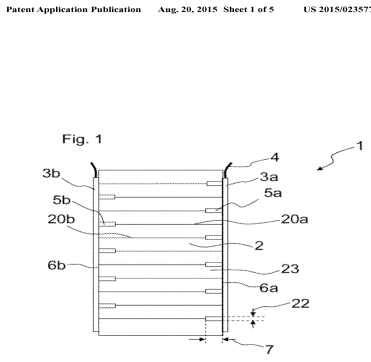
Applicant: EPCOS AG, Munich, DE

Inventor: Dieter, Somitsch, Gross St. Florian, AT; Martin, Galler, Kalsdorf, AT; Aditya, Rajapurkar, Graz, AT

Prio: DE 20120809 10 2012 107 341.4, WO 20150209 PCT/EP2013/066117

Appl.No: US14420653

IPC: H01G 4/30 2006.01 (IA)



VARIABLE CAPACITOR COMPROMISING MEMS DEVICES FOR RADIO FREQUENCY APPLICATIONS

A variable capacitor (300) comprises cells (200, 400) that have an RF electrode (202, 402) coupled to a bond pad (30). Each cell comprises a plurality of MEMS devices (100) the capacitance of which can be changed by means of a movable electrode. The MEMS devices are placed in a sealed cavity of the cell and are arranged next to each other along the length of the RF electrode of the cell. The RF electrode of each cell can be trimmed so as to obtain an RF line (402) and a further ground electrode (404) and so as to scale the RF capacitance of the cell without impacting the mechanical performance of the MEMS cells. Each cell has the same control capacitance irrespective of the RF capacitance. This allows each cell to use the same isolation resistor required for RF operation and thus each cell has the same parasitic capacitance. This allows the CMOS control circuit to be optimized and the dynamic performance of the cells to be matched.

Publication: US 20150235771 A1 20150820

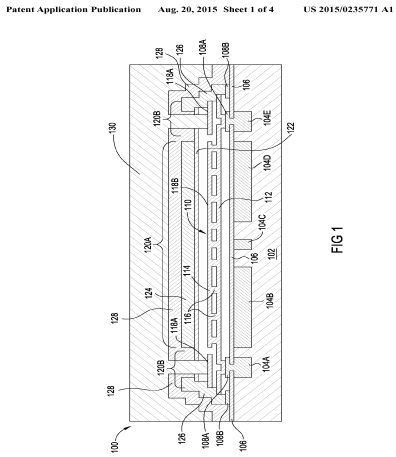
Applicant: CAVENDISH KINETICS, INC., San Jose, US

Inventor: Robertus Petrus, Van Kampen, S-Hertogenbosch, NL; Richard L., Knipe, McKinney, US

Prio: WO 20150206 PCT/US2013/053888

Appl.No: US14420152

IPC: H01G 5/16 2006.01 (IA)



NONAQUEOUS ELECTROLYTE SOLUTION, ELECTROCHEMICAL DEVICE, LITHIUM ION SECONDARY CELL, AND MODULE

A nonaqueous electrolyte solution including: a nonaqueous solvent; and an electrolyte salt. The nonaqueous solvent contains a fluorinated linear carbonate (A) represented by Formula (1): RfOCOOR where Rf represents a C1-4 fluorinated alkyl group and R represents a C1-4 alkyl group, and at least one cyclic carbonate (B) selected from ethylene carbonate, propylene carbonate, and fluoroethylene carbonate. The nonaqueous solvent also contains at least one compound (α) and at least one compound (ß) as defined herein. The compound (α) is contained in an amount of 5000 ppm or less based on the amount of the fluorinated linear carbonate (A), and the compound (ß) is contained in an amount of 50 ppm or less based on the amount of the cyclic carbonate (B). Also disclosed is an electrochemical device and a lithium ion secondary cell containing the nonaqueous electrolyte solution and a module including the lithium ion secondary cell.

Publication: US 20150235772 A1 20150820

Applicant: DAIKIN INDUSTRIES, LTD., Osaka-Shi, Osaka, JP; DAIKIN INDUSTRIES, LTD., Osaka-Shi, Osaka, JP

Inventor: Hideo, Sakata, Settsu-shi, JP; Meiten, Koh, Settsu-shi, JP; Shigeaki, Yamazaki, Settsu-shi, JP; Akiyoshi, Yamauchi, Settsu-shi, JP; Michiru, Kagawa, Settsu-shi, JP; Aoi, Nakazono, Settsu-shi, JP

Prio: JP 20120928 2012-218675, WO 20150318 PCT/JP2013/075884

Appl.No: US14429285

IPC: H01G 9/035 2006.01 (IA)

ELECTROLYTIC SOLUTION FOR ELECTROLYTIC CAPACITOR, AND ELECTROLYTIC CAPACITOR

Provided is an electrolytic solution suitable for use in a 100 WV class electrolytic capacitor having low inductance at low temperatures and high durability in high-temperature use conditions. This electrolytic solution for an electrolytic capacitor contains: a mixed organic solvent including sulfolane and y-butyrolactone; water; an electrolyte selected from the group consisting of a quaternized pyridinium salt of carboxylic acid and a quaternized imidazolinium salt of carboxylic acid; boric acid; and mannitol; and has a mass ratio of boric acid and mannitol in the range of 1:1.2 to 1:1.6, and a total amount of boric acid and mannitol of 10.0 to 14.5% by mass of the total electrolytic solution, the water content being 1.5 to 2.0% by mass of the total electrolytic solution.

Publication: US 20150235773 A1 20150820

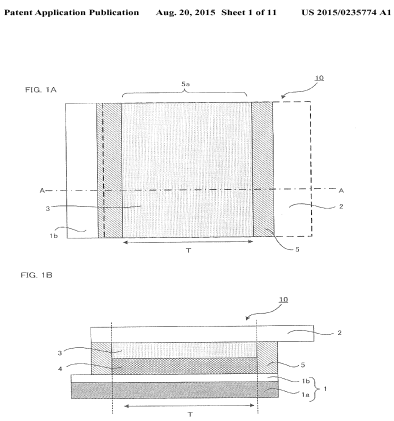
Applicant: NIPPON CHEMI-CON CORPORATION, Shinagawa-ku, Tokyo, JP; NIPPON CHEMI-CON CORPORATION, Shinagawa-ku, Tokyo, JP
Inventor: Shingo, Takeuchi, Tokyo, JP
Prio: JP 20120929 2012-218915, WO 20150327 PCT/JP2013/076442
Appl.No: US14432157
IPC: H01G 9/035 2006.01 (IA)

DYE-SENSITIZED SOLAR CELL

A dye-sensitized solar cell includes a base material that functions as an electrode, has flexibility, and has a porous layer, containing a dye-sensitizer-supported fine particle of a metal oxide semiconductor on one surface thereof. A counter electrode base material is arranged to oppose the base material for dye sensitized solar cell, functions as an electrode, and has flexibility. A solid electrolyte layer is provided between the base material for dye-sensitized solar cell and the counter electrode base material and contacts the porous layer. Among the base materials, at least one has transparency; and at least one has an insulating layer provided on a surface thereof. The insulating layer is provided in a region a region where the porous layer is formed, and where the base materials are opposed to each other. The insulating layer has an external communication portion that leads from an inside of the porous layer-forming region to outside.

Publication: US 20150235774 A1 20150820

Applicant: DAI NIPPON PRINTING CO., LTD., Tokyo-to, JP
Inventor: Naohiro, OBONAI, Tokyo-to, JP; Ryo, FUJIWARA, Tokyo-to, JP
Prio: JP 20091116 2009-261158
Appl.No: US14695549
IPC: H01G 9/20 2006.01 (IA)



Electrode material, preparation method thereof and supercapacitor based thereof

The disclosure discloses electrode material, preparation methods thereof and supercapacitors based thereof. Raw material for preparing the electrode material include PVDF and an additive which can be reacted with the PVDF to generate conductive active substance, the amount of the PVDF is 50 to 99 mass percentage, and the amount of the additive is 1 to 50 mass percentage. A PVDF-based composite film can be prepared from the raw materials; and activating treatment is performed on the film by virtue of a physico-chemical process, so that PVDF can generate a conductive active substance, the contact resistance of the PVDF and the active substance is reduced, and the conductive active substance is distributed in the PVDF-based composite film more uniformly. Button and wound supercapacitor and flexible capacitor, which are prepared from the electrode material, are high in power density and energy density, long in cycle life.

Publication: US 20150235775 A1 20150820

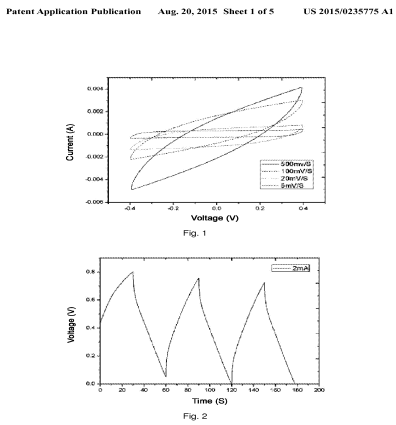
Applicant: SICHUAN UNIVERSITY, Sichuan, CN

Inventor: Jiliang, Zhu, Sichuan, CN; Ping, Sun, Sichuan, CN; Zhongxing, Wang, Sichuan, CN; Zifan, Zeng, Sichuan, CN; Qingyuan, Wang, Sichuan, CN; Juncheng, Zhu, Sichuan, CN

Prio: CN 20120828 201210310094.3, CN 20120828 201210310195.0, WO 20150302 PCT/CN2013/070430

Appl.No: US14425312

IPC: H01G 11/30 2006.01 (IA)



CONDUCTIVE MATERIAL WITH CHARGE-STORAGE MATERIAL IN VOIDS

A conductive material includes a graphene-nanonsheet material, with charge-storage material in voids in and/or coating the graphene material. The charge-storage material may include any of a variety of types of carbon, including carbon black, acetylene black, furnace black, carbon fibers, carbon nanotubes, graphene in the form of wrinkled sheets of graphene, carbon nano-onions, or hydrothermal-synthesized nanospheres of carbon material. Alternatively, the charge-storage material may be non-carbon pseudocapacitive materials. Also, the charge-storage material may involve Faradaic processes similar to those observed with battery electrodes. The conductive material may be formed or placed on a conductive or a dielectric substrate. One or more gaps may be formed in the conductive material, with the conductive material forming two or more electrodes. The electrodes may then be covered with an electrolyte material, to produce an electric double layer capacitor.

Publication: US 20150235776 A1 20150820

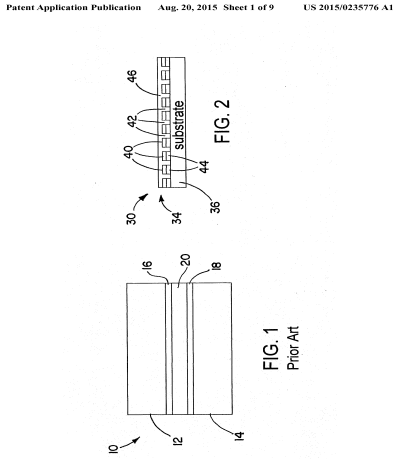
Applicant: JME, Inc., Beachwood, US

Inventor: John R., Miller, Beachwood, US

Prio: WO 20141211 PCT/US2013/049841

Appl.No: US14407125

IPC: H01G 11/36 2006.01 (IA)



POWER STORAGE DEVICE POSITIVE ELECTRODE, POWER STORAGE DEVICE, AND METHOD FOR PRODUCING SLURRY FOR POWER STORAGE DEVICE POSITIVE ELECTRODE

A higher performance positive electrode for a power storage device is provided, which ensures a higher capacity density per unit weight of an active substance and, particularly, a higher initial capacity in initial charge/discharge. The power storage device positive electrode includes electrically conductive polymer particles as an active substance, and the electrically conductive polymer particles each have a flat shape.

Publication: US 20150235777 A1 20150820

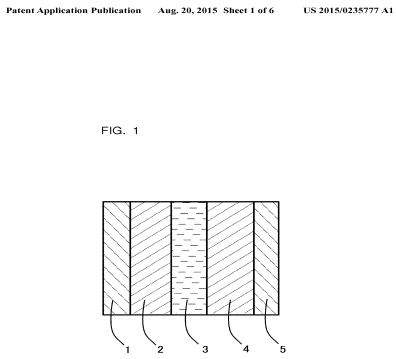
Applicant: NITTO DENKO CORPORATION, Ibaraki-shi, Osaka, JP; NITTO DENKO CORPORATION, Ibaraki-shi, Osaka, JP

Inventor: Yohei, Ando, Ibaraki-shi, JP; Yutaka, Kishii, Ibaraki-shi, JP; Masao, Abe, Ibaraki-shi, JP; Yoshihiro, Uetani, Ibaraki-shi, JP; Hiroyoshi, Take, Ibaraki-shi, JP; Atsuko, Mizuike, Ibaraki-shi, JP

Prio: JP 20120808 2012-176310, JP 20130806 2013-163440, WO 20150415 PCT/JP2013/071423

Appl.No: US14417862

IPC: H01G 11/42 2006.01 (IA)



SEALING MATERIAL, METHOD OF MANUFACTURING FLEXIBLE THIN-FILM TYPE SUPER-CAPACITOR DEVICE USING THE SAME, AND SUPER-CAPACITOR DEVICE MANUFACTURED BY THE METHOD

Disclosed are a method of manufacturing a flexible thin-film type super-capacitor device and a super-capacitor device manufactured by the same. The flexible thin-film type super-capacitor device comprises a base film which has flexibility; a separator which is interposed between the base films; and an active material which is formed on the base film. Thus, flexibility is given since thickness is very thin while maintaining high electrical conductivity and high binding property. In addition, economic feasibility is high and mass production is possible. Further, it is possible to stably and efficiently contain a highly corrosive material.

Publication: US 20150235778 A1 20150820

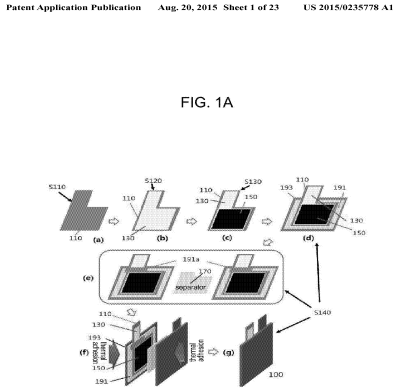
Applicant: KOREA INSTITUTE OF ENERGY RESEARCH, Daejeon, KR

Inventor: Jung-Joon, YOO, Daejeon, KR; Jong-Huy, KIM, Daejeon, KR; Jae-Kook, YOON, Daejeon, KR; Hana, YOON, Daejeon, KR; Yong-Il, KIM, Daejeon, KR

Prio: KR 20140217 10-2014-0017868, KR 20140930 10-2014-0131302

Appl.No: US14602443

IPC: H01G 11/68 2006.01 (IA)



BST CAPACITOR

A capacitor having a capacitance settable by biasing, including: a series association of a plurality of first capacitive elements between two first terminals defining the capacitor electrodes; and two second terminals of application of bias voltages respectively connected, via resistive elements, to the opposite electrodes of each of the first capacitive elements.

Publication: US 20150243437 A1 20150827

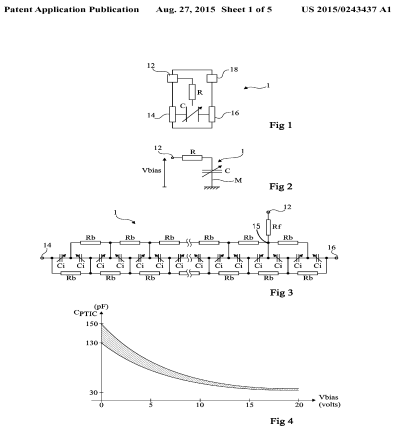
Applicant: STMicroelectronics (Tours) SAS, Tours, FR

Inventor: Sylvain, CHARLEY, Mettray, FR; Aline, Noire, St. Antoine du Rocher, FR

Prio: FR 20140226 1451547

Appl.No: US14632981

IPC: H01G 2/00 2006.01 (IA)



MULTILAYER CERAMIC CAPACITOR AND BOARD HAVING THE SAME

A multilayer ceramic capacitor and a board having the same are provided. The multilayer ceramic capacitor includes three external electrodes including a conductive layer, a nickel plating layer, and a tin plating layer sequentially stacked on a mounting surface of the ceramic body, and spaced apart from each other. When an outermost portion of a lead-out portion of an internal electrode exposed to the mounting surface is P, a total thickness of the conductive layer, the nickel plating layer, and the tin plating layer in a normal line direction of the conductive layer from P is a, a thickness of the conductive layer in the normal line direction of the conductive layer from P is b, and a sum of pore heights of pores existing in the conductive layer in the normal line direction of the conductive layer from P is bp, (b-bp)/a satisfies 0.264≤(b-bp)/a≤0.638.

Publication: US 20150243438 A1 20150827

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., Suwon-Si, KR

Inventor: Young Ghyu, AHN, Suwon-Si, KR; Hyun Tae, KIM, Suwon-Si, KR; Kyo Kwang, LEE, Suwon-Si, KR; Jin, KIM, Suwon-Si, KR; Byoung Hwa, LEE, Suwon-Si, KR; Hwi Geun, IM, Suwon-Si, KR

Prio: KR 20140227 10-2014-0023639, KR 20141022 10-2014-0143390

Appl.No: US14601724

IPC: H01G 4/008 2006.01 (IA)

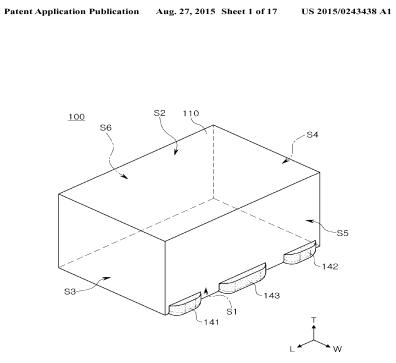


FIG. 1

MULTILAYER CERAMIC ELECTRONIC COMPONENT AND BOARD HAVING THE SAME MOUNTED THEREON

A multilayer ceramic electronic component may include: a ceramic body including dielectric layers; an active layer configured to form capacitance by stacking internal electrodes alternately exposed to end surfaces of the ceramic body with the dielectric layers interposed therebetween; upper and lower cover layers formed on and below the active layer; and first and second external electrodes formed on end portions of the ceramic body. In a cross-section of the ceramic body in length-thickness direction, the external electrodes may include conductive layers formed at corner portions of the ceramic body, base electrodes covering the conductive layers, and terminal electrodes formed on the base electrodes, the conductive layers being positioned outside the active layer of the ceramic body.

Publication: US 20150243439 A1 20150827

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., Suwon-Si, KR

Inventor: Joon Hwan, KWAG, Suwon-Si, KR

Prio: KR 20140226 10-2014-0022677

Appl.No: US14307157

IPC: H01G 4/228 2006.01 (IA)

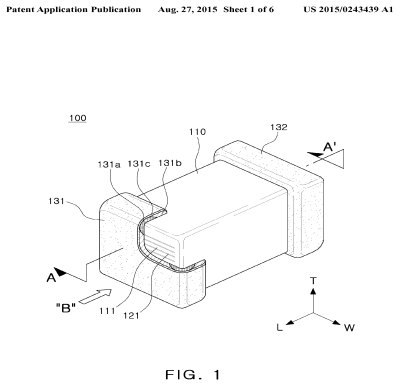


FIG. 1

NON-UNIFORM DIELECTRIC LAYER CAPACITOR FOR VIBRATION AND ACOUSTICS IMPROVEMENT

A Non-Uniform Dielectric Layer, Multi-Layer-Ceramic-Capacitor (MLCC) has upper and lower dielectric layers separating upper and lower electrode layers, where the lower dielectric layers have a greater vertical thickness than the upper dielectric layers to reduce piezoelectric effect driven capacitor reaction forces on a printed circuit board (PCB) on which the capacitor is mounted. Such an MLCC may include an upper set of dielectric layers that separate adjacent pairs of upper electrode layers in a top portion of the MLCC, and a lower set of dielectric layers that separate adjacent pairs of lower electrode layers in a bottom portion of the MLCC. A bottom portion of the MLCC may be mounted on a PCB. The thickness of the lower dielectric layers may be between 1.5 and 3.5 times greater than the upper dielectric layers to reduce piezoelectric effect driven capacitor reaction forces in the audio range of human hearing.

Publication: US 20150243440 A1 20150827

Applicant: Apple Inc., Cupertino, US; Apple Inc., Cupertino, US

Inventor: Zhong-Qing, Gong, Cupertino, US; Kevin R., Richardson, Cupertino, US; Yanchu, Xu, Cupertino, US; Connor R., Duke, Cupertino, US; Benjamin A., Bard, Cupertino, US

Prio:

Appl.No: US14285461

IPC: H01G 4/30 2006.01 (IA)

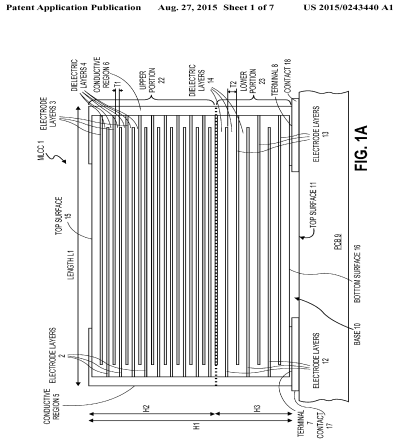


FIG. 1A

METHOD FOR FORMING PATTERN

The invention provides a process and an apparatus for producing a high quality electronic component by reducing sagging at pattern side walls, which may occur when patterns of a wiring, an electrode, etc. are printed by a screen printing process using an electroconductive paste, an insulation paste, or a semiconductor paste, and reducing a mesh mark on the patterns of a wiring, an electrode, etc., or a full solid surface film, as well as a pattern formation process, by which screen printing can be applied and double face printing can be conducted with the number of process steps less than a conventional process. A pattern is formed by that a pattern is printed on a blanket having a surface comprising polydimethylsiloxane using an electroconductive paste, an insulation paste, or a semiconductor paste by a screen printing process, and the pattern is transferred from the blanket to a printing object.

Publication: US 20150243441 A1 20150827

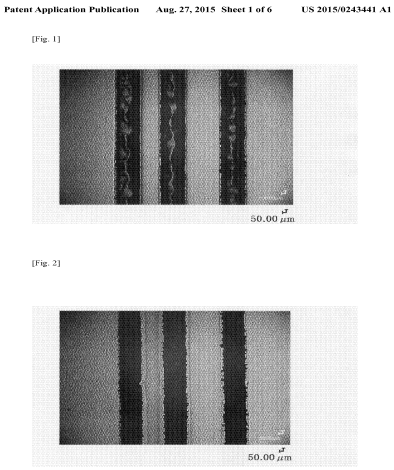
Applicant: NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY, Tokyo, JP; NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY, Chiyoda-ku, Tokyo, JP

Inventor: Kenichi, Nomura, Tsukuba-shi, JP; Hirobumi, Ushijima, Tsukuba-shi, JP; Noriko, Iwase, Tsukuba-shi, JP; Manabu, Yoshida, Tsukuba-shi, JP

Prio: JP 20120925 2012-210892, WO 20150324 PCT/JP2013/074551

Appl.No: US14430700

IPC: H01G 4/30 2006.01 (IA)



VARIABLE CAPACITANCE ELEMENT, PACKAGED CIRCUIT, RESONANT CIRCUIT, COMMUNICATION APPARATUS, COMMUNICATION SYSTEM, WIRELESS CHARGING SYSTEM, POWER SUPPLY APPARATUS, AND ELECTRONIC APPARATUS

The present provides a variable capacitance element enabling a further reduction in capacitance variation among variable capacitance elements, and provides a packaged circuit including the variable capacitance element. A variable capacitance element is configured to include an element body unit, a compensation unit, a first external terminal for signals, a second external terminal for signals, external terminals for control, and external terminals for capacitance compensation. The compensation unit has second variable-capacitance capacitor units C9 to C 11, each including a second dielectric layer formed of a ferroelectric material, and is connected to the element body unit, and has a capacitance varying according to a control voltage signal.

Publication: US 20150243442 A1 20150827

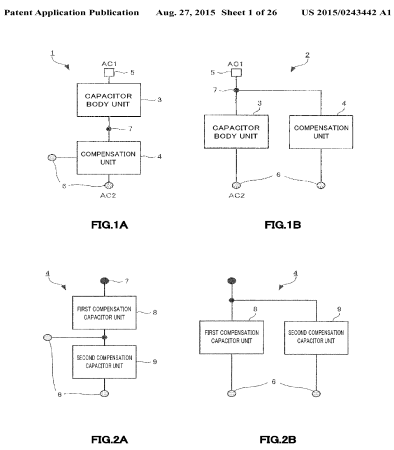
Applicant: DEXERIALS CORPORATION, Tokyo, JP

Inventor: Masayoshi, Kanno, Tochigi, JP; Norio, Saito, Tochigi, JP

Prio: JP 20120809 2012-176665, WO 20150202 PCT/JP2013/070474

Appl.No: US14419136

IPC: H01G 7/00 2006.01 (IA)



PHOTOSEMICONDUCTOR ELECTRODE, PHOTOELECTROCHEMICAL CELL, AND ENERGY SYSTEM

A photosemiconductor electrode (400) of the present invention includes a conductor (410) and a photosemiconductor layer (first semiconductor layer) (420) provided on the conductor (410). The photosemiconductor layer (420) includes a photosemiconductor (e.g., a photosemiconductor film (421)) and an oxide containing iridium element (e.g., iridium oxide (422)). The Fermi level of the oxide containing iridium element is more negative than the Fermi level of the photosemiconductor and is more negative than -4.44 eV, with respect to the vacuum level.

Publication: US 20150243443 A1 20150827

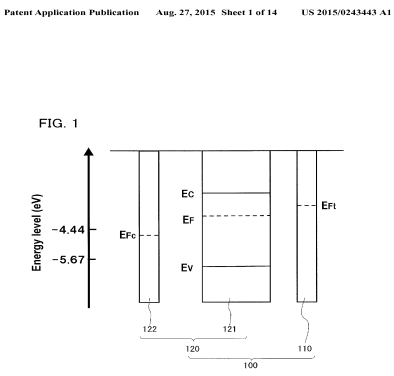
Applicant: Panasonic Intellectual Property Management Co., Ltd., Osaka-shi, Osaka, JP; PANASONIC CORPORATION, Osaka, JP

Inventor: Yoshihiro, Kozawa, Osaka, JP; Satoru, Tamura, Osaka, JP; Nobuhiro, Miyata, Osaka, JP; Takahiro, Kurabuchi, Osaka, JP; Takaiki, Nomura, Osaka, JP; Kazuhito, Hato, Osaka, JP

Prio: JP 20121031 2012-241192, WO 20150326 PCT/JP2013/006368

Appl.No: US14431585

IPC: H01G 9/20 2006.01 (IA)



BI- AND TRI- LAYER INTERFACIAL LAYERS IN PEROVSKITE MATERIAL DEVICES

Photovoltaic devices such as solar cells, hybrid solar cell-batteries, and other such devices may include an active layer disposed between two electrodes. The active layer may have perovskite material and other material such as mesoporous material, interfacial layers, thin-coat interfacial layers, and combinations thereof. The perovskite material may be photoactive. The perovskite material may be disposed between two or more other materials in the photovoltaic device. Inclusion of these materials in various arrangements within an active layer of a photovoltaic device may improve device performance. Other materials may be included to further improve device performance, such as, for example: additional perovskites, and additional interfacial layers.

Publication: US 20150243444 A1 20150827

Applicant: Hunt Energy Enterprises, L.L.C., Dallas, US

Inventor: Michael D., Irwin, Dallas, US; Jerred A., Chute, Dallas, US; Vivek V., Dhas, Dallas, US

Prio:

Appl.No: US14711391

IPC: H01G 9/20 2006.01 (IA)

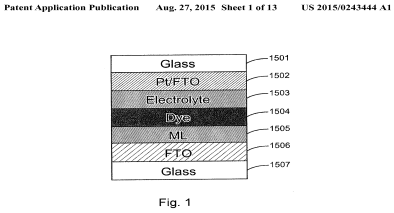


Fig. 1

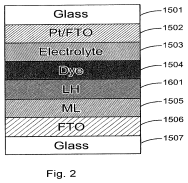


Fig. 2

PHOTOELECTRIC CONVERSION ELEMENT AND METHOD FOR PRODUCING THE SAME

To provide a photoelectric conversion element being excellent in photoelectric conversion efficiency and stability of photoelectric conversion function, a method for producing the photoelectric conversion element, and a solar cell using the photoelectric conversion element. A photoelectric conversion element having a substrate, a first electrode, a photoelectric conversion layer containing a semiconductor and a sensitizing pigment, a hole transport layer having a conductive polymer, and a second electrode, wherein the hole transport layer is formed by bringing the photoelectric conversion layer into contact with a solution containing a conductive polymer precursor and an oxidizer at a ratio of 0.1<[Ox]/[M] (wherein [Ox] is the molar concentration of the oxidizer; and [M] is the molar concentration of the conductive polymer precursor), and irradiating the photoelectric conversion layer with light.

Publication: US 20150243445 A1 20150827

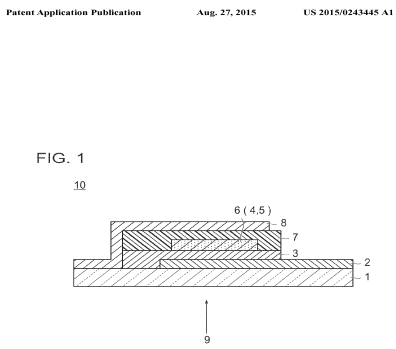
Applicant: KONICA MINOLTA, INC., Tokyo, JP

Inventor: Takayuki, Ishikawa, Tokyo, JP; Kazuya, Isobe, Tokyo, JP

Prio: JP 20120924 2012-209702, JP 20130213 2013-025881, WO 20150323 PCT/JP2013/075194

Appl.No: US14430407

IPC: H01G 9/20 2006.01 (IA)



PHOTOVOLTAIC CELL

A photovoltaic cell including: (a) a housing adapted to enclose the photovoltaic cell, and including an at least partially transparent cell wall; (b) an electrolyte, disposed within the cell wall, and containing a corrosive redox species; (c) an at least partially transparent conductive coating disposed on an interior surface of the cell wall, within the photovoltaic cell; (d) an anode disposed on the conductive coating, the anode including a porous film adapted to make intimate contact with the redox species, and a dye, absorbed on a surface of the porous film, the dye and the film adapted to convert photons to electrons; (e) a cathode, disposed within an interior surface of the housing and disposed substantially opposite the anode, including a conductive carbon layer, and a catalytic component, associated with the carbon layer and adapted to catalyze a redox reaction, the carbon layer adapted to transfer electrons from the catalytic component to a current collection component of the cathode, and (f) at least one metal strip or wire, electrically associated with the anode and with the conductive coating, the strip or wire having sufficient thickness to form a protrusion protruding above a plane of the porous film by at least 50 micrometers, wherein a distance between a surface of the catalytic component and a surface of the porous film is less than 20 micrometers.

Publication: US 20150243446 A1 20150827

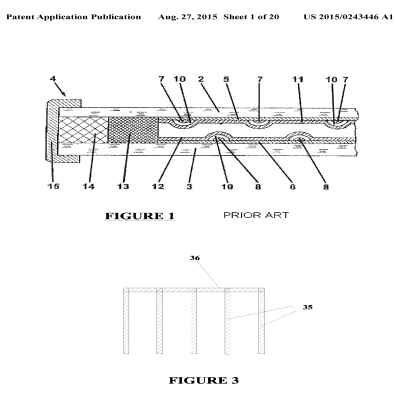
Applicant: 3GSOLAR PHOTOVOLTAICS LTD., Jerusalem, IL

Inventor: Jonathan R., GOLDSTEIN, Jerusalem, IL; Barry, BREEN, Jerusalem, IL; Ilya, YAKUPOV, Rehovot, IL; Eli, ROSH HODESH, Rishon Lezion, IL; Ron, PAZ, Rehovot, IL

Prio:

Appl.No: US14562728

IPC: H01G 9/20 2006.01 (IA)



DYE-SENSITIZED SOLAR CELL ELEMENT

A dye-sensitized solar cell element has at least one dye-sensitized solar cell, the dye-sensitized solar cell is equipped with a conductive substrate having a transparent substrate and a transparent conductive layer provided on one surface of the transparent substrate, a counter substrate facing the conductive substrate, an oxide semiconductor layer provided on the conductive substrate or the counter substrate, and an annular sealing portion bonding the conductive substrate and the counter substrate. The transparent conductive layer has a main body portion disposed on an inner side of the sealing portion, a groove is formed in the transparent conductive layer, and at least a part of the groove has a first groove formed along an external shape of the sealing portion, and an insulating material also continuously covers an edge portion of the main body portion as well as enters into at least a part of the first groove.

Publication: US 20150243447 A1 20150827

Applicant: FUJIKURA, LTD., Tokyo, JP; FUJIKURA, LTD., Tokyo, JP

Inventor: Kenichi, Okada, Chiba, JP; Katsuyoshi, Endoh, Chiba, JP; Hiroki, Usui, Chiba, JP; Ong-on, Topon, Chiba, JP

Prio: JP 20120901 2012-192703, JP 20120901 2012-192704, JP 20120901 2012-192705, JP 20130330 2013-075456, WO 20150218 PCT/JP2013/073454

Appl.No: US14422236

IPC: H01G 9/20 2006.01 (IA)

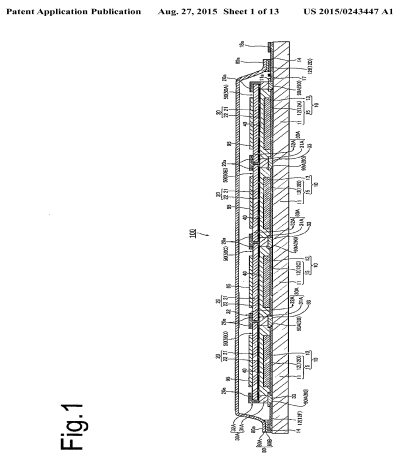


Fig.1

DYE-SENSITIZED SOLAR CELL ELEMENT FOR LOW ILLUMINANCE

The dye-sensitized solar cell element includes at least one dye-sensitized solar cell (DSC), a first current extracting portion and a second current extracting portion for extracting current from the at least one DSC. The DSC comprises a first electrode having a transparent substrate and a transparent conductive layer provided on the surface of the substrate, a second electrode facing the first electrode and having a metal substrate, an oxide semiconductor layer provided on the first electrode, and an annular sealing portion bonding the first electrode with the second electrode. The first current extracting portion is included in the conductive film of one DSC of the at least one DSC, the second current extracting portion is connected with the metal substrate of the second electrode of one DSC of the at least one DSC, and the first and second current extracting portions are disposed next to each other.

Publication: US 20150243448 A1 20150827

Applicant: FUJIKURA LTD., Koto-ku, Tokyo, JP; FUJIKURA LTD., Koto-ku, Tokyo, JP

Inventor: Kenichi, Okada, Chiba, JP; Naoshi, Yamada, Chiba, JP; Katsuyoshi, Endoh, Chiba, JP; Hiroki, Usui, Chiba, JP

Prio: JP 20120901 2012-192704, JP 20120901 2012-192706, JP 20120901 2012-192707, WO 20150227 PCT/JP2013/073453

Appl.No: US14424733

IPC: H01G 9/20 2006.01 (IA)

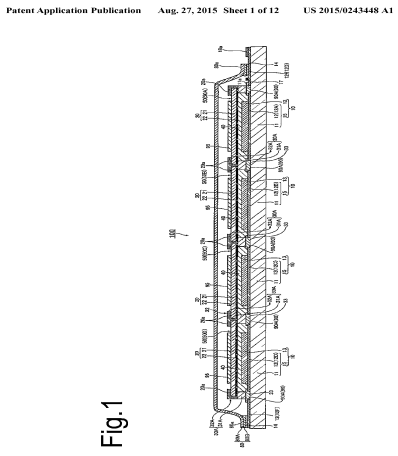


Fig.1

Lithium Ion Capacitor

Provided is a lithium ion capacitor that is safe and has a high energy density and a high output. Specifically provided is a lithium ion capacitor comprising, accommodated within an outer casing: an electrode stack obtained by stacking a negative electrode in which a negative-electrode active material layer including a carbon material as the negative-electrode active material is disposed on a negative-electrode collector, a separator comprising a polyethylene-containing polyolefin resin, and a positive electrode in which a positive-electrode active material layer including a positive-electrode active material layer comprising a carbon material or a carbonaceous material is disposed on a positive-electrode collector; and a non-aqueous electrolyte solution including a lithium ion-containing electrolyte.

Publication: US 20150243449 A1 20150827

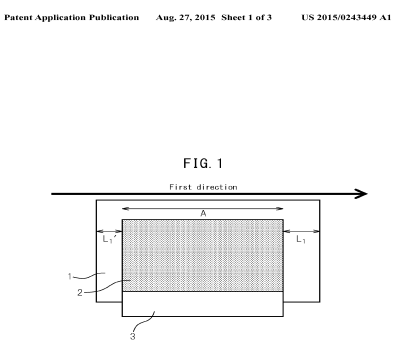
Applicant: Asahi Kasei Kabushiki Kaisha, Tokyo, JP; Asahi Kasei Kabushiki Kaisha, Osaka, JP

Inventor: Nobuhiro, Okada, Tokyo, JP; Osamu, Saito, Tokyo, JP; Kensuke, Niimura, Tokyo, JP

Prio: JP 20120920 2012-207509, JP 20120920 2012-207518, WO 20150319 PCT/JP2013/075159

Appl.No: US14429519

IPC: H01G 11/06 2006.01 (IA)



ELECTRICITY STORAGE MODULE

A electricity storage module is provided with a stack formed by stacking a plurality of electricity storage elements having positive and negative lead terminals that protrude outward from end portions thereof and insulating holder members made of an insulating material for holding the electricity storage elements. A connecting portion formed by connecting different polarized lead terminals of adjacent electric cells is disposed in a position shifted from other connecting portions than that connecting portion as seen from the stacking direction of the stack, and the insulating holder members are provided with windows that correspond to the connecting portions.

Publication: US 20150243450 A1 20150827

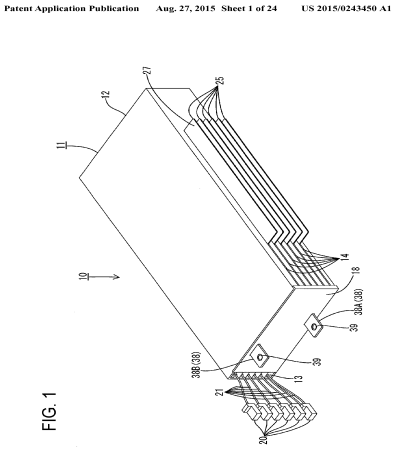
Applicant: AUTONETWORKS TECHNOLOGIES, LTD., Yokkaichi, Mie, JP; SUMITOMO WIRING SYSTEMS, LTD., Yokkaichi, Mie, JP; SUMITOMO ELECTRIC INDUSTRIES, LTD., Osaka-shi, Osaka, JP

Inventor: Hiroki, Shimoda, Yokkaichi, JP; Masakuni, Kasugai, Yokkaichi, JP; Makoto, Higashikozono, Yokkaichi, JP; Hisashi, Sawada, Yokkaichi, JP; Hiroomi, Hiramitsu, Yokkaichi, JP; Masato, Tsutsuki, Yokkaichi, JP; Kazuyuki, Nakagaki, Yokkaichi, JP

Prio: JP 20121010 2012-224898, WO 20150330 PCT/JP2013/074482

Appl.No: US14432299

IPC: H01G 11/12 2006.01 (IA)



METHOD FOR PREPARING CARBON NANOFIBER COMPOSITE AND CARBON NANOFIBER COMPOSITE PREPARED THEREBY

The present invention relates to a method for preparing a carbon nanofiber composite, and a carbon nanofiber composite prepared thereby. The method for preparing a carbon nanofiber composite provided by the present invention has reduced costs and is economical and efficient compared with a convention method for preparing a carbon nanofiber composite. In addition, the carbon nanofiber composite of the present invention can provide remarkable decomposition performance of organic pollutants, and a carbon nanofiber composite prepared by the preparation method of the present invention can be used in an electrode for an electric double-layer supercapacitor, a fuel cell electrode, a filter, a hydrogen storage material, and the like.

Publication: US 20150243451 A1 20150827

Applicant: DAEGU GYEONGBUK INSTITUTE OF SCIENCE AND TECHNOLOGY, Daegu, KR

Inventor: Soonhyun, Kim, Daejeon, KR; Sang Kyoo, Lim, Daegu, KR; Sung-Ho, Hwang, Daegu, KR; Minsun, Kim, Daegu, KR

Prio: KR 20121113 10-2012-0128390, WO 20150331 PCT/KR2013/008827

Appl.No: US14432689

IPC: H01G 11/36 2006.01 (IA)

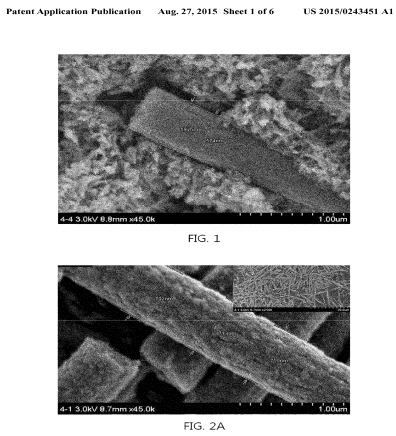


FIG. 1

FIG. 2A

CHARGE STORAGE DEVICES CONTAINING CARBON NANOTUBE FILMS AS ELECTRODES AND CHARGE COLLECTORS

An energy storage device includes a nanostructured network and an electrolyte in contact with the nanostructured network. The nanostructured network is an electrically conducting nanostructured network that provides combined functions of an electrode and a charge collector of the energy storage device. An electrical device includes an energy storage device that includes a nanostructured network and an electrolyte in contact with the nanostructured network, and a load-bearing electrical circuit electrically connected to the electrical energy storage device. The energy storage device is suitable to power the electrical device while in operation.

Publication: US 20150243452 A1 20150827

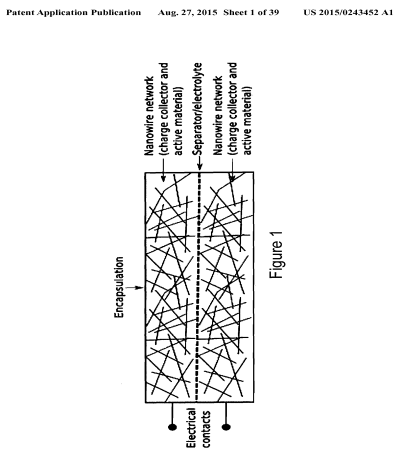
Applicant: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, Oakland, US; THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, Oakland, US

Inventor: George, Gruner, Los Angeles, US; Martti, Kaempgen, Hann. Muenden, DE; Andreas, Kiebele, Aesch, CH

Prio:

Appl.No: US14629247

IPC: H01G 11/36 2006.01 (IA)



ELECTRICITY STORAGE DEVICE AND METHOD FOR MANUFACTURING SAME

An electricity storage device includes an electricity storage element formed by winding an electrode body of an anode or cathode side along with a separator, an electrode leading section having an inclined edge is formed on an element end-face of the electricity storage element by a part of the electrode body.

Publication: US 20150243453 A1 20150827

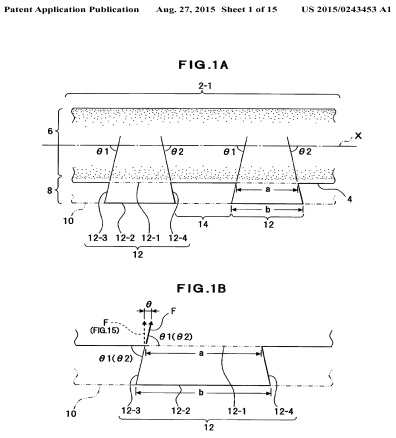
Applicant: NIPPON CHEMI-CON CORPORATION, Tokyo, JP; NIPPON CHEMI-CON CORPORATION, Tokyo, JP

Inventor: Junnosuke, Taguchi, Tokyo, JP

Prio: JP 20121126 2012-257360, JP 20121126 2012-257361

Appl.No: US14709771

IPC: H01G 11/86 2006.01 (IA)



Enhanced charge-storage electrochemical double layer capacitors with nanoscale electrolyte confinement tunability, and a method for production thereof to obtain axi-symmetric, high surface area electrode growth

An enhanced energy storage device such as double layer capacitor or battery is made starting with a substrate capable of conducting stored energy. The substrate material is one in which ordered pores can be formed, creating a template of densely arrayed pores. An electrode comprised of high density carbon nanotubes within the template is grown from and oriented substantially perpendicular to the substrate to constitute an axi-symmetric, ultra-high surface area electrode, and then the template is then selectively and only partially etched. An electrolyte is structurally confined anisotropically around the nanotubes by a remaining portion of the selectively and partially etched template so that substantially enhanced energy storage is obtained. The optimal structural confinement, which causes optimal charge storage, depends upon the amount of partial etching of the template which is defined by the electrolyte selected.

Publication: US 9099241 B1 20150804

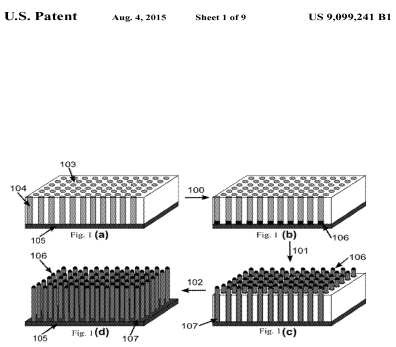
Applicant: Mainstream Engineering Corporation, Rockledge, US; Mainstream Engineering Corporation, Rockledge, US

Inventor: Dustin, Zastrow, Indialantic, US; Katherine, Nicol, Rockledge, US; Justin J., Hill, Merritt Island, US

Prio:

Appl.No: US13860005

IPC: H01G 9/00 2006.01 (IA)



Multilayer ceramic capacitor

A multilayer ceramic capacitor includes a body and first and second outer electrodes. The body includes a multilayer unit with ceramic dielectric layers and conductive layers alternately stacked on each other. The body is sectioned into a thickness-direction inner layer section that includes the multilayer unit and thickness-direction first and second outer layer sections that sandwich the thickness-direction inner layer section therebetween. A dimension of the thickness-direction second outer layer section is greater than a dimension of the thickness-direction first outer layer section. A conductive layer closest to a first principal surface and a conductive layer closest to a second principal surface are first and second outermost conductive layers, respectively. A curving amount of an extension portion of the second outermost conductive layer is greater than that of an extension portion of the first outermost conductive layer.

Publication: US 9099246 B1 20150804

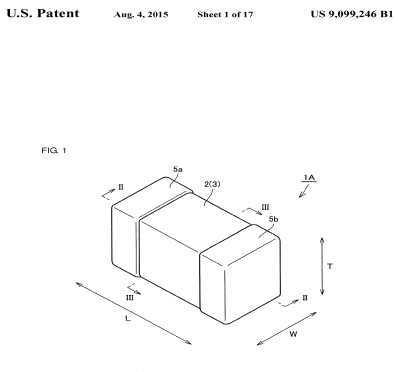
Applicant: Murata Manufacturing Co. Ltd., Kyoto, JP; Murata Manufacturing Co., Ltd., Nagaokakyo-shi, Kyoto-fu, JP

Inventor: Shota, Kitano, Nagaokakyo, JP; Hiroaki, Sugita, Nagaokakyo, JP; Mayumi, Yamada, Nagaokakyo, JP; Hirobumi, Adachi, Nagaokakyo, JP

Prio: JP 20140918 2014-190019

Appl.No: US14529599

IPC: H01G 4/30 2006.01 (IA)



Multilayer ceramic capacitor

A multilayer ceramic capacitor includes a body including a multilayer unit with ceramic dielectric layers and conductive layers alternately stacked on each other. The body includes a thickness-direction inner layer section including the multilayer unit and thickness-direction first and second outer layer sections that sandwich the thickness-direction inner layer section therebetween. A dimension of the thickness-direction second outer layer section is greater than a dimension of the thickness-direction first outer layer section. A width of a second outermost conductive layer closest to a second principal surface of the body is smaller than a width of a central conductive layer closest to a center of the multilayer unit in the thickness direction. The thickness-direction second outer layer section includes an outer portion which defines the second principal surface and an inner portion disposed between the thickness-direction inner layer section and the outer portion, and a boundary portion disposed between the outer portion and the inner portion has a larger Si content than the outer portion.

Publication: US 9099247 B1 20150804

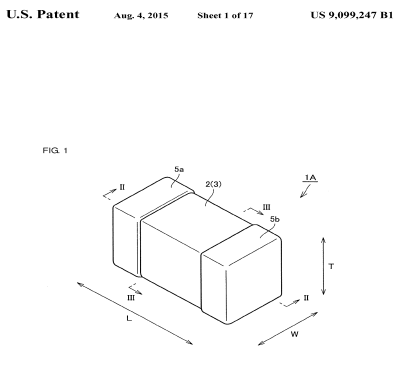
Applicant: Murata Manufacturing Co., Ltd., Kyoto, JP; Murata Manufacturing Co., Ltd., Nagaokakyo-shi, Kyoto-fu, JP

Inventor: Shota, Kitano, Nagaokakyo, JP; Hiroaki, Sugita, Nagaokakyo, JP; Mayumi, Yamada, Nagaokakyo, JP

Prio: JP 20140813 2014-164954

Appl.No: US14568465

IPC: H01G 4/01 2006.01 (IA)



METHOD FOR FORMING PATTERN

The invention provides a process and an apparatus for producing a high quality electronic component by reducing sagging at pattern side walls, which may occur when patterns of a wiring, an electrode, etc. are printed by a screen printing process using an electroconductive paste, an insulation paste, or a semiconductor paste, and reducing a mesh mark on the patterns of a wiring, an electrode, etc., or a full solid surface film, as well as a pattern formation process, by which screen printing can be applied and double face printing can be conducted with the number of process steps less than a conventional process. A pattern is formed by that a pattern is printed on a blanket having a surface comprising polydimethylsiloxane using an electroconductive paste, an insulation paste, or a semiconductor paste by a screen printing process, and the pattern is transferred from the blanket to a printing object.

Publication: EP 2903007 A1 20150805

Applicant: National Institute of Advanced Industrial Science and Technology, 3-1, Kasumigaseki 1-chome Chiyoda-ku, Tokyo 100-8921, JP

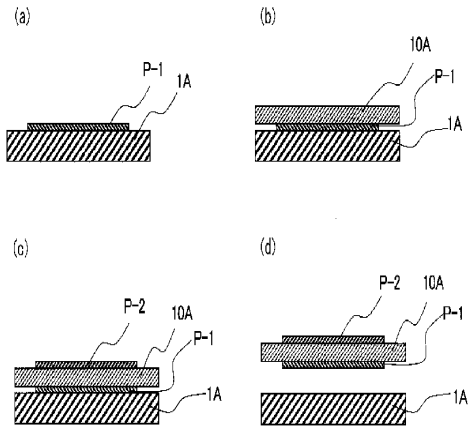
Inventor: NOMURA, Kenichi, c/o NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY Tsukuba Central 5 1-1 Higashi 1-chome, Tsukuba-shi Ibaraki 305-8565, JP; USHIJIMA, Hirobumi, c/o NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY Tsukuba Central 5 1-1 Higashi 1-chome, Tsukuba-shi Ibaraki 305-8565, JP; IWASE, Noriko, c/o NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY Tsukuba Central 5 1-1 Higashi 1-chome, Tsukuba-shi Ibaraki 305-8565, JP; YOSHIDA, Manabu, c/o NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY Tsukuba Central 5 1-1 Higashi 1-chome, Tsukuba-shi Ibaraki 305-8565, JP

Prio: JP 20120925 2012210892

Appl.No: EP13840499

IPC: H01B 13/00 2006.01 (IA)

[Fig. 7]



ELECTROLYTIC SOLUTION FOR ELECTROLYTIC CAPACITOR, AND ELECTROLYTIC CAPACITOR

Provided is an electrolytic solution suitable for use in a 100 WV class electrolytic capacitor having low inductance at low temperatures and high durability in high-temperature use conditions. This electrolytic solution for an electrolytic capacitor contains: a mixed organic solvent including sulfolane and γ-butyrolactone; water; an electrolyte selected from the group consisting of a quaternized pyridinium salt of carboxylic acid and a quaternized imidazolinium salt of carboxylic acid; boric acid; and mannitol; and has a mass ratio of boric acid and mannitol in the range of 1:l .2 to 1:1.6, and a total amount of boric acid and mannitol of 10.0 to 14.5 % by mass of the total electrolytic solution, the water content being 1.5 to 2.0 % by mass of the total electrolytic solution.

Publication: EP 2903010 A1 20150805

Applicant: Nippon Chemi-Con Corporation, 6-4 Osaki 5-chome Shinagawa-ku, Tokyo 141-8605, JP

Inventor: TAKEUCHI, Shingo, c/o Nippon Chemi-Con Corporation 6-4 Osaki 5-chome Shinagawa-ku, Tokyo 141-8605, JP

Prio: JP 20120929 2012218915

Appl.No: EP13841642

IPC: H01G 9/035 2006.01 (IA)

POLYMER SOLAR CELL AND PREPARATION METHOD THEREOF

Disclosed are a polymer solar cell and a preparation method thereof. The preparation method comprises: successively preparing on a clean glass substrate(1), a cathode (2), an electronic buffer layer (3) and an active layer (4) by the steps of dissolving poly(3,4-ethylenedioxythiophene) and polymerized p-styrene sulphonic acid, dissolving zinc oxide into acetic acid to obtain a zinc oxide solution, mixing the zinc oxide solution with the solution of poly(3,4-ethylenedioxythiophene) and polymerized p-styrene sulphonic acid to obtain a mixed solution, spin-coating the mixed solution on the active layer(4) and then by drying to obtain the anode (5), and finally obtain the polymer solar cell. Using the refractive index difference between the anode and the active layer, the light absorption and energy conversion efficiency of a polymer solar cell are improved, resulting in a simple preparation process, and the use of a reversed structure facilitates improving the lifetime of a polymer solar cell and enables the product and method to have industrialized application prospects.

Publication: EP 2903029 A1 20150805

Applicant: Ocean's King Lighting Science & Technology Co., Ltd, Nanhai Road Neptunus Bldg. 22F A Block Nanshan, Shenzhen, Guangdong 518000, CN; Shenzhen Ocean's King Lighting Engineering Co., Ltd., Dongbin Road No.84 Main Building of Huaye Compan F/2 North Side Nanshan, Shenzhen, Guangdong 518000, CN

Inventor: ZHOU, Mingjie, 22F. A Block Neptunus Bldg. Nanhai Road Nanshan, Shenzhen Guangdong 518000, CN; WANG, Ping, 22F. A Block Neptunus Bldg. Nanhai Road Nanshan, Shenzhen Guangdong 518000, CN; HUANG, Hui, 22F. A Block Neptunus Bldg. Nanhai Road Nanshan, Shenzhen Guangdong 518000, CN; CHEN, Jixing, 22F. A Block Neptunus Bldg. Nanhai Road Nanshan, Shenzhen Guangdong 518000, CN

Prio:

Appl.No: EP12885934

IPC: H01L 31/00 2006.01 (IA)

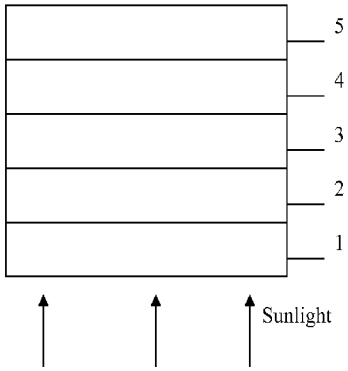


Fig. 1

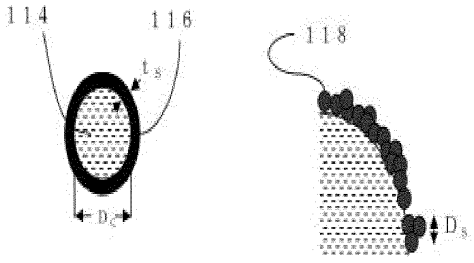
COLLECTOR, ELECTRODE STRUCTURE, NONAQUEOUS ELECTROLYTE BATTERY, CONDUCTIVE FILLER, AND ELECTRICITY STORAGE COMPONENT

The present invention provides a current collector having a conductive layer which is excellent in adhesion strength and can exhibit a PTC function for stably contributing to safety, when used for an electrode structure for non-aqueous electrolyte batteries or for electrical storage devices. A current collector, including a metal foil and a conductive layer formed on at least one side of the metal foil, the conductive layer being formed partially or entirely on the surface of the metal foil; is provided. Here, the conductive layer contains core shell particles including core particles 114 having insulating crystalline polymer as a main component, and a shell layer 116 having conductivity, the shell layer 116 being formed on the surface of the core particles 114.

Publication: EP 2903063 A1 20150805

Applicant: Furukawa Electric Co., Ltd., 2-3, Marunouchi 2-chome, Chiyoda-ku Tokyo 100-8322, JP; UACJ Corporation, 1-7-2, Otemachi Chiyoda-ku, Tokyo 100-0004, JP; UACJ Foil Corporation, 6-5, Kabuto-cho, Nihonbashi, Chuo-ku Tokyo 1030026, JP

[FIG. 3]



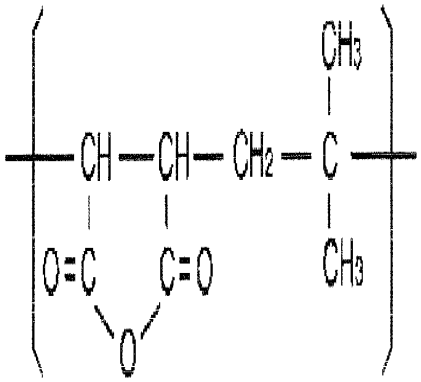
Inventor: HARA, Hidekazu, c/o FURUKAWA ELECTRIC CO. LTD. 2-3 Marunouchi 2-chome Chiyoda-ku, Tokyo 100-8322, JP; IIDA, Takahiro, c/o FURUKAWA ELECTRIC CO. LTD. 2-3 Marunouchi 2-chome Chiyoda-ku, Tokyo 100-8322, JP; MORISHIMA, Yasumasa, c/o FURUKAWA ELECTRIC CO. LTD. 2-3 Marunouchi 2-chome Chiyoda-ku, Tokyo 100-8322, JP; ITO, Takayori, c/o FURUKAWA ELECTRIC CO. LTD. 2-3 Marunouchi 2-chome Chiyoda-ku, Tokyo 100-8322, JP; SAITO, Sohei, c/o UACJ Corporation 1-7-2, Otemachi Chiyoda-ku, Tokyo 100-0004, JP; KATO, Osamu, c/o Furukawa-Sky Aluminum Corp. 14-1 Sotokanda 4-Chome Chiyoda-ku, Tokyo 101-8970, JP; HONKAWA, Yukiou, c/o UACJ Corporation 1-7-2, Otemachi Chiyoda-ku, Tokyo 101-8970, JP; YAEGASHI, Tatsuhiro, c/o UACJ Corporation 1-7-2, Otemachi Chiyoda-ku, Tokyo 101-8970, JP; KATAOKA, Tsugio, c/o UACJ Foil Corporation Shiga Plant 61-8 Sasatani Yamadera-cho, Kusatsu-shi Shiga 525-0042, JP; INOUE, Mitsuya, c/o UACJ Foil Corporation Shiga Plant 61-8 Sasatani Yamadera-cho, Kusatsu-shi Shiga 525-0042, JP; YAMABE, Satoshi, c/o UACJ Foil Corporation Shiga Plant 61-8 Sasatani Yamadera-cho, Kusatsu-shi Shiga 525-0042, JP
Prio: JP 20120928 2012218519
Appl.No: EP13840765
IPC: H01M 4/66 2006.01 (IA)

CONDUCTIVE ADHESIVE COMPOSITION FOR ELECTROCHEMICAL ELEMENT ELECTRODE, COLLECTOR WITH ADHESIVE LAYER, AND ELECTRODE FOR ELECTROCHEMICAL ELEMENT

The present invention is characterized by containing an electroconductive carbon, a water-soluble polymer, a particulate binding agent, and a dispersion medium, in which the water-soluble polymer is an isobutylene-maleic anhydride copolymer containing a structural unit (a) represented by the following general formula (I), , and is partially hydrolyzed.

Publication: EP 2903064 A1 20150805
Applicant: Zeon Corporation, 6-2, Marunouchi 1-chome Chiyoda-ku, Tokyo 100-8246, JP
Inventor: YOSHIDA Naoki, c/o ZEON CORPORATION 6-2 Marunouchi 1-chome Chiyoda-ku, Tokyo 100-8246, JP
Prio: JP 20120928 2012217137
Appl.No: EP13842498
IPC: H01M 4/66 2006.01 (IA)

{Chem. 15}



(I)

Gel-type polymer electrolyte comprising eutectic mixture and an electrochemical device containing the same

A gel-type polymer electrolyte is provided which comprises a eutectic mixture. The eutectic mixture is composed of: (a) a heterocyclic compound selected from imidazole, pyrazole, triazole, pyrimidine, 4-isopropylimidazole, 4-methylimidazole, ethoxypyridine and N-ethylimidazole; and (b) an ionizable lithium salt. The gel-type polymer electrolyte is formed by polymerization of the eutectic mixture and a precursor solution containing a polymerizable monomer.

Publication: EP 2903074 A1 20150805

Applicant: LG Chem, Ltd., 20, Yoido-dong, Youngdungpo-gu, Seoul 150-721, KR

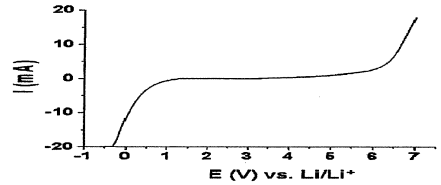
Inventor: Lee, Byoung-Bae, 740-5 Seongjeong 1-dong Cheonan-si, 331-934 Chungcheongnam-do, KR; Oh, Jae-Seung, 103-1302 Samsung Apt. Suseo-dong Gangnam-gu, 135-521 Seoul, KR; Park, Ji-Won, 3-105 LG Chemical Employee Apt. Doryong-dong Yuseong-gu, 305-340 Daejeon, KR; Choi, Shin-Jung, 744-43 Sin-dong Iksan-si, 570-976 Jeonbuk, KR; Park, Jae-Duk, 106-1203 Cheonggu Narae Apt. Jeonmin-dong Yuseong-gu, 305-729 Daejeon, KR; Kim, Dong-Su, 209-401 Central Park 2 Danji Apt. Munhwa 1-dong Jung-gu, 301-792 Daejeon, KR; Lee, Hyo-Jin, 101 Shin Yeonlip LG Chemical Employee Apt. Doryong-dong Yuseong-gu, 305-340 Daejeon, KR

Prio: KR 20080118 20080005650

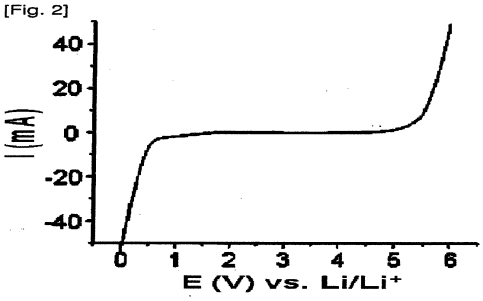
Appl.No: EP15152656

IPC: H01M 10/0565 2010.01 (IA)

[Fig. 1]



[Fig. 2]



NONAQUEOUS ELECTROLYTE SOLUTION, ELECTROCHEMICAL DEVICE, LITHIUM ION SECONDARY CELL, AND MODULE

The present invention aims to provide a nonaqueous electrolyte solution which enables production of a lithium ion secondary cell excellent in high temperature storage characteristics and cycling characteristics at high voltages. The present invention relates to a nonaqueous electrolyte solution including: a nonaqueous solvent; and an electrolyte salt; wherein the nonaqueous solvent contains a fluorinated linear carbonate (A) represented by Formula (1):   RfOCOOR   (1) where Rf represents a C1-4 fluorinated alkyl group and R represents a C1-4 alkyl group, and at least one cyclic carbonate (B) selected from the group consisting of ethylene carbonate, propylene carbonate, and fluoroethylene carbonate, and the nonaqueous solvent also contains at least one compound (α) selected from the group consisting of (I) a compound represented by Formula (2):   RfOH   (2) where Rf is defined as above, (II) a compound represented by Formula (3)   ROH   (3) where R is defined as above, and (III) a compound represented by Formula (4):   ROCOCl   (4) where R is defined as above, and at least one compound (ß) selected from the group consisting of (IV) a compound represented by Formula (5):   HO(CH2CH2)nOH   (5) where n is an integer of 1 to 5, (V) a compound represented by Formula (6):   HO(CHCH3CH2)nOH   (6) where n is an integer of 1 to 5, and (VI) a compound represented by Formula (7):   HO(CHFCH2)nOH   (7) where n is an integer of 1 to 5, the compound (α) being contained in an amount of 5000 ppm or less based on the amount of the fluorinated linear carbonate (A), the compound (ß) being contained in an amount of 50 ppm or less based on the amount of the cyclic carbonate (B).

Publication: EP 2903075 A1 20150805

Applicant: Daikin Industries, Ltd., Umeda Center Building 4-12 Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP

Inventor: SAKATA Hideo, c/o DAIKIN INDUSTRIES, LTD., Umeda Center Building 4-12, Nakazaki-Nishi 2-chome, Kita-ku, Osaka-shi Osaka 530-8323, JP; YAMAZAKI, Shigeaki, c/o DAIKIN INDUSTRIES, LTD., Umeda Center Building 4-12, Nakazaki-Nishi 2-chome, Kita-ku, Osaka-shi Osaka 530-8323, JP; YAMAUCHI, Akiyoshi, c/o DAIKIN INDUSTRIES, LTD., Umeda Center Building 4-12, Nakazaki-Nishi 2-chome, Kita-ku, Osaka-shi Osaka 530-8323, JP; KAGAWA, Michiru, c/o DAIKIN INDUSTRIES, LTD., Umeda Center Building 4-12, Nakazaki-Nishi 2-chome, Kita-ku, Osaka-shi Osaka 530-8323, JP; NAKAZONO, Aoi, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome, Kita-ku, Osaka-shi Osaka 530-8323, JP; KOH, Meiten, c/o DAIKIN INDUSTRIES, LTD., Umeda Center Building 4-12, Nakazaki-Nishi 2-chome, Kita-ku Osaka-shi Osaka 530-8323, JP

Prio: JP 20120928 2012218675

Appl.No: EP13841887

IPC: H01M 10/0569 2010.01 (IA)

ELECTRODE FOR ELECTRICAL STORAGE ELEMENT, AND NONAQUEOUS LITHIUM ELECTRICAL STORAGE ELEMENT

Provided is a non-aqueous lithium-type electrical storage element having both high output and high capacity per volume. The non-aqueous lithium-type electrical storage element relevant to the present invention is a non-aqueous lithium-type electrical storage element having: an electrode body laminated with a positive electrode having a positive electrode active material layer including a positive electrode active material, and a positive electrode current collector, a separator, and a negative electrode having a negative electrode active material layer including a negative electrode active material, and a negative electrode current collector; a non-aqueous electrolytic solution including a lithium ion; and an outer casing, wherein the positive electrode active material comprises an active material, having a BET specific surface area of 2600 m2/g to 4500 m2/g, and having an average particle size of 1 µm to 30 µm, in which mesopore volume V1 (cc/g) derived from a pore having a diameter of 20 Å to 500 Å, calculated by the BJH method, is 0.8 <V1≤2.5, and micro-pore volume V2 (cc/g) derived from a pore having a diameter of smaller than 20 Å, calculated by the MP method, is 0.92 <V2≤3.0; and the positive electrode active material layer has a bulk density of 0.40 g/cm3 to 0.70 g/cm3.

Publication: EP 2905793 A1 20150812

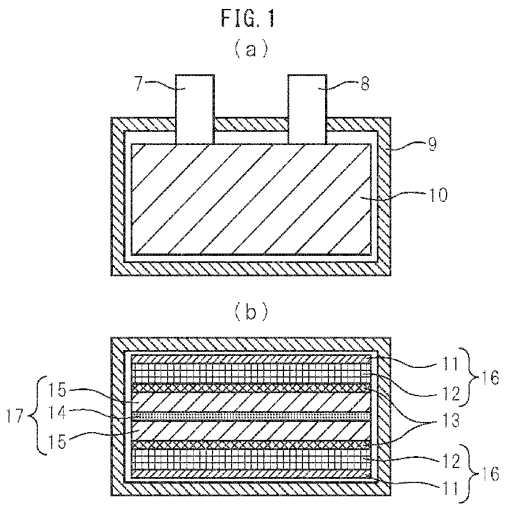
Applicant: Asahi Kasei Kabushiki Kaisha, 1-105 Kanda Jinbocho, Chiyoda-ku Tokyo 101-8101, JP

Inventor: HASHIMOTO, Tomotaka, 1-105 Kanda Jinbocho Chiyoda-ku, Tokyo 101-8101, JP

Prio: JP 20121001 2012219585

Appl.No: EP13843320

IPC: H01G 11/24 2013.01 (IA)

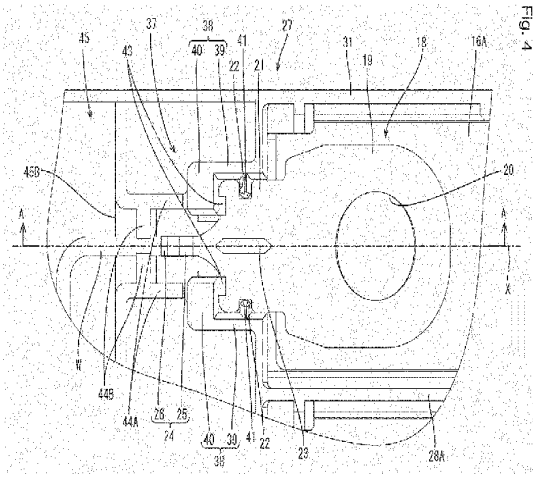


WIRING MODULE

A wiring module (15) includes connecting members (16A, 16B) for connecting adjacent electrode terminals (13A, 13B) of a plurality of electricity storage elements (11), an insulating protector (27) that has partition walls (31) surrounding the connecting members (16A, 16B) and that accommodates the connecting members (16A, 16B), and voltage detection terminals (18) that are connected to the end portions of electric wires (W) and that are laid over the connecting members (16A, 16B). The voltage detection terminal (18) includes a fastened portion (19) that is laid over the connecting member (16A, 16B) and that is fastened by a nut (46), and a terminal guide-out portion (21) that is guided to an area not overlapping the connecting member (16A, 16B). The insulating protector (27) includes a positioning portion (37) into which the terminal guide-out portion (21) is fitted and with which the terminal guide-out portion (21) is positioned.

Publication: EP 2908361 A1 20150819

Applicant: AutoNetworks Technologies, Ltd., 1-14 Nishisuehiro-cho, Yokkaichi-shi, Mie 510-8503, JP; Sumitomo Wiring Systems, Ltd., 1-14, Nishisuehiro-cho, Yokkaichi-shi, Mie 510-8503, JP; Sumitomo Electric Industries, Ltd., 5-33, Kitahama 4-chome Chuo-ku, Osaka-shi, Osaka 541-0041, JP



Inventor: NAKAYAMA, Osamu, c/o AUTONETWORKS TECHNOLOGIES Ltd. 1-14 Nishisuehiro-cho, Yokkaichi-shi Mie 510-8503, JP; MORITA, Mitsutoshi, c/o AUTONETWORKS TECHNOLOGIES Ltd. 1-14 Nishisuehiro-cho, Yokkaichi-shi Mie 510-8503, JP; TAKADA, Kotaro, c/o AUTONETWORKS TECHNOLOGIES Ltd. 1-14 Nishisuehiro-cho, Yokkaichi-shi Mie 510-8503, JP; FUJITA, Tetsuya, c/o SUMITOMO WIRING SYSTEMS Ltd. 1-14 Nishisuehiro-cho, Yokkaichi-shi Mie 510-8503, JP; ISHIKAWA, Yoshiyuki, c/o SUMITOMO WIRING SYSTEMS Ltd. 1-14 Nishisuehiro-cho, Yokkaichi-shi Mie 510-8503, JP; YASUDA, Tomoaki, c/o SUMITOMO WIRING SYSTEMS Ltd. 1-14 Nishisuehiro-cho, Yokkaichi-shi Mie 510-8503, JP

Prio: JP 20130828 2013176644, JP 20130913 2013190658

Appl.No: EP13892421

IPC: H01M 2/10 2006.01 (IA)

New lithium-doped Pernigraniline-based materials, their methods of preparation and their uses in various applications

The present invention relates to a new lithium-doped Pernigraniline-based material, a method for the preparation thereof, its use in various applications, an electrode comprising said lithium-doped Pernigraniline-based material and its preparation method, a membrane comprising said lithium-doped Pernigraniline-based material and its preparation method, and an electrochemical storage system comprising said electrode.

Publication: EP 2910590 A1 20150826

Applicant: Centre National de la Recherche Scientifique, 3, rue Michel-Ange, 75016 Paris, FR; UNIVERSITE DE NANTES, 1, quai de Tourville, 44000 Nantes, FR; Université de Picardie Jules Verne, Chemin du Thil, 80025 Amiens, FR

Inventor: Gaubicher, Joël, 56, rue du Maine, 44000 NANTES, FR; Jimenez Manero, Pablo, 10 rue Beauregard, 44000 NANTES, FR; Lestriez, Bernard, 22 avenue de l'Eperonnière, 44000 NANTES, FR; Bonnet, Jean-Pierre, 35 rue Copernic, 75116 PARIS, FR; Guyomard, Dominique, 3, rue de la Motte, 44880 SAUTRON, FR

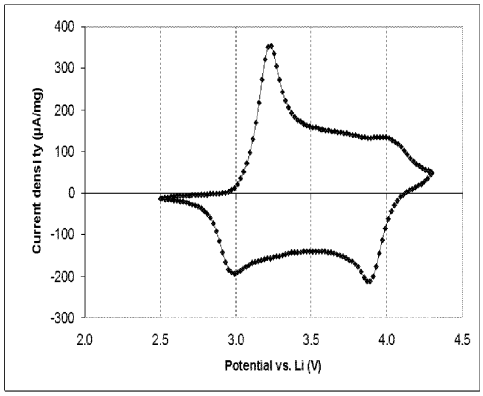


FIG.3

Prio:

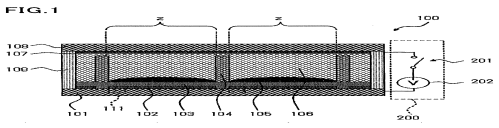
Appl.No: EP14305254

IPC: C08G 73/02 2006.01 (IA)

HIGH DIELECTRIC FILM

The present invention aims to provide a film having a high dielectric constant and a low dissipation factor. The high dielectric film of the present invention includes a vinylidene fluoride/tetrafluoroethylene copolymer (A) with a mole ratio (vinylidene fluoride)/(tetrafluoroethylene) of 95/5 to 80/20. The film includes an α-crystal structure and a ß-crystal structure. The ratio of the ß-crystal structure is 50% or more.

Publication: EP 2910604 A1 20150826



Applicant: Daikin Industries, Ltd., Umeda Center Building 4-12 Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP

Inventor: TATEMICHI Mayuko, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; OTA Miharu, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; YOKOTANI Kouji, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; KOMATSU Nobuyuki, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; NAKAMURA Hisako, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; SHIGENAI Fumiko, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; HAZAMA Takeshi, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; KINOSHITA Masakazu, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; KOH Meiten, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; ISHIKAWA Takuji, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; IGUCHI Takashi, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; UCHIDA Kazunobu, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; FUKATANI Tomoyuki, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; KITAHARA Takahiro, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP; KODANI Tetsuhiro, c/o DAIKIN INDUSTRIES, LTD. Umeda Center Building 4-12, Nakazaki-Nishi 2-chome Kita-ku, Osaka-shi, Osaka 530-8323, JP

Prio: JP 20121016 2012228973, JP 20130118 2013007606

Appl.No: EP13848067

IPC: C08L 27/16 2006.01 (IA)

ELECTROLYTE SALT AND ELECTROLYTE FOR ELECTRICITY STORAGE DEVICE, AND ELECTRICITY STORAGE DEVICE

Provided is an electrolyte salt comprising a quaternary ammonium cation indicated by formula (1) and a trimethylsilyl alkanesulfonate anion indicated by formula (2). (In the formula, R1-R4 each independently indicate a C1-4 alkyl group or an alkoxyalkyl group indicated by -(CH2)n-OR. Any two among R1-R4 can mutually bond and form a ring together with a nitrogen atom to which same have bonded. The remaining two can mutually bond and form a spiro ring having a nitrogen atom as the spiro atom therefor. R indicates a methyl group or an ethyl group. n indicates 1 or 2 and m indicates 2 or 3.)

Publication: EP 2911167 A1 20150826

Applicant: Nisshinbo Holdings Inc., 31-11, Nihonbashiningyo-cho 2-chome Chuo-ku, Tokyo 103-8650, JP

Inventor: MASUDA Gen, c/o Nisshinbo Holdings Inc. 1-2-3 Onodai Midori-ku Chiba-shi, Chiba 267-0056, JP

Prio: JP 20121016 2012229110

Appl.No: EP13847905

IPC: H01G 11/62 2013.01 (IA)

(1)

GASKET

Brennstoffzellendichtung vom filmintegrierten Typ, die ein Paar Harzfilme (6,7) umfasst, die jeweils eine Schicht aus vulkanisiertem Kautschuk (8,9) mit einem Querschnitt einer stufenförmigen Wand vom umgekehrten T-Typ, die aus einem Kautschuk geformt ist, der an dem Harzfilm haftet, und auf den äußeren Oberflächen der äußeren peripheralen Kantenteile der Harzschichten angebracht ist, wenn diese in eine Brennstoffzelle eingesetzt wird, aufweisen.

Publication: EP 1174482 B1 20150805

Applicant: NOK CORPORATION, 12-15 Shiba Daimon 1-chome, Minato-ku, Tokyo 105-8585, JP

Inventor: SENDA, Kazuhisa, 1053, Kameino, Fujisawa City, Kanagawa 252-0813, JP; ANDO, Osamu, 17-2, Fukuda 7-chome, Yamato City, Kanagawa 242-0024, JP

Prio: JP 19990427 11940899

Appl.No: EP922878

IPC: C09K 3/10 2006.01 (IA)

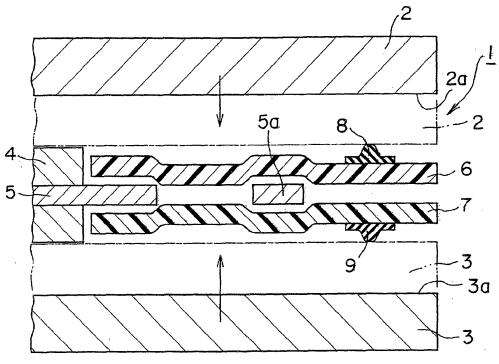


Fig. 1

COMPOSITE POLYMER ELECTROLYTE COMPOSITION

Verbundpolymerelektrodenzusammensetzung, umfassend ein Produkt, das durch Polymerisation einer Monomerzusammensetzung in situ hergestellt wird, welche (a) geschmolzenes Monomersalz mit einer polymerisierbaren funktionellen Gruppe und einer quaternären Ammoniumsalz-Struktur, bestehend aus einem quaternären Ammoniumkation und einem fluorhaltigen Anion, und (b) ein Lithiumsalz aus einem Lithiumion und einem fluorhaltigen Anion in Gegenwart eines elektrochemisch inerten polymeren Verstärkungsmaterials umfasst.

Publication: EP 1612809 B1 20150819

Applicant: PIOTREK CO., LTD., 7-26-805, Nagara 2-chome Otsu Shiga, JP

Inventor: OGATA, Naoya, 6-29-6, Asagayakita, Suginami-ku, Tokyo, 1660001, JP; KAGAWA, Hiroshi, 31-10, Yodonoharamachi, Takatsuki-shi, Osaka, 5690001, JP; SADA, Makiko, 5-2-1, Aoyama, Otsu-shi, Shiga, 5202101, JP

Prio: JP 20030331 2003129589

Appl.No: EP4720736

IPC: H01B 1/06 2006.01 (IA)

ELECTROLYTE SOLUTION FOR ALUMINUM ELECTROLYTIC CAPACITOR, AND ALUMINUM ELECTROLYTIC CAPACITOR USING THE SAME

Eine Elektrolytlösung, umfassend einen Elektrolyten (C), gebildet aus einem Alkylphosphatanion (A), dargestellt durch die nachstehend angegebene Formel (1) oder (2), und einem Kation (B), und ein organisches Lösungsmittel (D), wobei der Gehalt an in der Elektrolytlösung enthaltener Phosphorsäure 0,01 bis 1 Gew.-% beträgt, wobei der Gehalt des Elektrolyten (C) 5 bis 70 Gew.-%, bezogen auf das Gewicht des Elektrolyten (C) und des organischen Lösungsmittels (D), beträgt, wobei der Wassergehalt 0,01 bis 5 Gew.-%, bezogen auf das Gewicht des Elektrolyten (C) und des organischen Lösungsmittels (D), beträgt, und wobei das Kation (B) ein Amidiniumkation (B1) ist; wobei R1 eine Alkylgruppe mit 1 bis 10 Kohlenstoffatomen ist und R2 ein Wasserstoffatom oder eine Alkylgruppe mit 1 bis 10 Kohlenstoffatomen ist.

Publication: EP 2034497 B1 20150805

Applicant: Sanyo Chemical Industries, Ltd., 11-1, Ikkyo Nomoto-cho, Higashiyama-ku, Kyoto-shi, Kyoto 605-0995, JP

Inventor: TAGUCHI, Shinya, 502, Bloom-Wiste 12-6, Sakae-machi, Munakata-shi Fukuoka 811-4173, JP; SASADA, Shinya, SANYO CHEMICAL INDUSTRIES, LTD. 11-1, Ikkyo Nomoto-cho Higashiyama-ku, Kyoto-shi Kyoto 605-0995, JP; KAMEO, Azusa, 3-1-5-606, Tsurumi Chuou Tsurumi-ku, Yokohama-shi Kanagawa 230-0051, JP

Prio: JP 20060620 2006169553, JP 20061027 2006291883

Appl.No: EP7737265

IPC: H01G 9/035 2006.01 (IA)

ELECTRIC DOUBLE LAYER CAPACITOR

Elektrischer Doppelschichtkondensator, umfassend eine polarisierbare Elektrodenschicht, die einen aktivierten Kohlenstoff, ein leitfähiges Agens und ein Bindemittel enthält, worin ein äußerer spezifischer Flächeninhalt des aktivierten Kohlenstoffs, der als ein spezifischer Flächeninhalt pro Volumeneinheit der polarisierbaren Elektrodenschicht definiert ist, der durch ein t-plot-Verfahren unter Ausschluss von Mikroporen mit einem kleineren Porendurchmesser als 2 Nanometer (20 Ängström) aus einer Stickstoffabsorptionsisotherme berechnet wird, in einem Bereich von 450 bis 800 m2/cm3 liegt, und ein auf Partikelzwischenräumen beruhendes Volumen pro Volumeneinheit der polarisierbaren Elektrodenschicht, das gemäß dem in dieser Beschreibung erwähnten Verfahren berechnet wird, in einem Bereich von 0,05 bis 0,12 cm3/cm3 liegt, dadurch gekennzeichnet, dass: eine relative Partikelmenge pro Volumen in einem Modendurchmesser einer Partikelgrößenverteilung in dem aktivierten Kohlenstoff in einem Bereich von 10 bis 30% liegt.

Publication: EP 2058828 B1 20150819

Applicant: W.L. Gore & Associates, Co., Ltd., 1-8-15 Konan Minato-ku, 108-0075, Tokyo, JP

Inventor: NORIEDA, Hiroyuki, JAPAN GORE-TEX INC. 42-5, Akatsutsumi 1-chome, Setagaya-ku, Tokyo 1568505, JP; KOBAYASHI, Kotaro, JAPAN GORE-TEX INC. 42-5, Akatsutsumi 1-chome, Setagaya-ku, Tokyo 1568505, JP

Prio: JP 20060901 2006237562

Appl.No: EP7806797

IPC: H01G 11/24 2013.01 (IA)

Fig.1

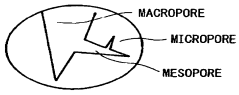
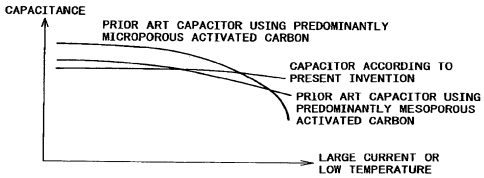


Fig.2



LAYER CONFIGURATION WITH IMPROVED STABILITY TO SUNLIGHT EXPOSURE

Zusammensetzung ohne Hydrochinon, enthaltend mindestens ein Polymer aus der Gruppe bestehend aus Poly-(3,4-methylendioxythiophen), Poly-(3,4-methylendioxythiophen)-Derivaten, Poly-(3,4-ethylendioxythiophen), Poly-(3,4-ethylendioxythiophen)-Derivaten, Poly-(3,4-propylendioxythiophen), Poly-(3,4-propylendioxythiophen)-Derivaten, Poly-(3,4-butylendioxythiophen), Poly-(3,4-butylendioxythiophen)-Derivaten und Copolymeren derselben, ein Polyanion, mindestens eine aromatische Verbindung ohne Sulfogruppen und mit mindestens zwei Hydroxygruppen und mindestens eine eine Polyhydroxy- und/oder Carboxygruppe oder Amid- oder Lactamgruppe enthaltende aliphatische Verbindung.

Publication: EP 2079792 B1 20150805

Applicant: Agfa-Gevaert N.V., Septestraat 27, 2640 Mortsel, BE

Inventor: LOUWET, Frank, AGFA-GEVAERT IP Department 3800 Septestraat 27, 2640 Mortsel, BE; BOLLENS, Louis, AGFA-GEVAERT IP Department 3800 Septestraat 27, 2640 Mortsel, BE

Prio: US 20061106 864523 P

Appl.No: EP7822095

IPC: C08K 5/13 2006.01 (IA)

TITANIUM OXIDE STRUCTURE AND POROUS TITANIUM OXIDE COMPOSITION

Röhrenförmige Titanoxidstruktur, umfassend miteinander verbundene Titanoxidteilchen (1a), wobei die Titanoxidteilchen (1a) Anatas-Titanoxid umfassen.

Publication: EP 2292560 B1 20150812

Applicant: Osaka Gas Co., Ltd., 1-2, Hiranomachi 4-chome Chuo-ku Osaka-shi, Osaka 541-0046, JP

Inventor: NISHINO, Hitoshi, c/o OSAKA GAS CO. LTD. 1-2 Hiranomachi 4-chome Chuo-ku, Osaka-shi Osaka 541-0046, JP; NISHIDA, Ryoichi, c/o OSAKA GAS CO. LTD. 1-2 Hiranomachi 4-chome Chuo-ku, Osaka-shi Osaka 541-0046, JP; MATSUYOSHI, Hiroaki, c/o OSAKA GAS CO. LTD. 1-2 Hiranomachi 4-chome Chuo-ku, Osaka-shi Osaka 541-0046, JP; SAKAMOTO, Hiroki, c/o OSAKA GAS CO. LTD. 1-2 Hiranomachi 4-chome Chuo-ku, Osaka-shi Osaka 541-0046, JP; TOMITA, Haruo, c/o OSAKA GAS CO. LTD. 1-2 Hiranomachi 4-chome Chuo-ku, Osaka-shi Osaka 541-0046, JP; HAYAMA, Hidekazu, c/o KRI INC. Kyoto Research Park 134 Chudoji Minamimachi Shimogyo-ku, Kyoto-shi Kyoto 600-8813, JP; TABUCHI, Minoru, c/o KRI INC. Kyoto Research Park 134 Chudoji Minamimachi Shimogyo-ku, Kyoto-shi Kyoto 600-8813, JP; ICHIMURA, Nobuko, c/o KRI INC. Kyoto Research Park 134 Chudoji Minamimachi Shimogyo-ku, Kyoto-shi Kyoto 600-8813, JP; DEGUCHI, Tomoe, c/o KRI INC. Kyoto Research Park 134 Chudoji Minamimachi Shimogyo-ku, Kyoto-shi Kyoto 600-8813, JP

Prio: JP 20080620 2008162428, JP 20080620 2008162450

Appl.No: EP9766722

IPC: C01G 23/047 2006.01 (IA)

DEVICE FOR COOLING A VEHICLE BATTERY

Vorrichtung zur Kühlung einer Fahrzeugbatterie, umfassend eine Mehrzahl von elektrischen Speicherelementen (6), und einen von einem kühlenden Fluid durchströmbaren Kühlkörper (1), wobei zumindest eines der elektrischen Speicherelemente (6) jeweils an zumindest einem Kühlblech (3) in thermischem Kontakt festgelegt ist, und wobei das Kühlblech (3) zur Übertragung von Wärme des Speicherelements (6) an das Fluid mit dem Kühlkörper (1) verbunden ist, wobei das Kühlblech (3) eine flächige, mechanische Verbindung mit dem Kühlkörper (1) aufweist, dadurch gekennzeichnet, dass das Kühlblech (3) an seinem zu dem Kühlkörper (1) gerichteten Ende eine sich in flachem Winkel verjüngende Ausformung (13) aufweist, wobei die Ausformung insbesondere reibschlüssig in eine korrespondierende Ausnehmung (14) des Kühlkörpers (1) eingreift.

Publication: EP 2301099 B1 20150812

Applicant: MAHLE Behr GmbH & Co. KG, Mauserstrasse 3, 70469 Stuttgart, DE

Inventor: SCHMID, Caroline, Albert-Schäffle-Strasse 8, 70186 Stuttgart, DE; ISERMEYER, Tobias, Rudolf-Hausser-Strasse 14, 74245 Löwenstein, DE; KOHLBERGER, Markus, Leuschnerstrasse 15, 70174 Stuttgart, DE; MOLDOVAN, Florin, Marc-Chagall-Weg 2a, 70569 Stuttgart, DE; SCHIEHLEN, Thomas, In der Wanne 5, 89174 Altheim, DE; DAMSOHN, Herbert, Rieslingstrasse 35, 73773 Aichwald, DE; STEINBACH, Martin, Geigeräckerstrasse 9, 71336 Waiblingen, DE; HERRMANN, Hans-Georg, Fridingerstrasse 10, 70619 Stuttgart, DE; ECKSTEIN, Jürgen, Mozartstrasse 11,

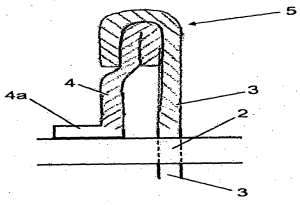


Fig. 1

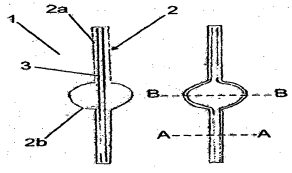


Fig. 2

71409 Schwaikheim, DE

Prio: DE 20080617 102008028400

Appl.No: EP9765592

IPC: H01M 6/50 2006.01 (IA)

PHOTOELECTRIC DEVICE

Photoelektrische Vorrichtung, umfassend: - ein Paar Elektroden (1) (5); - eine Elektronentransportschicht (3), angeordnet zwischen den Elektroden; - eine Lochtransportschicht (4), angeordnet zwischen den Elektroden (1) (5); dadurch gekennzeichnet, dass die Elektronentransportschicht (3) aus einer organischen Verbindung mit einer Gelgruppe gemacht ist, die chemisch an eine Redoxgruppe geknüpft ist, wobei die letztere in der Lage ist, wiederholt oxidiert und reduziert zu werden, und wobei die organische Verbindung mit einer Elektrolytlösung gequollen ist, um eine Gelschicht (7) zu bilden, wobei die Elektrolytlösung einen Reduktionszustand der Redoxgruppe stabilisiert.

Publication: EP 2320513 B1 20150819

Applicant: Panasonic Corporation, 1006, Oaza Kadoma Kadoma-shi, Osaka 571-8501, JP; Waseda University, 104, Totsuka-machi 1-chome Shinjuku-ku, Tokyo 169-8050, JP

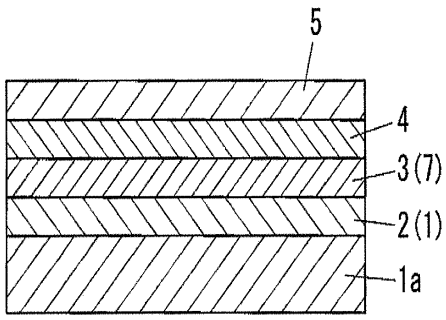
Inventor: SEKIGUCHI, Takashi, c/o Panasonic Corporation Intellectual Property Center Planning and Management Group 7F OBP Panasonic Tower, 2-1-61 Shiromi, Chuo-ku, Osaka 540-6207 Japan, JP; KAMBE, Shingo, c/o Panasonic Corporation Intellectual Property Center Planning and Management Group 7F OBP Panasonic Tower, 2-1-61 Shiromi, Chuo-ku, Osaka 540-6207 Japan, JP; NISHIDE, Hiroyuki, c/o Faculty of Science and Engineering WASEDA UNIVERSITY 4-1 Okubo 3-chome Shinjuku-ku, Tokyo 169-8555, JP; OYAIZU, Kenichi, c/o Faculty of Science and Engineering WASEDA UNIVERSITY 4-1 Okubo 3-chome Shinjuku-ku, Tokyo 169-8555, JP; KATO, Fumiaki, c/o Faculty of Science and Engineering WASEDA UNIVERSITY 4-1 Okubo 3-chome Shinjuku-ku, Tokyo 169-8555, JP; TAKAHASHI, Akira, c/o Faculty of Science and Engineering WASEDA UNIVERSITY 4-1Okubo 3-chome Shinjuku-ku, Tokyo 169-8555, JP; YAMAKI, Takeyuki, c/o Panasonic Corporation Intellectual Property Center Planning and Management Group 7F OBP Panasonic Tower, 2-1-61 Shiromi, Chuo-ku, Osaka 540-6207 Japan, JP; YAGUCHI, Mitsuo, c/o Panasonic Corporation Intellectual Property Center Planning and Management Group 7F OBP Panasonic Tower, 2-1-61 Shiromi, Chuo-ku, Osaka 540-6207 Japan, JP; SUZUKA, Michio, c/o Panasonic Corporation Intellectual Property Center Planning and Management Group 7F OBP Panasonic Tower, 1048 Oaza-Kadoma, 2-1-61 Shiromi, Chuo-ku, Osaka 540-6207 Japan, JP

Prio: JP 20080828 2008220367

Appl.No: EP9809744

IPC: H01G 9/20 2006.01 (IA)

FIG. 1



PIGMENT FOR USE WITH PHOTOELECTRIC CONVERSION ELEMENT, AND PHOTOELECTRIC CONVERSION ELEMENT

Fotoelektrische Umwandlungsvorrichtung, umfassend: eine Elektrode mit einem Farbstoff und einem Träger, auf den der Farbstoff aufgebracht ist, dadurch gekennzeichnet, dass der Träger eine Cyaninverbindung der Formel (1) aufweist wobei R1 und R2 jeweils und unabhängig eine Hydroxyl-Gruppe, eine Nitro-Gruppe, eine Cyano-Gruppe oder ein Halogenatom oder eine Alkyl-Gruppe, eine Alkoxy-Gruppe, eine Aryl-Gruppe, eine Arylalkyl-Gruppe oder ein Derivat davon sind, a und b jeweils und unabhängig eine ganze Zahl von 0 bis 4 sind, R3 bis R6 jeweils und unabhängig ein Wasserstoffatom, eine Hydroxyl-Gruppe, eine Nitro-Gruppe, eine Cyano-Gruppe oder ein Halogen-Atom oder eine Alkyl-Gruppe, eine Alkoxy-Gruppe, eine Aryl-Gruppe, eine Arylalkyl-Gruppe oder ein Derivat davon sind, mindestens eines von R3 und R4 und mindestens eines von R5 und R6 können jeweils abgetrennt sein, um eine Doppelbindung auszubilden, oder können entsprechend miteinander verbunden sein, um eine oder mehrere Ringstrukturen auszubilden, X1 eine Gruppe ist ausgedrückt durch -C(R7)(R8)-, eine Gruppe ausgedrückt durch -N(R9)-, ein Schwefelatom, ein Sauerstoffatom, ein Selenatom oder ein Telluratom, X2 eine Gruppe ist ausgedrückt durch -C(R10)(R11)-, eine Gruppe ausgedrückt durch -N(R12)-, ein Schwefelatom, ein Sauerstoffatom, ein Selenatom oder ein Telluratom, R7, R8, R10 und R11 jeweils und unabhängig ein Wasserstoffatom, eine Gruppe ausgedrückt durch die Formel (2), oder eine Alkyl-Gruppe, eine Alkoxy-Gruppe, eine Aryl-Gruppe, eine Arylalkyl-Gruppe oder ein Derivat davon, ausgenommen eine Gruppe entsprechend der Gruppe der Formel (2), R9 und R12 sind jeweils und unabhängig ein Wasserstoffatom, eine Hydroxyl-Gruppe, eine Nitro-Gruppe, eine Cyano-Gruppe oder ein Halogenatom oder eine Alkyl-Gruppe, eine Alkoxy-Gruppe, eine Aryl-Gruppe, eine Arylalkyl-Gruppe oder ein Derivat davon, Y1 und Y2 jeweils und unabhängig eine Anker-Gruppe oder eine Alkyl-Gruppe, eine Alkoxy-Gruppe, eine A... (+1805)

Publication: EP 2372829 B1 20150819

Applicant: Adeka Corporation, 7-2-35, Higashiogu Arakawa-ku, Tokyo 116-8554, JP

Inventor: TANABE Junji, c/o TDK CORPORATION 1-13-1, Nihonbashi Chuo-ku, Tokyo 103-8272, JP; MONDEN Atsushi, c/o TDK CORPORATION 1-13-1, Nihonbashi Chuo-ku, Tokyo 103-8272, JP; SHINKAI Masahiro, c/o TDK CORPORATION 1-13-1, Nihonbashi Chuo-ku, Tokyo 103-8272, JP; YANO Toru, c/o ADEKA CORPORATION 7-2-35, Higashiogu Arakawa-ku, Tokyo 116-8554, JP; MAE Yukiko, c/o ADEKA CORPORATION 7-2-35, Higashiogu Arakawa-ku, Tokyo 116-8554, JP; AOYAMA Yohei, c/o ADEKA CORPORATION 7-2-35, Higashiogu Arakawa-ku, Tokyo 116-8554, JP

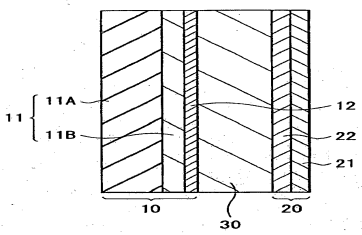


FIG. 1

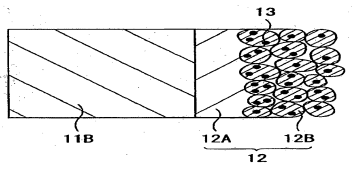


FIG. 2

Prio: JP 20081226 2008333597

Appl.No: EP9834999

IPC: C09B 23/04 2006.01 (IA)

Imidazolium salts having liquid crystal characteristics, useful as electrolytes

Imidazoliumsalze mit der folgenden strukturellen Formel (I) oder Mischungen davon, wobei: Q für eine -CRa=CRb-Gruppe steht, in der Ra und Rb unabhängig für H oder Methyl stehen, oder die -CRa=CRb- Gruppe Teil eines kondensierten aromatischen cyclischen Systems ist; R eine C1-C14Alkylgruppe oder eine C2-C18 Alkoxyalkylgruppe ist; R' eine Alkylgruppe ist, die mindestens 8 Kohlenstoffatome enthält, von denen mindestens 6 teilweise oder vollständig fluoriert sind; R" Wasserstoff oder C1-C3 Alkyl ist; Z I- oder BF4- ist; mit Ausnahme der Iodidsalze von 1-Methyl-3-(3,3,4,4,5,5,6,6,7,7,8,8-tridecafluorooctyl)imidalolium.

Publication: EP 2440532 B1 20150805

Applicant: Daunia Solar Cell S.r.l., S.S. 16 Zona Industriale Incoronata, 71100 Foggia, IT

Inventor: RESNATI, Giuseppe, Via Moncenisio 10, I-20052 Monza (MI), IT; METRANGOLO, Pierangelo, Via G. D'Annunzio, 5, I-20096

Pioltello (MI), IT; ABATE, Antonio, Via Maiocchi 18, I-20129 Milano, IT; MATTEUCCI, Francesco, Via Mazzini 84/a, I-48100 Ravenna, IT

Prio: EP 20090610 09425227
Appl.No: EP10730066
IPC: C07D 233/54 2006.01 (IA)

MULTILAYER CAPACITOR WITH HIGH CAPACITANCE AND HIGH VOLTAGE CAPABILITY

Kondensator (10), umfassend: erste innere Leiter (11) und zweite innere Leiter (12) in einer abwechselnden Schicht, wobei die ersten inneren Leiter (11) eine erste Polarität aufweisen und die zweiten inneren Leiter (12) eine entgegengesetzte Polarität aufweisen und wobei jeder erste innere Leiter (11) der inneren Leiter und jeder zweite innere Leiter (12) der zweiten inneren Leiter eine Hauptregion (120), eine sekundäre Region (121) und eine tertiäre Region (121') umfasst, wobei jede der sekundären Region (121) und der tertiären Region (121') eine Breite aufweist, die schmaler ist als die Breite der Hauptregion (120), und sich an gegenüberliegenden Seiten der Hauptregion (120) befindet; wobei der Kondensator (10) dadurch gekennzeichnet ist, dass er weiterhin erste Streifen umfasst, wobei jeder erste Streifen der ersten Streifen in einer Ebene mit einem der ersten inneren Leitern (11) liegt und eine entgegengesetzte Polarität aufweist und der erste Streifen durch einen ersten Lückenabstand von dem ersten inneren Leiter, der in der gleichen Ebene liegt, getrennt ist; weiterhin zweite Streifen umfasst, wobei jeder zweite Streifen der zweiten Streifen in einer Ebene mit einem der zweiten inneren Leitern (12) liegt und eine entgegengesetzte Polarität aufweist und jeder zweite Streifen der zweiten Streifen durch den ersten Lückenabstand von dem zweiten inneren Leiter (12), der in der gleichen Ebene liegt, getrennt ist; einen ersten externen Anschluss (13), der elektrisch mit den ersten inneren Leitern (11) an einem des sekundären Bereichs (121) und des tertiären Bereichs (121') vonjedem der ersten inneren Leiter (11) in Kontakt steht, wobei der erste externe Anschluss (13) eine erste Seitenerstreckung aufweist, die sich stetig über eine Strecke entlang von Seiten des Kondensators (10) erstreckt, wobei die Seiten senkrecht zu den externen Anschlüssen sind; einen zweiten externen Anschluss (14), der elektrisch mit den zwei... (+1087)

Publication: EP 2449569 B1 20150826

Applicant: Kemet Electronics Corporation, 2835 Kemet Way, Simpsonville, South Carolina 29681, US
Inventor: BULTITUDE, John, 508 Foxcroft Drive, Greenville South Carolina 29615, US; MAGEE, James, R., 605 Chaulk Hill Court, Simpsonville South Carolina 29681, US; JONES, Lonnie, G., 104 Salem Court, Greenville South Carolina 29617, US

Prio: US 20090701 222296 P
Appl.No: EP10794758
IPC: H01G 4/12 2006.01 (IA)

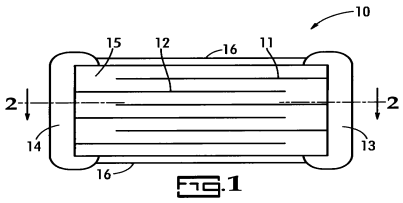


FIG.1

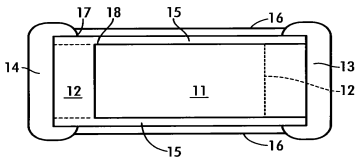


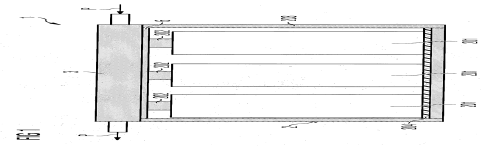
FIG.2

ELECTRICAL ENERGY STORE WITH COOLING DEVICE

Elektrischer Energiespeicher (2) für ein Antriebssystem mit - einer Energiespeichereinrichtung (201), - einem Kühlkörper (3), - wenigstens einem im Wärmefluss zwischen der Energiespeichereinrichtung (201) und dem Kühlkörper (3) angeordnetem Peltier-Element (5), und - einer Steuereinheit, dadurch gekennzeichnet, dass die Steuereinheit geeignet ist, das zumindest eine Peltier-Element (5) abzuschalten, wenn die Umgebungstemperatur einen vorgegebenen Temperaturwert unterschreitet oder kleiner gleich dem vorgegebenen Temperaturwert ist.

Publication: EP 2567424 B1 20150819

Applicant: Siemens Aktiengesellschaft, Wittelsbacherplatz 2, 80333 München, DE



Inventor: HUBER, Norbert, Taunusstr. 96, 91056 Erlangen, DE; MEINERT, Michael, Altkirchenweg 11a, 91056 Erlangen, DE; RASTOGI, Armin, Tulpenweg 27, 91056 Erlangen-Hüttendorf, DE
Prio: DE 20100923 102010041277, DE 20100507 102010028728
Appl.No: EP11717523
IPC: F25B 21/02 2006.01 (IA)

ELECTRICAL COMPONENT, NONAQUEOUS-ELECTROLYTE CELL, AND LEAD WIRE AND SEALABLE CONTAINER BOTH FOR USE THEREIN

Elektrische Stromversorgung, umfassend: einen versiegelbaren Behälter (2) mit einer Metallschicht (5); und eine Zuleitung (3), die sich vom Inneren des versiegelbaren Behälters (2) nach außen erstreckt, wobei der versiegelbare Behälter (2) und die Zuleitung (3) in einem Siegelbereich (9) schmelzverbunden sind, wobei die elektrische Stromversorgung dadurch gekennzeichnet ist, dass der Siegelbereich (9) zumindest teilweise eine Schicht aus einem Polyallylamin in einem Bereich zwischen der Metallschicht (5) und der Zuleitung (3) und in Kontakt mit der Zuleitung (3) aufweist.

Publication: EP 2600435 B1 20150819

Applicant: Sumitomo Electric Industries, Ltd., 5-33 Kitahama 4-chome, Chuo-ku Osaka-shi Osaka 541-0041, JP
Inventor: FUKUDA, Yutaka, c/o Osaka Works of Sumitomo Electric Industries Ltd. 1-3 Shimaya1-chome Konohana-ku, Osaka-shi Osaka 554-0024, JP; HAYAMI, Hiroshi, c/o Osaka Works of Sumitomo Electric Industries Ltd. 1-3 Shimaya 1-chome Konohana-ku, Osaka-shi Osaka 554-0024, JP; SUGIYAMA, Hiroyasu, c/o Sumitomo Electric Flat Components Inc. 3-3 Satsuki-cho, Kanuma-shi Tochigi 322-8585, JP
Prio: JP 20100727 2010167770
Appl.No: EP11812328
IPC: H01M 2/06 2006.01 (IA)

FIG. 1

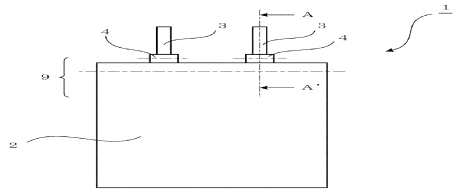
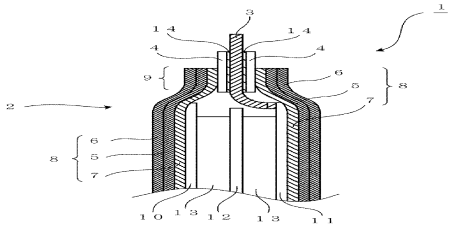


FIG. 2



NAPHTALENE MONOIMIDE DERIVATIVES AND USE THEREOF AS PHOTOSENSITIZERS IN SOLAR CELLS AND PHOTODETECTORS

Verbindungen der Formeln Ia und Ib worin bedeuten R gleiche oder verschiedene Reste Aryloxy, Arylthio, Hetaryloxy oder Hetarylthio, n 0, 1, 2, 3, 4 oder 5, B C1-C6-Alkylen oder 1,4-Phenylen, wobei der Phenylenrest ein- oder mehrfach durch Alkyl, Nitro, Cyano und/oder Halogen substituiert sein kann, A -COOM, -SO3M oder -PO3M, M Wasserstoff, Alkalimetallkation oder [NR'4]+, R' Wasserstoff oder Alkyl, wobei die Reste R' gleich oder verschieden sein können, L eine Brücke der Formeln   -Ar-, -Ar-Ar oder   -Ar-Ar-Ar- welche ein- oder mehrfach durch Phenyl, Alkyl, Alkoxy, Alkylthio und/oder - NR4R5 substituiert sein kann und in welcher Ar Aryl oder Hetaryl bedeutet, das mit gesättigten oder ungesättigten 5- bis 18-gliedrigen Ringen, die Heteroatome enthalten können, anelliert sein kann, wobei im Falle von zwei oder drei Ar diese gleich oder voneinander verschieden sind, R4, R5 unabhängig voneinander Wasserstoff, Alkyl, dessen Kohlenstoffkette durch eine oder mehrere Gruppierungen -O-, -S-, -CO-, -SO- und/oder -SO2- unterbrochen sein kann, Aryl oder Hetaryl, das jeweils ein- oder mehrfach durch Alkyl, Alkoxy und/oder Alkylthio substituiert sein kann, R1, R2 unabhängig voneinander Reste der Formeln IIa oder IIb R3 Phenyl, Alkyl, Alkoxy, Alkylthio oder -NR7R8, m 0, 1, 2, 3 oder 4, X C(R6R7)2, NR8, Sauerstoff oder Schwefel und R6, R7, R8 unabhängig voneinander Wasserstoff, Alkyl, dessen Kohlenstoffkette durch eine oder mehrere Gruppierungen -O-, -S-, -CO-, -SO- und/oder -SO2- unterbrochen sein kann, Aryl oder Hetaryl, das jeweils ein- oder mehrfach durch Alkyl, Alkoxy und/oder Alkylthio substituiert sein kann.

Publication: EP 2655366 B1 20150819

Applicant: BASF SE, 67056 Ludwigshafen, DE

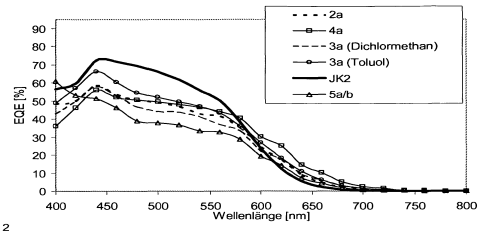
Inventor: PSCHIRER, Neil Gregory, Gaustrasse 52, 55116 Mainz, DE; SCHÖNEBOOM, Jan, Struvestraße 1, 68199 Mannheim, DE; EICKEMEYER, Felix, Am Bächenbuckel 24-1, 69118 Heidelberg, DE; REICHELT, Helmut, Johann-Gottlieb-Fichte-Str. 56, 67435 Neustadt, DE; SENS, Rüdiger, Faselwiese 15, 67069 Ludwigshafen, DE; BRUDER, Ingmar, Heiligensteinerstr. 8a, 67376 Harthausen, DE

Prio: EP 20101222 10196607

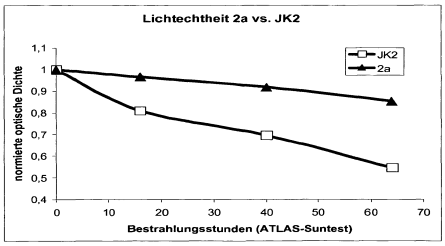
Appl.No: EP11851671

IPC: C07D 409/02 2006.01 (IA)

Figur 1



Figur 2



DYE-SENSITIZED SOLAR CELL FOR LOW LIGHT INTENSITIES

Farbstoffsensibilisierte Solarzelle für niedrige Beleuchtung, umfassend: eine erste Elektrode, umfassend ein transparentes Substrat und einen transparenten leitenden Film, der auf dem transparenten Substrat vorgesehen ist, eine zweite Elektrode, die der ersten Elektrode gegenüberliegt, eine Oxid-Halbleiterschicht, die auf der ersten Elektrode oder der zweiten Elektrode vorgesehen ist, einen Elektrolyten, der zwischen der ersten und der zweiten Elektrode vorgesehen ist, einen lichtsensibilisierenden Farbstoff, der an die Oxid-Halbleiterschicht adsorbiert ist, und ein Coadsorptionsmittel, das an die Oxid-Halbleiterschicht zusammen mit dem lichtsensibilisierenden Farbstoff adsorbiert ist, worin der lichtsensibilisierende Farbstoff eine Metallkomplexverbindung mit der folgenden Formel (1) ist, dadurch gekennzeichnet, dass das Coadsorbens zwei Arten von organischen Verbindungen enthält, ausgewählt aus der Gruppe bestehend aus einer organischen Verbindung, dargestellt durch die folgende Formel (2), einer organischen Verbindung, dargestellt durch die folgende Formel (3), und einer organischen Verbindung, dargestellt durch die folgende Formel (4), oder umfassend eine organische Verbindung, ausgewählt aus den organischen Verbindungen, dargestellt durch die Formeln (2) bis (4) und einer organischen Verbindung, dargestellt durch die folgende Formel (X) : worin in der Formel (1) M Ru ist, R1, R2, R3 und R4 jeweils unabhängig ein monovalentes Kation sind und R5 und R6 jeweils unabhängig eine Halogengruppe, -H, -CN, -NCS oder -NCO sind, worin in der Formel (2) n eine ganze Zahl von 0 bis 5 ist und R7 eine monovalente Gruppe mit einer n-konjugierten Struktur oder eine monovalente Gruppe mit einem Steroidgerüst ist, worin in der Formel (3) W ein Kohlenstoffatom oder Siliziumatom ist, Y1, Y2, Y3 und Y4 jeweils unabhängig ein Wasserstoffatom, eine Carboxylgruppe, substituierte oder unsubstituierte Alkoxygruppe mit 1 bis 6 Kohlenstoffatomen od... (+939)

Publication: EP 2683019 B1 20150819

Applicant: Fujikura Ltd., 5-1, Kiba 1-chome Koto-ku, Tokyo 135-8512, JP

Inventor: SHIMOHIRA Kouki, c/o Fujikura Ltd. Sakura Works 1440 Mutsuzaki, Sakura-shi Chiba 285-8550, JP; OKADA Kenichi, c/o Fujikura Ltd. Sakura Works 1440 Mutsuzaki, Sakura-shi Chiba 285-8550, JP; ENDO Katsuyoshi, c/o Fujikura Ltd. Sakura Works 1440 Mutsuzaki, Sakura-shi Chiba 285-8550, JP

Prio: JP 20110302 2011044732

Appl.No: EP12751907

IPC: H01M 14/00 2006.01 (IA)

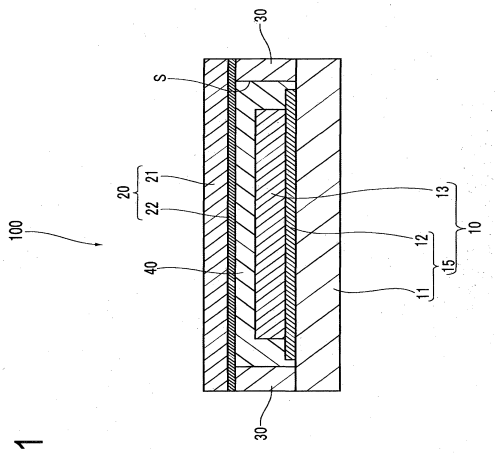


Fig.1

SPECIFIC ELECTROLYTIC COMPOSITION FOR ENERGY STORAGE DEVICE

Verwendung einer ionischen Flüssigkeit in einer elektrolytischen Zusammensetzung, umfassend ein organisches Lösungsmittel und ein oder mehrere nicht lithiumhaltige ionische Salze, die in dem organischen Lösungsmittel gelöst sind, um die Entflammungstemperatur der Zusammensetzung zu erhöhen.

Publication: EP 2721623 B1 20150805

Applicant: Commissariat à l'Énergie Atomique et aux Énergies Alternatives, Bâtiment le Ponant D 25 rue Leblanc, 75015 Paris, FR; Université François Rabelais de Tours, 3, rue Tanneurs, BP 4103, 37041 Tours Cedex 1, FR

Inventor: GALIANO, Herv&eacute, 9 rue Claudie Deshayes, F-37700 La Ville Aux Dames, FR; MONTIGNY, Bénédicte, 61 BIS rue du Grand Carroi, F-37520 La Riche, FR; ABDALLAH, Thamra, 2 allée Gaston Leroux, F-38130 Echirolles, FR; LEMORDANT, Daniel, 32 quai Henri IV, F-37270 Veretz, FR

Prio: FR 20110620 1155399

Appl.No: EP12728092

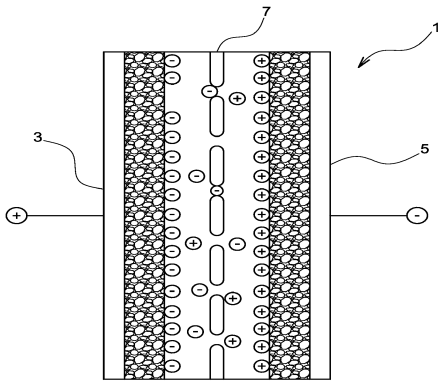


FIGURE UNIQUE

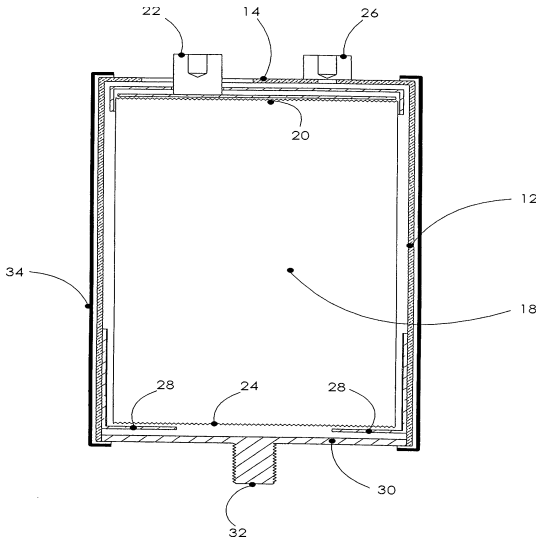
IPC: H01G 11/58 2013.01 (IA)

Filmkondensator mit einem Kupferbecher

Filmkondensator, bestehend aus einem Becher mit einem rohrförmigen Körper (12), einem Boden (30) und einem Deckel (14), einem durch zwei durch versetzt zueinander aufgewickelte metallisierte Folien gebildeten Kondensatorwickel (18) mit einer auf die obere Stirnseite des Wickels (18) aufgebrachten oberen Schoopschicht (20), die mit einem über den Deckel (14) hinaus ragenden einen Anschluss (22) elektrisch verbunden ist, und einer auf die untere Stirnseite des Wickels (18) aufgebrachte untere Schoopschicht (24), die mit einem auf den Deckel (14) hinaus ragenden anderen Anschluss (26) elektrisch verbunden ist, bei dem die obere Schoopschicht (20) gegenüber dem Deckel (14) elektrisch isoliert mit dem durch diesen hindurch ragenden einen Anschluss (22) elektrisch verbunden ist, und die untere Schoopschicht (24) über den Becherkörper (12) und den Deckel (14) mit dem von diesem getragenen anderen Anschluss (26) elektrisch verbunden ist.

Publication: DE 102014001820 A1 20150813

Applicant: Fischer, Peter, 25873, Oldersbek, DE
Inventor: Fischer, Peter, 25873, Oldersbek, DE
Prio:
Appl.No:
IPC: H01G 4/32 2006.01 (IA)

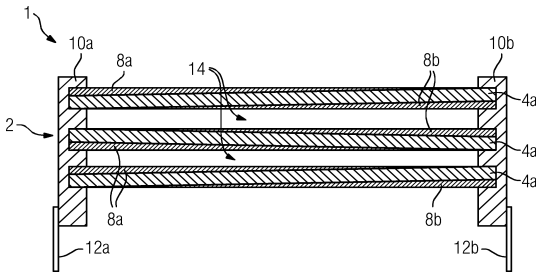


Folienkondensator

Die Erfindung nennt einen Folienkondensator (1), umfassend eine Mehrzahl von Lagen (2) von Dielektrikumsfolien (4a-4c), eine mit einem ersten Anschluss (12a) kontaktierte erste Kontaktschicht (10a) an einer ersten Stirnseite der Lagen (2), und eine mit einem zweiten Anschluss (12b) kontaktierte zweite Kontaktschicht (10a) an einer zweiten Stirnseite der Lagen (2), wobei auf mindestens jede zweite Dielektrikumsfolie (4a, 4c) mindestens einseitig eine Metallisierungsschicht (8a, 8b) aufgebracht ist, und wobei jede Metallisierungsschicht (8a, 8b) entweder mit der ersten Kontaktschicht (10a) oder mit der zweiten Kontaktschicht (10b) kontaktiert ist. Hierbei ist vorgesehen, dass sich die Dicke wenigstens einer Metallisierungsschicht (8a, 8b) von der mit ihr kontaktierten Kontaktschicht (10a, 10b) weg entlang ihrer Auftragungslänge verjüngt, wobei entlang einer Strecke, welche senkrecht zur Kontaktschicht (10a, 10b) bis zum der Kontaktschicht (10a, 10b) abgewandten Rand der Metallisierungsschicht (10a, 10b) führt, die durchschnittliche Dicke der Metallisierungsschicht (8a, 8b) über die der Kontaktschicht (10a, 10b) angrenzenden Hälfte der Strecke mindestens 50% mehr beträgt als die durchschnittliche Dicke der Metallisierungsschicht (8a, 8b) über die der Kontaktschicht (10a, 10b) abgewandten Hälfte der Strecke, und/oder, dass bei wenigstens einem Paar von zwei aufeinander folgenden Dielektrikumsfolien (4a, 4c), auf die an den einander zugewandten Seiten jeweils eine mit der jeweils selben Kontaktschicht (10a, 10b) kontaktierte Metallisierungsschicht (8a, 8b) aufgebracht ist, eine Dielektrikumsfolie (4a, 4c) an dem dieser Kontaktschicht (10a, 10b) zugewandten Rand eine durch eine Anzahl von Aussparungen (22a, 22b, 28a) gebildete Kontur (20a, 20b) aufweist, und/oder, dass die erste Kontaktschicht (10a) und die zweite Kontaktschicht (10b) jeweils von einer Metallplatte (32) bedeckt sind.

Publication: DE 102014202067 A1 20150806

Applicant: Siemens Aktiengesellschaft, 80333, München, DE



Inventor: Glück, Winfried, 91085, Weisendorf, DE; Hetz, Rüdiger, 91362, Pretzfeld, DE; Höhne, Silvio, 91054, Erlangen, DE; Hölzlein, Karlheinz, Dr., 96332, Pressig, DE; Rochholz, Günter, 91074, Herzogenaurach, DE; Kürten, Bernd, 90587, Obermichelbach, DE

Prio:

Appl.No:

IPC: H01G 4/30 2006.01 (IA)

METHOD OF MANUFACTURING ELECTRONIC COMPONENT WITH TERMINAL PLATE, AND ELECTRONIC COMPONENT WITH TERMINAL PLATE

PROBLEM TO BE SOLVED: To provide a method capable of achieving improvement in productivity and bonding reliability and reduction in damage to a chip-type electronic component when terminal plates are soldered to terminal electrodes of the chip-type electronic component.SOLUTION: The method of manufacturing an electronic component with terminal plates bonds terminal plates 16 and 17 formed of metal plates to terminal electrodes 14 and 15 formed on both opposite end surfaces of a chip-type electronic component 2 by a solder. A cream solder 18a is applied to outer surfaces of the terminal electrodes 14 and 15, the electronic component 2 is inserted between the terminal plates 16 and 17, and the terminal plates 16 and 17 are pressed toward the terminal electrodes by a pair of heating elements 152 to thermocompression-bond the terminal plates to the terminal electrodes, thereby obtaining the electronic component 2 having the terminal plates temporarily fixed thereto. The electronic component 2 having the terminal plates temporarily fixed thereto is heated in a heating furnace 153 to permanently bond the terminal plates to the electronic component 2 by melting of the cream solder 18a, thereby obtaining an electronic component 1 with terminal plates.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015062214 A 20150402

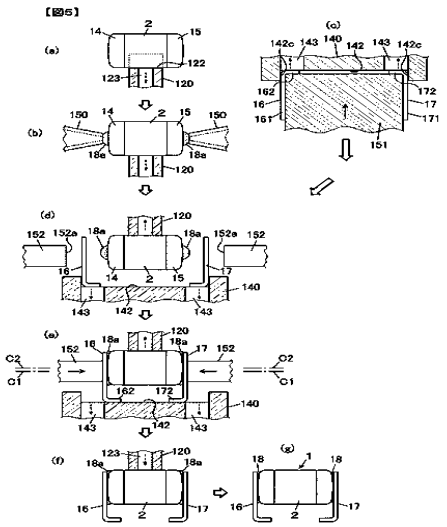
Applicant: MURATA MFG CO LTD

Inventor: KIMURA NOBUMICHI; TAKARADA MASUYOSHI

Prio: JP 20130820 2013170086

Appl.No: JP2014057416

IPC: H01G 4/228 2006.01 (IA)

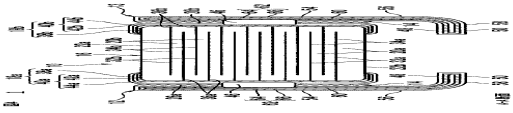


CERAMIC ELECTRONIC COMPONENT

PROBLEM TO BE SOLVED: To provide a ceramic electronic component in which metal terminals are attached to an electronic component body and which is capable of preventing the electronic component body from falling off from the metal terminals when the ceramic electronic component is mounted on a mounting substrate by reflow treatment.SOLUTION: A ceramic electronic component 1 comprises an electronic component body 10 and first and second metal terminals 12 and 13. The electronic component body 10 has a ceramic element assembly 16 and first and second external electrodes 18a and 18b. The first and second external electrodes 18a and 18b of the electronic component body 10 and the first and second metal terminals 12 and 13 are formed to be connected to each other by a solder 14 containing Sn as a main component. An alloy layer 46 containing Ni-Sn is formed at least at a part of each of the junction surfaces between the first and second metal terminals 12 and 13 and the first and second external electrodes 18a and 18b.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015062215 A 20150402

Applicant: MURATA MFG CO LTD



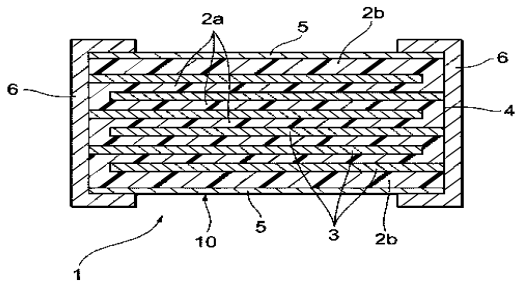
Inventor: ITAGAKI YOJI; KIMURA NOBUMICHI; MATSUDA TOMOAKI
Prio: JP 20130820 2013170520
Appl.No: JP2014115097
IPC: H01G 2/06 2006.01 (IA)

LAMINATED CERAMIC ELECTRONIC COMPONENT

PROBLEM TO BE SOLVED: To provide a laminated ceramic electronic component, such as a laminated ceramic capacitor, which has excellent mechanical strength even if it is a low profile shape and, at the same time, has thermal shock resistance.SOLUTION: Disclosed is a laminated ceramic electronic component 1 which includes: an internal layer on which a dielectric layer 2a containing ABO<SB>3</SB> (wherein, A contains at least Ba, and B represents a perovskite type crystal containing at least Ti) as a main component and an internal electrode layer 3 are alternately laminated; and a pair of external layers holding the internal layer. A continuous film 5 consisting of a Ba-Si-Ti-O based crystal phase is provided in the outer layer 2b.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015062216 A 20150402

Applicant: TDK CORP
Inventor: ENDO MAKOTO; YAMAGUCHI KOICHI; ISHIDA KEISUKE
Prio: JP 20130823 2013173378
Appl.No: JP2014121271
IPC: H01G 4/30 2006.01 (IA)

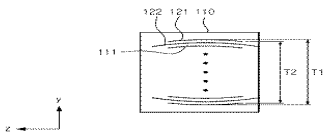


MULTILAYER CERAMIC ELECTRONIC COMPONENT

PROBLEM TO BE SOLVED: To provide a multilayer ceramic electronic component which suppresses short circuits between internal electrodes and delamination failures and reduces acoustic noise generated at voltage application.SOLUTION: A multilayer ceramic electronic component comprises: a plurality of first internal electrodes 121; a plurality of second internal electrodes 122; first and second external electrodes; and insulating layers formed on a first side face, a first end face and a second end face of a ceramic body 110. The distances by which the plurality of first and second internal electrodes are spaced from the second side face are different, three or more electrodes among the plurality of first and second internal electrodes form a block, the block is repetitively layered, the width of the first and the second internal electrodes forming each block decreases from the outer most side to an internal part, internal electrodes having the same width are adjacent in the boundary of blocks which are adjacent with each other, and when the longest distance and the shortest distance between the upper and the lower outer most internal electrodes among the plurality of first and second internal electrodes are T1 and T2, respectively, the formula 0.76≤T2/T1≤0.97 is satisfied.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015062244 A 20150402

Applicant: SAMSUNG ELECTRO-MECHANICS CO LTD
Inventor: KIM HYUN-JUN
Prio: KR 20121220 2012 2012149938
Appl.No: JP2014227169



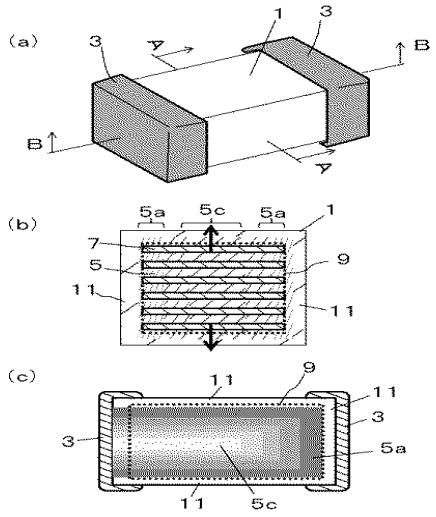
IPC: H01G 4/12 2006.01 (IA)

LAMINATED ELECTRONIC COMPONENT

PROBLEM TO BE SOLVED: To provide a laminated electronic component capable of reducing the possibility of an occurrence of delamination even in multi-layered internal electrode layers.SOLUTION: A laminated electronic component includes a functional part 9 comprising a plurality of ceramic layers 5 and internal electrode layers 7 alternately laminated therein, the ceramic layers mainly consisting of ceramic particles and having a glass phase surrounding the ceramic particles. In plan view of the functional part 9 in a lamination direction, a ratio of a glass phase included in a peripheral part 5a of the ceramic layer 5 is higher than that of a glass phase included in a central part 5c of the ceramic layer 5. Thereby, the adhesiveness between the peripheral part 5a of the ceramic layer 5 and the internal electrode layers 7 facing the peripheral part 5a can be enhanced.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015065222 A 20150409

Applicant: KYOCERA CORP
Inventor: SEKI HIDENOBU
Prio:
Appl.No: JP2013197027
IPC: H01G 4/12 2006.01 (IA)

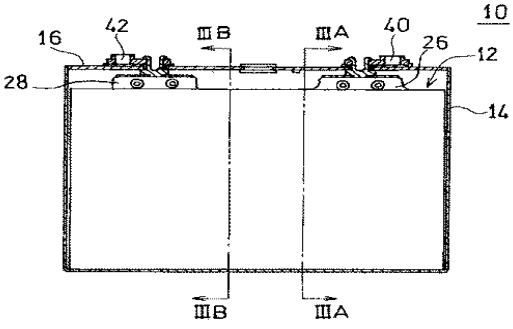


POWER STORAGE DEVICE

PROBLEM TO BE SOLVED: To facilitate the manufacture of a power storage device.SOLUTION: A power storage device includes: an electrode group having a plurality of first electrodes, a plurality of second electrodes, and separators for electrically insulating the plurality of first electrodes and the plurality of second electrodes; an electrolyte; a case which houses the electrode group and the electrolyte and has an opening; a sealing plate for sealing the opening of the case; a first terminal plate which is disposed on a first main surface side of the sealing plate and has a first external terminal; a first connection member for electrically connecting the plurality of first electrodes and the first terminal plate; and a first gasket for electrically insulating the first external terminal from the sealing plate. The first connection member includes a first lead electrically connected to the plurality of first electrodes, and a first rivet electrically connected to the first lead and fixed to the first lead.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015065229 A 20150409

Applicant: SUMITOMO ELECTRIC IND LTD
Inventor: UEDA MITSUYASU; MASHIMA MASATOSHI
Prio:
Appl.No: JP2013197132
IPC: H01G 11/74 2013.01 (IA)



NONWOVEN FABRIC SEPARATOR FOR ELECTROCHEMICAL ELEMENTS

PROBLEM TO BE SOLVED: To provide: a method for manufacturing a nonwoven fabric separator for electrochemical elements with cellulose blended therein by which curl that would be a problem in an assembly process of an electrochemical element even when exposed to a low-humidity environment is not caused; and a nonwoven fabric separator for electrochemical elements.SOLUTION: A method for manufacturing a nonwoven fabric separator for electrochemical elements comprises: a step of leaving a piece of nonwoven fabric with cellulose blended therein in contact with a roll heated at a temperature of 100 or more and 160°C or less for at least one second under the condition of a moisture percentage 12.0 mass% or less. A nonwoven fabric separator for electrochemical elements is manufactured by the above manufacturing method.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015065258 A 20150409

Applicant: MITSUBISHI PAPER MILLS LTD
Inventor: KASAI TAKAKO; YAMAMOTO HIROKAZU
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Appl.No: JP2013197802
IPC: H01G 11/52 2013.01 (IA)

(19) JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

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H01M 2/16 (2006.01)
H01G 11/84 (2013.01)

(21) Application number: 2013197802
(22) Date of filing: 25.09.2013
(71) Applicant: MITSUBISHI PAPER MILLS LTD
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YAMAMOTO HIROKAZU

(54) NONWOVEN FABRIC SEPARATOR FOR ELECTROCHEMICAL ELEMENTS

(57) Abstract:

PROBLEM TO BE SOLVED: To provide: a method for manufacturing a nonwoven fabric separator for electrochemical elements with cellulose blended therein by which curl that would be a problem in an assembly process of an electrochemical element even when exposed to a low-humidity environment is not caused; and a nonwoven fabric separator for electrochemical elements.

SOLUTION: A method for manufacturing a nonwoven fabric separator for electrochemical elements comprises: a step of leaving a piece of nonwoven fabric with cellulose blended therein in contact with a roll heated at a temperature of 100 or more and 160°C or less for at least one second under the condition of a moisture percentage 12.0 mass% or less. A nonwoven fabric separator for electrochemical elements is manufactured by the above manufacturing method.

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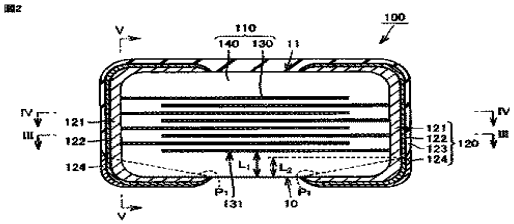
ELECTRONIC COMPONENT AND MANUFACTURING METHOD THEREOF

PROBLEM TO BE SOLVED: To restrain cracks on an element assembly generated by tensile stress due to thermal shrinkage of a solder fillet.SOLUTION: An external electrode 120 includes: a sinter body layer 121 containing sintered metal; a reinforcing layer 122 not containing Sn but containing Cu or Ni; an insulation layer 123 made of a material having an electric insulation property; and a Sn-containing layer 124 containing Sn. The sinter body layer 121 is provided at least onto one principal plane 10 from each end face in an element assembly 110 to cover each end face of the element assembly 110. The reinforcing layer 122 is provided on the sinter body layer 121 to entirely cover the sinter body layer 121. The insulation layer 123 is provided directly on the reinforcing layer 122 on each end face side of the element assembly 110 to extend in a direction orthogonal to a side face of the element assembly 110, so as to constitute one part of a surface of the external electrode 120. The Sn-containing layer 124 is provided to cover the reinforcing layer 122 except for a portion covered by the insulation layer 123, so as to constitute the other part of the surface of the external electrode 120.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015065283 A 20150409

Applicant: MURATA MFG CO LTD
Inventor: MORI HARUHIKO; OOTSUNA HIROYUKI
Prio:
Appl.No: JP2013198167
IPC: H01G 4/232 2006.01 (IA)

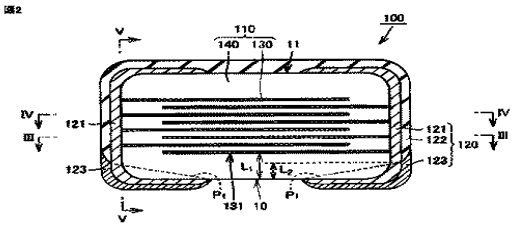


ELECTRONIC COMPONENT AND MANUFACTURING METHOD THEREOF

PROBLEM TO BE SOLVED: To restrain cracks on an element assembly generated by tensile stress due to thermal shrinkage of a solder fillet.SOLUTION: An external electrode 120 includes: a sinter body layer 121 containing sintered metal; an insulation layer 122 made of a material having an electric insulation property; and a Sn-containing layer 123 containing Sn. The sinter body layer 121 is provided at least onto one principal plane from each end face in an element assembly 110 to cover each end face of the element assembly 110. The insulation layer 122 is provided directly on the sinter body layer 121 on each end face side of the element assembly 110 to extend in a direction orthogonal to a side face of the element assembly 110, so as to constitute one part of a surface of the external electrode 120. The Sn-containing layer 123 is provided to cover the sinter body layer 121 except for a portion covered by the insulation layer 122, so as to constitute the other part of the surface of the external electrode 120.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015065284 A 20150409

Applicant: MURATA MFG CO LTD
Inventor: MORI HARUHIKO; OOTSUNA HIROYUKI
Prio:
Appl.No: JP2013198171
IPC: H01G 4/252 2006.01 (IA)

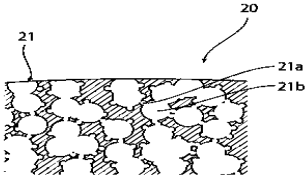


ELECTRICAL DOUBLE-LAYER CAPACITOR

PROBLEM TO BE SOLVED: To provide an electrical double-layer capacitor having excellent heat resistance and small internal resistance.SOLUTION: An electrical double-layer capacitor 1 includes a positive electrode 12, a negative electrode 11, and an electrolyte. The positive electrode 12 has a positive-electrode-side collective electrode 12a and a positive-electrode-side polarizable electrode 12b. The positive-electrode-side polarizable electrode 12b is provided on the positive-electrode-side collective electrode 12a. The negative electrode 11 has a negative-electrode-side collective electrode 11a and a negative-electrode-side polarizable electrode 11b. The negative-electrode-side polarizable electrode 11b is provided on the negative-electrode-side collective electrode 11a. At least one of the positive-electrode-side collective electrode 12a and the negative-electrode-side collective electrode 11a contains carbon particles 20 each having a plurality of open pores 21. The open pores 21 has relatively small aperture portions 21 and relatively large aperture portions 21b. The open pores 21 has the large aperture portions 21b located closer to the depth side than the small aperture portions 21a.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015065297 A 20150409

Applicant: MURATA MFG CO LTD
Inventor: KUNIMATSU HIROSHI; FUKUDA YASUTAKE; OKAZAKI NAOMI
Prio:
Appl.No: JP2013198332
IPC: H01G 11/24 2013.01 (IA)

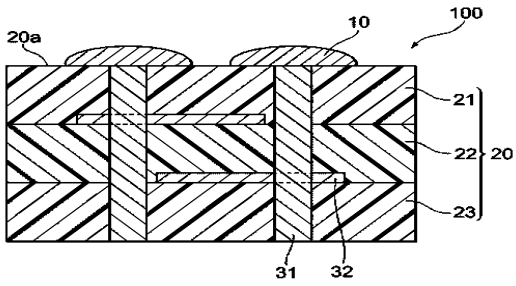


CERAMIC ELECTRONIC COMPONENT

PROBLEM TO BE SOLVED: To provide a ceramic electronic component having a terminal electrode with a high joining strength in solder bonding between the terminal electrode of the ceramic electronic part and a substrate.SOLUTION: A ceramic electronic component 100 has a terminal electrode 10 provided on a surface of a ceramic body 20, and the terminal electrode 10 contains Cu and Zn, when a Cu content is set to be 100 atom%, a Zn content is in a range of 20 to 40 atom%. The terminal electrode 10 further contains Ni. When the Cu content is set to be 100 atom%, a Ni content is in a range not including 0 and of 40 atom% or less.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015065331 A 20150409

Applicant: TDK CORP
Inventor: KITAGAMI MASATAKA; YANAGIDA MIYUKI; ABE TOSHIYUKI
Prio:
Appl.No: JP2013198759
IPC: H01G 4/232 2006.01 (IA)

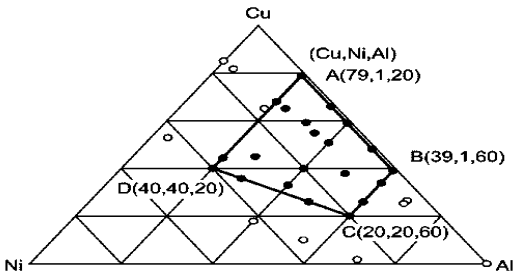


CERAMIC ELECTRONIC COMPONENT

PROBLEM TO BE SOLVED: To provide a ceramic electronic component having a terminal electrode using a base metal with good bondability of a substrate and good platability, even if bonding to a substrate by a lead-free solder.SOLUTION: In a ceramic electronic component, a terminal electrode of the ceramic electronic component is provided on a surface of a ceramic body, the terminal electrode contains Cu, Ni and Al, when an element ratio of three components of Cu, Ni and Al is set to be a:b:c(a+b+c=100), a composition range of (a, b, c) is in a domain(including lines connecting each point) enclosed by A(79, 1, 20), B(39, 1, 60), C(20, 20, 60), and D(40, 40, 20) on a composition diagram of the three components.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015065332 A 20150409

Applicant: TDK CORP
Inventor: KITAGAMI MASATAKA; YANAGIDA MIYUKI; ABE TOSHIYUKI
Prio:
Appl.No: JP2013198760
IPC: H01G 4/228 2006.01 (IA)



ELECTROLYTIC SOLUTION FOR ELECTROLYTE CAPACITORS

PROBLEM TO BE SOLVED: To provide an electrolytic solution for activation which is arranged so that the precipitation of an electrolyte is suppressed at a low temperature, stable with age and hard to decompose, and which enables the suppression of the increase in the specific resistance of an electrolytic solution, is usable under a high-voltage condition, and high in sparking voltage.SOLUTION: An electrolytic solution for activation of an electrolyte capacitor comprises a compound expressed by the formula (1) below or its salt. [Chemical formula 1] (In the formula (1), Z represents a residue of alcohol having 3-6 hydroxyl groups obtained by removing hydroxyl groups therefrom; AO represents an oxyalkylene group having 2-4 carbon atoms; X represents a carbon hydride group having 1-3 carbon atoms; n is 1-50 and represents an average additional mole number of the oxyalkylene group; and k is 3-6).COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015065369 A 20150409

Applicant: NOF CORP
Inventor: SUNADA KAZUTERU; NAKAMURA YASUYUKI; ABE TETSUSHI
Prio:
Appl.No: JP2013199338
IPC: H01G 9/035 2006.01 (IA)

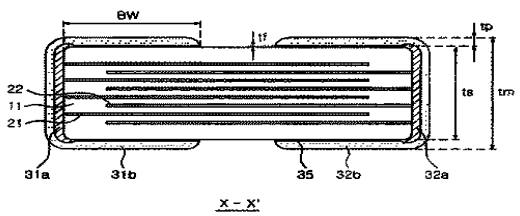
$$Z-[-O-(AO)_n-X-COOH]_k \quad (1)$$

MULTILAYER CERAMIC ELECTRONIC COMPONENT TO BE EMBEDDED IN BOARD, MANUFACTURING METHOD THEREOF, AND PRINTED CIRCUIT BOARD HAVING MULTILAYER CERAMIC ELECTRONIC COMPONENT EMBEDDED THEREIN

PROBLEM TO BE SOLVED: To provide a multilayer ceramic electronic component to be embedded in a board and a manufacturing method thereof.SOLUTION: There is provided a multilayer ceramic electronic component to be embedded in a board, in which the thickness of a ceramic body in an entire chip is increased by reducing the thickness of an external electrode while forming a band surface of the external electrode of a predetermined length or longer for connecting to an external wiring through a via hole, so that the chip strength may be improved and the occurrence of damage such as breakage may be prevented. Also provided is a manufacturing method thereof.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015065394 A 20150409

Applicant: SAMSUNG ELECTRO-MECHANICS CO LTD
Inventor: KIM HYE SEONG; JUNG HEE JUNG
Prio: KR 20130924 2013 2013113360
Appl.No: JP2013269267
IPC: H01G 4/232 2006.01 (IA)

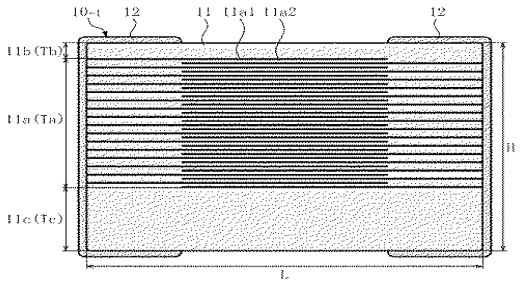


MULTILAYER CERAMIC CAPACITOR

PROBLEM TO BE SOLVED: To provide a multilayer ceramic capacitor having high practical use for preventing acoustic noise in a mounting state.SOLUTION: A capacitor main body 11 of a multilayer ceramic capacitor 10-1 integrally has: a capacitance part 11a in which a plurality of internal electrode layers 11a1 are stacked in the height direction via dielectric layers 11a2; an upper-side protection part 11b made from a dielectric material and located on the upper side of the topmost internal electrode layer 11a1 of the plurality of internal electrode layers 11a1; and a lower-side protection part 11c made from a dielectric material and located on the lower side of the bottommost internal electrode layer 11a1 of the plurality of internal electrode layers 11a1. The thickness Tc of the lower-side protection part 11c is thicker than the thickness Tb of the upper-side protection part 11b so that the capacitance part 11a is disproportionately located on the upper side in the height direction of the capacitor main body 11.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015065414 A 20150409

Applicant: TAIYO YUDEN CO LTD
Inventor: SHIBAZAKI RYUICHI; SASAKI SHINICHI; SAITO NAOKI; SUZUKI TAKAFUMI
Prio: JP 20130830 2013179361
Appl.No: JP2014153566
IPC: H01G 4/12 2006.01 (IA)

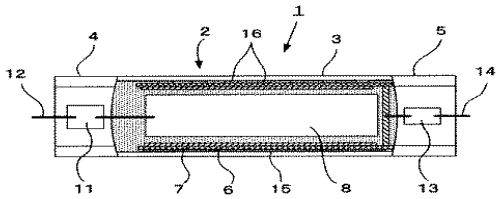


DYE-SENSITIZED SOLAR CELL

PROBLEM TO BE SOLVED: To provide a dye-sensitized solar cell that includes: a collecting electrode formed of a transparent conductive film on an inner surface of a tubular container; a photoelectrode formed on an inner surface of the collecting electrode; a counter electrode opposing the collecting electrode and the photoelectrode and has an electrolyte charged in the tubular container; and a structure that compensates a decrease in power generation efficiency depending upon the electric resistance of the collecting electrode made of the transparent conductive film, and efficiently takes out electrons collected at the collecting electrode so as to improve the power generation efficiency.SOLUTION: A dye-sensitized solar cell is provided with a belt-like electric conduction part made of a material having larger conductivity than a collecting electrode formed on one surface side of the collecting electrode extending along a tube-axis direction of an annular container.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015065421 A 20150409

Applicant: USHIO INC
Inventor: YAMADA KOSUKE; NAKAMURA MASAKI
Prio: JP 20130828 2013176798
Appl.No: JP2014163345
IPC: H01G 9/20 2006.01 (IA)

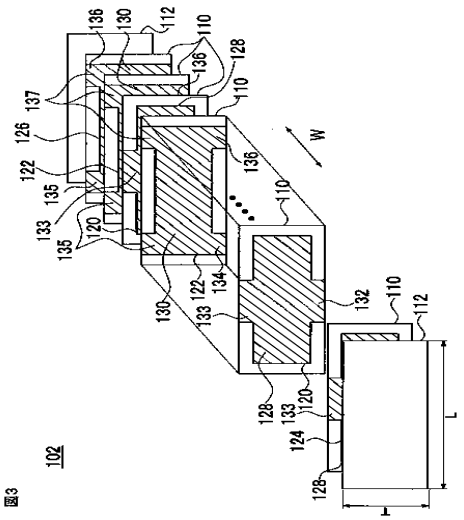


THREE-TERMINAL CAPACITOR

PROBLEM TO BE SOLVED: To provide a three-terminal capacitor that prevents degradation of a capacitor function by preventing cracks occurring near an outermost conductor layer.SOLUTION: A three-terminal capacitor includes a capacitor element 102. Second external electrodes are provided at one end portion and the other end portion in a longitudinal direction of a first surface of the capacitor element 102, and a first external electrode is provided at a portion between the two second external electrodes. The capacitor element 102 includes a plurality of dielectric layers 110 for internal layers disposed between a first conductor layer 120 and a second conductor layer 122, outermost conductor layers 124 and 126 disposed so as to sandwich the plurality of dielectric layers for internal layers, and dielectric layers 112 for external layers disposed so as to sandwich the outermost conductor layers 124 and 126. The thickness of the outermost conductor layers 124 and 126 is smaller than the thickness of the first dielectric layer 120 or the second dielectric layer 122 located at the vicinity of the center in the width direction.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015065455 A 20150409

Applicant: MURATA MFG CO LTD
Inventor: ADACHI HIROFUMI; IKEDA MITSURU; KIMURA YOSHIAKI
Prio:
Appl.No: JP2014231081
IPC: H01G 4/30 2006.01 (IA)



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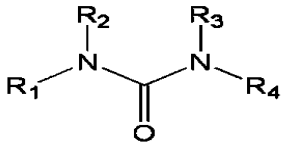
ELECTROLYTIC SOLUTION FOR DRIVING ELECTROLYTIC CAPACITOR

PROBLEM TO BE SOLVED: To provide an electrolytic solution for driving an electrolytic capacitor, specifically a medium- and high-voltage aluminum electrolytic capacitor, excellent in high-temperature long-life characteristics and high in productivity of capacitors.SOLUTION: An electrolytic solution for driving an electrolytic capacitor contains a compound represented by the following formula (I), in an organic electrolytic solution that contains an organic solvent having a hydroxyl group, and organic carboxylic acid or a salt thereof. (R<SB>1</SB>-R<SB>4</SB> each independently represent hydrogen, a hydroxyl group, a cyano group, a nitro group, an amino group, an imino group, a carbonyl group, a carboxyl group, a sulfo group, an aryl group, a 1-8C cycloalkyl group, or a 1-18C alkyl group or alkoxy group which may be branched. R<SB>1</SB>-R<SB>4</SB> may together form a ring.)COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015069985 A 20150413

Applicant: TOMIYAMA PURE CHEMICAL INDUSTRIES LTD
Inventor: SHIROTA DAISUKE; URAMOTO MASAHIDE; KOJIMA YOSHIHIRO; NAKAMURA TOMOHIRO; KUDO MASASHI
Prio:
Appl.No: JP2013200102
IPC: H01G 9/035 2006.01 (IA)



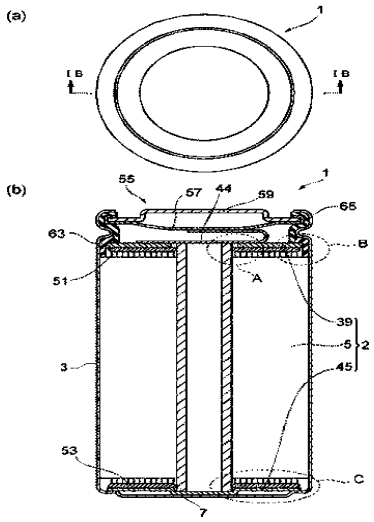
(I)

LITHIUM ION CAPACITOR

PROBLEM TO BE SOLVED: To provide a lithium ion capacitor superior in low-temperature characteristic and superior from the viewpoint of safety.SOLUTION: A lithium ion capacitor comprises: a positive electrode active material; a carbon material as a negative electrode active material; and a nonaqueous electrolytic solution. The nonaqueous electrolytic solution includes cyclic carbonate, chain carbonate and γ-butyrolactone. In the lithium ion capacitor, the content of the γ-butyrolactone is 15-50 vol.% to the total volume of the nonaqueous electrolytic solution.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070032 A 20150413

Applicant: HITACHI CHEMICAL CO LTD
Inventor: ONUMA TAKEMITSU; AICHI KATSUHIDE
Prio:
Appl.No: JP2013201436
IPC: H01G 11/60 2013.01 (IA)

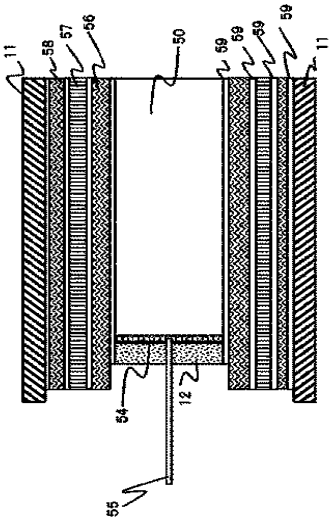


HIGH-VOLTAGE CAPACITOR, AND HIGH VOLTAGE GENERATION DEVICE EMPLOYING HIGH-VOLTAGE CAPACITOR

PROBLEM TO BE SOLVED: To prevent an insulation oil from penetrating into a high-voltage capacitor around which dielectric films with conductor foils formed therein are wound in a roll shape.SOLUTION: A high-voltage capacitor is formed by overlapping and winding two dielectric films in which a plurality of conductor foils are formed in a length direction while being spaced in a width direction on one side of the dielectric films. The two dielectric films are formed with an equal width and an equal interval of the conductor foils. The high-voltage capacitor includes a capacitor body 50 formed by deviating positions of both end portions of one of conductor foils which are overlapped with the dielectric film interposed therebetween, in the width direction so as to oppose the other neighboring two conductor foils. In the outer circumference of the capacitor body 50, resin insulation layers 56 and 58 are formed by winding a sheet impregnating a resin in an unwoven fabric. On a boundary surface between the resin insulation layers 56 and 58 and the capacitor body 50, an adhesion layer 59 is interposed that is formed by performing heat treatment on the resin insulation layers 56 and 58.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070035 A 20150413

Applicant: HITACHI MEDICAL CORP
Inventor: HATSUMI SATOSHI; SHIMADA SUSUMU
Prio:
Appl.No: JP2013201468
IPC: H01G 4/224 2006.01 (IA)

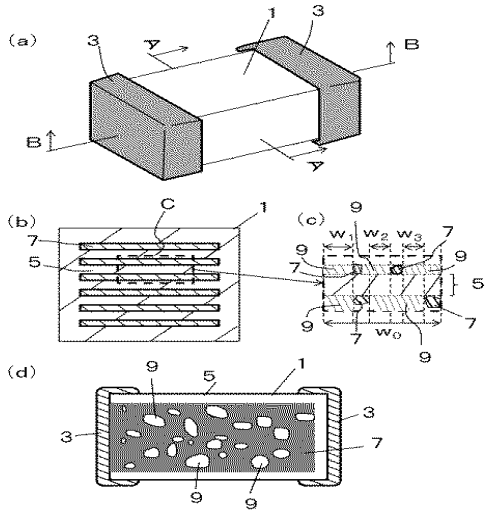


LAMINATED ELECTRONIC COMPONENT

PROBLEM TO BE SOLVED: To provide a laminated electronic component in which a high withstand voltage can be obtained, even if a voltage is applied while a ceramic layer is thinned.SOLUTION: A laminated electronic component includes an electronic component body 1 where a ceramic layer 5 and an internal electrode layer 7 are laminated alternately. The ceramic layers 5 arranged to sandwich the internal electrode layer 7 vertically on both sides thereof are integrate with a ceramic binding material 9 partially penetrating the internal electrode layer 7. In the sectional view of the electronic component body 1, the internal electrode layers 7 are arranged not to overlap at the same position in the lamination direction, between the two layers arranged with the ceramic layer 5 interposed therebetween.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070048 A 20150413

Applicant: KYOCERA CORP
Inventor: UENO JUN
Prio:
Appl.No: JP2013201728
IPC: H01G 4/232 2006.01 (IA)



METHOD OF MANUFACTURING MULTILAYER THIN FILM CAPACITOR

PROBLEM TO BE SOLVED: To provide a method of manufacturing a multilayer thin film capacitor which allows for increase in the capacity of a capacitor element, while enhancing the design flexibility in the structure of the capacitor element, and facilitating the capacity adjustment of the capacitor element.SOLUTION: Since the outer periphery of a capacitor element 6 is formed in a predetermined shape by a single etching, it is not required to ensure an alignment margin in an exposure mask used for processing the plan view of the outer periphery of a capacitor element 6 in the predetermined shape. Since the area of an electrode layer 4 can be increased, the capacity of the capacitor element 6 can be increased, and thereby the design flexibility in the structure of the capacitor element 6 can be enhanced. Furthermore, since the external dimensions of the capacitor element 6 can be adjusted by simply changing the design of the exposure mask used in the outline processing step, capacity adjustment of the capacitor element 6 can be facilitated.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070058 A 20150413

Applicant: MURATA MFG CO LTD
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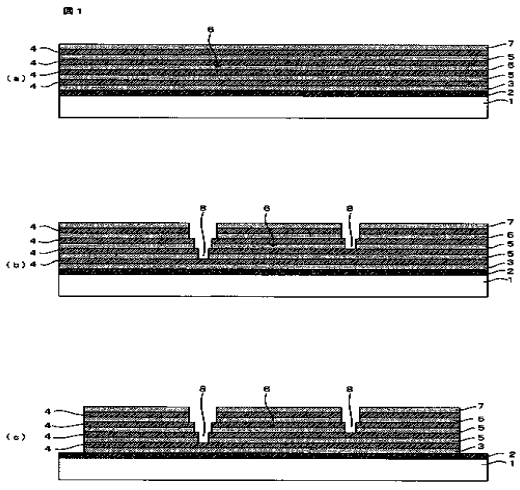
Prio:
Appl.No: JP2013201882
IPC: H01G 4/12 2006.01 (IA)



COMPOSITION FOR CAPACITOR ELECTRODE FORMATION, CAPACITOR ELECTRODE, AND CAPACITOR

PROBLEM TO BE SOLVED: To provide a composition for electrode formation for forming a capacitor superior in charge and discharge cycle characteristics, which is superior in the ability to distribute an active material and a conductive assistant.SOLUTION: A composition for capacitor electrode formation comprises: at least one of an electrode active material (A) and a conductive assistant (B); a binder (C) including crosslinked resin microparticles; a resin type dispersant (D) produced by neutralizing, in copolymer having an aromatic ring, a carboxyl group or an amino group, and a hydroxyl group, at least a part of the carboxyl group or the amino group; and an aqueous liquid medium (E).COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070089 A 20150413

Applicant: TOYO INK SC HOLDINGS CO LTD
Inventor: YATEMATA AKIHIKO; MOROISHI YORIYUKI
Prio:
Appl.No: JP2013202530
IPC: H01G 11/38 2013.01 (IA)

(19) JAPANESE PATENT OFFICE

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(22) Date of filing: 27.09.2013

(71) Applicant: TOYO INK SC HOLDINGS CO LTD

(72) Inventor: YATEMATA AKIHIKO
MOROISHI YORIYUKI

(54) COMPOSITION FOR CAPACITOR ELECTRODE FORMATION, CAPACITOR ELECTRODE, AND CAPACITOR

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a composition for electrode formation for forming a capacitor superior in charge and discharge cycle characteristics, which is superior in the ability to distribute an active material and a conductive assistant.

SOLUTION: A composition for capacitor electrode formation comprises: at least one of an electrode active material (A) and a conductive assistant (B); a binder (C) including crosslinked resin microparticles; a resin type dispersant (D) produced by neutralizing, in copolymer having an aromatic ring, a carboxyl group or an amino group, and a hydroxyl group, at least a part of the carboxyl group or the amino group; and an aqueous liquid medium (E).

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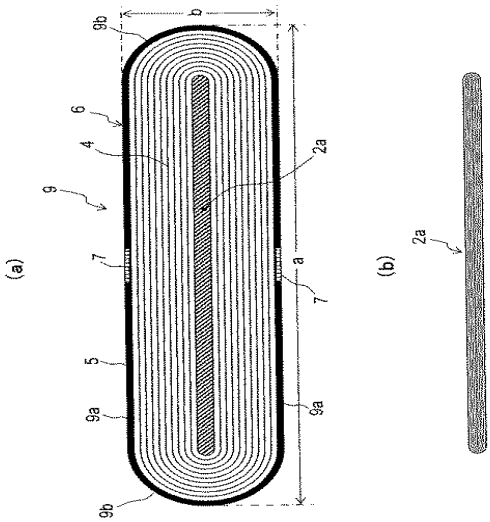
CAPACITOR ELEMENT

PROBLEM TO BE SOLVED: To solve the problems of flat formability inhibition, decrease in breakdown voltage characteristics, and operation sound during ripple current, by preventing occurrence of voids, wrinkles and distortion of a metalization film wound body in a capacitor element having ellipticity of 0.6 or more.SOLUTION: A composite film wound body 6 is configured by further winding an exterior film 5 on the outer periphery of a metalization film wound body 4 configured by winding a metalization film 3, and then winding and fixing by thermal welding. A flat columnar body 9 is configured by pressing the composite film wound body 6, and metal electrodes 10 are formed at both ends in the axial direction thereof. In a capacitor element having an oblateness of 0.6 or more from the point of view of volumetric efficiency up, the winding and fixing of the exterior film 5 is thermal welding at a part of self overlap, and performed at a plurality of points distributed in the circumferential direction, and the ratio of the entire outer peripheral surface occupied by the total thermal welding area is set to 30% or less.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070125 A 20150413

Applicant: NICHICON CORP
Inventor: TAKAGAKI KOJI; OZAWA TOSHIAKI; HORIGUCHI TAKESHI; HAYASHI TATSUYA
Prio:
Appl.No: JP2013203449
IPC: H01G 4/18 2006.01 (IA)

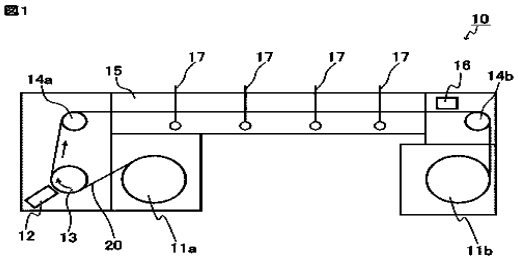


METHOD OF PRODUCING CERAMIC GREEN SHEET

PROBLEM TO BE SOLVED: To provide a method of producing a ceramic green sheet capable of products, e.g., a multilayer capacitor, having a higher sheet density with good yield.SOLUTION: A method of producing a ceramic green sheet includes a slurry preparation step for preparing slurry containing ceramic powder and a resin component, a coating step for coating a support film with the slurry, and a dry step for drying the slurry thus applied. The dry step is set to such conditions that drying of slurry is completed in 4 seconds or more after ending the coating step.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070127 A 20150413

Applicant: MURATA MFG CO LTD
Inventor: TABATA KAZUHIRO; TANAKA HIDEHIKO; YAMAMOTO YOICHI
Prio:
Appl.No: JP2013203507
IPC: H01G 4/12 2006.01 (IA)



ELECTRODE MATERIAL, ELECTRODE AND, POWER STORAGE DEVICE

PROBLEM TO BE SOLVED: To provide an electrode material which allows for production of a power storage device having a large charge/discharge capacity.SOLUTION: An electrode material having a specific surface area of 500 m<SP>2</SP>/g or less is obtained via a process for heating a raw material, containing a solvent extract of coal, at 700-2,500°C under an atmosphere substantially not containing oxygen. Alternatively, an electrode material containing at least one kind selected from a group consisting of a metal capable of absorbing lithium, semimetals and their oxides is obtained via a process for heating a raw material, containing a solvent extract of coal under an atmosphere substantially not containing oxygen.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070137 A 20150413

Applicant: JSR CORP
Inventor: ISHIBASHI KEISUKE; SHIMOBABA SATOSHI; ITO AKIMOTO; OKANIWA MOTOKI; ERIYAMA YUICHI; MIYAKI NOBUYUKI
Prio:
Appl.No: JP2013203731
IPC: H01G 11/34 2013.01 (IA)

(19) JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

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H01M 4/38 (2006.01)
H01M 4/48 (2010.01)

(21) Application number: 2013203731

(22) Date of filing: 30.09.2013

(71) Applicant: JSR CORP

(72) Inventor: ISHIBASHI KEISUKE
SHIMOBABA SATOSHI
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MIYAKI NOBUYUKI

(54) ELECTRODE MATERIAL, ELECTRODE AND, POWER STORAGE DEVICE

(57) Abstract:

PROBLEM TO BE SOLVED: To provide an electrode material which allows for production of a power storage device having a large charge/discharge capacity.

SOLUTION: An electrode material having a specific surface area of 500 m2/g or less is obtained via a process for heating a raw material, containing a solvent extract of coal, at 700-2,500°C under an atmosphere substantially not containing oxygen. Alternatively, an electrode material containing at least one kind selected from a group consisting of a metal capable of absorbing lithium, semimetals and their oxides is obtained via a process for heating a raw material, containing a solvent extract of coal under an atmosphere substantially not containing oxygen.

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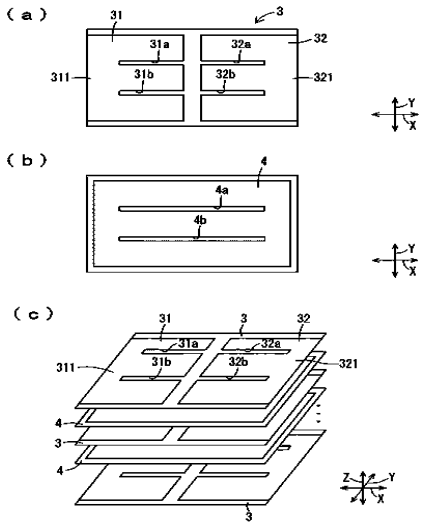
MULTILAYER CAPACITOR AND FLASH LIGHT EMITTING DEVICE

PROBLEM TO BE SOLVED: To provide a multilayer capacitor having high capacity and high breakdown voltage characteristics, that can be used as a main capacitor for flash emission of a xenon discharge tube.SOLUTION: A multilayer capacitor includes a laminate of a plurality of dielectric layers, a plurality of capacity electrodes 3 and floating electrodes 4 disposed alternately in the laminate while holding the dielectric layer, and first and second external electrodes provided on the side face of the laminate and connected electrically with the capacity electrodes 3 but insulated electrically from the floating electrodes 4. The capacity electrode 3 is configured to include a first capacity electrode 31 where a plurality of first capacity electrode slits 31a, 31b are formed, and a second capacity electrode 32 where a plurality of second capacity electrode slits 32a, 32b are formed.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070144 A 20150413

Applicant: KYOCERA CORP
Inventor: MURAMATSU SATOSHI
Prio:
Appl.No: JP2013203870
IPC: H01G 4/30 2006.01 (IA)

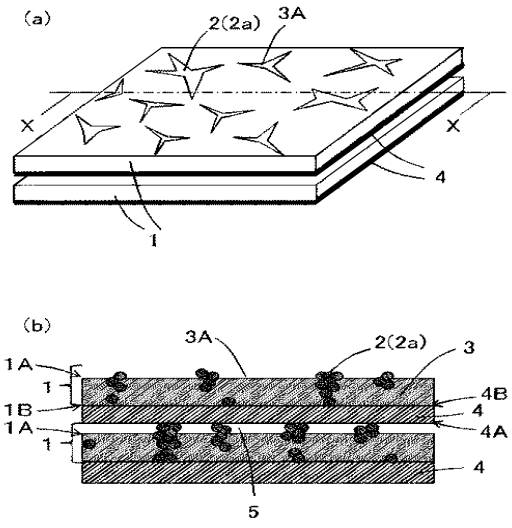


LAMINATE AND FILM CAPACITOR

PROBLEM TO BE SOLVED: To provide a laminate and a film capacitor of less defects in which adhesion of a dielectric film is more uniform, by using a dielectric film of good slipperiness and excellent handling properties in the winding step, and the like.SOLUTION: In a laminate where a plurality of dielectric films 1, containing ceramic particles 2a and a resin 3, are laminated with an electrode layer 4, provided on the second principal surface 1B, interposed therebetween, the first principal surface 1A of the dielectric films 1 has a first resin surface 3A composed of resin 3, and a ceramic particle aggregation 2 containing ceramic particles 2a and projecting from the first resin surface 3A. The first electrode surface 4A of the electrode layer 4 facing the first principal surface 1A is in contact with the ceramic particle aggregation 2, and has a cavity 5 between the first electrode surface 4A and first resin surface 3A.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070163 A 20150413

Applicant: KYOCERA CORP
Inventor: ITO KENICHI
Prio:
Appl.No: JP2013204367
IPC: H01G 4/18 2006.01 (IA)

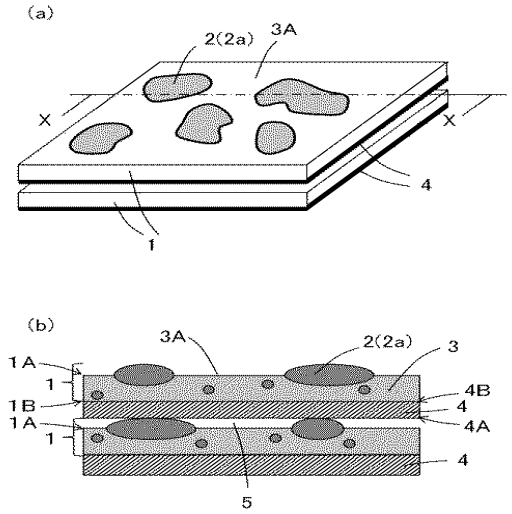


LAMINATE AND FILM CAPACITOR

PROBLEM TO BE SOLVED: To provide a laminate and a film capacitor of less defects in which adhesion of a dielectric film is more uniform, by using a dielectric film of good slipperiness and excellent in the handling properties in a winding step, and the like.SOLUTION: In a laminate where a plurality of dielectric films 1 containing a metal oxide 2a and a resin 3 are laminated with an electrode layer 4, provided on the second principal surface 1B, interposed therebetween, the first principal surface 1A of the dielectric film 1 has a first resin surface 3A composed of resin 3, and a plurality of flat-shaped hill-like parts 2 containing a metal oxide 2a and protruding like a hill from the first resin surface 3A. The first electrode surface 4A of the electrode layer 4 facing the first principal surface 1A is in contact with the hill-like part 2, and has a cavity 5 between the first electrode surface 4A and first resin surface 3A.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070165 A 20150413

Applicant: KYOCERA CORP
Inventor: ITO KENICHI
Prio:
Appl.No: JP2013204372
IPC: H01G 4/18 2006.01 (IA)

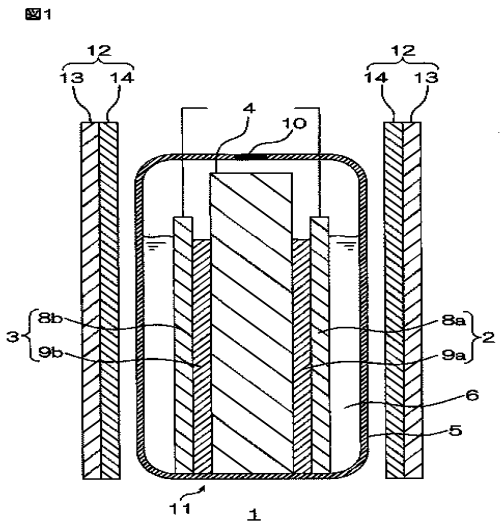


ELECTROCHEMICAL CAPACITOR

PROBLEM TO BE SOLVED: To provide an electrochemical capacitor capable of suppressing increase in the internal resistance, while prolonging the life, by suppressing retention of gas.SOLUTION: A hybrid capacitor 1 includes an electrochemical cell 11 including a positive electrode 2, a negative electrode 3 attached to face the positive electrode 2, a cell 5 for housing the positive electrode 2 and negative electrode 3, and filled with an electrolyte 6, and a check valve 10 for discharging gas in the cell 5, and a pressurizer 12 for pressurizing the electrochemical cell 11 in the facing direction of the positive electrode 2 and negative electrode 3. The pressurizer 12 includes a pair of constraining plates 13 arranged oppositely so as to sandwich the electrochemical cell 11, and a plurality of protrusions 14 protruding from the surface of the constraining plate 13 facing the electrochemical cell 11 toward the electrochemical cell 11, and arranged at predetermined intervals each other.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070197 A 20150413

Applicant: DAIHATSU MOTOR CO LTD
Inventor: MURAYAMA ICHIRO; MURABAYASHI MASANAO; ABE HIROKI
Prio:
Appl.No: JP2013205073
IPC: H01G 2/02 2006.01 (IA)



METHOD OF MANUFACTURING MICRO-ELECTRONIC COMPONENT AND CLEANING APPARATUS

PROBLEM TO BE SOLVED: To provide a method of manufacturing a micro-electronic component capable of enhancing the yield and productivity.SOLUTION: A method of manufacturing a micro-electronic component includes a step of cutting the material of multiple micro-electronic component, i.e., a mother block, and individualizing the mother block to multiple chips, and a step of cleaning the multiple chips 20 by immersing the multiple chips 20 thus individualized, while sticking to a holding adhesive sheet 30A, in a liquid 113 to which vibration is given.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070205 A 20150413

Applicant: MURATA MFG CO LTD
Inventor: SHIMIZU AKIKO; AMAYA KAZUHIRO; OKAJIMA KENICHI
Prio:
Appl.No: JP2013205222
IPC: H01G 4/30 2006.01 (IA)

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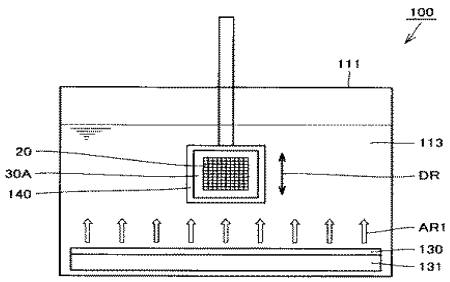


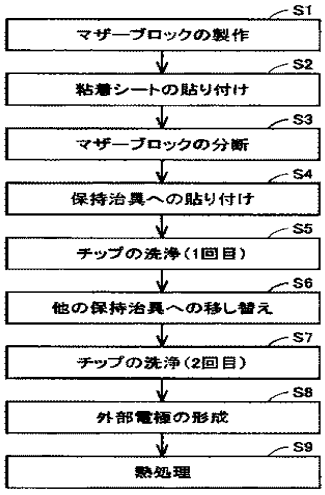
METHOD OF MANUFACTURING MICRO-ELECTRONIC COMPONENT AND HOLDING JIG FOR MANUFACTURING MICRO-ELECTRONIC COMPONENT

PROBLEM TO BE SOLVED: To provide a method of manufacturing a micro-electronic component capable of enhancing the yield and productivity.SOLUTION: A method of manufacturing a micro-electronic component includes a step of dividing the material of multiple micro-electronic components, i.e., a mother block, and individualizing the mother block to multiple chips 20, and a step of cleaning the multiple chips 20 by immersing the multiple chips 20 together with a holding jig 60 in a liquid 113 to which vibration is given, while holding an adhesive sheet 31 sticking to the multiple chips 20 on the surface side, i.e., the adhesive surface, by means of the holding jig 60 on the back side. A holding jig 40 having a holding sheet 62 for holding the adhesive sheet 31, and an annular frame 61 for supporting the periphery of the holding sheet 62 is used.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070206 A 20150413

Applicant: MURATA MFG CO LTD
Inventor: YAMADA HISAHIRO
Prio:
Appl.No: JP2013205226
IPC: H01G 4/30 2006.01 (IA)

図7

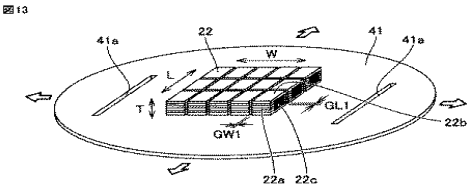


METHOD FOR MANUFACTURING ELECTRONIC COMPONENT

PROBLEM TO BE SOLVED: To provide a method for manufacturing an electronic component in which, even in the case where an expand device is used which isotropically draws an adhesive sheet having expandability, an expansion rate can be easily achieved so as to differ in a drawing direction and consequently capable of manufacturing an electronic component with low cost and high productivity.SOLUTION: A method for manufacturing an electronic component includes the steps of: adhesively holding a plurality of chips 22 on a holding region of an adhesive sheet 41 having expandability; expanding the adhesive sheet 41 using an expand device to collectively widen a space between the adjacent chips 22; rolling the plurality of chips on the expanded adhesive sheet 41; and collectively applying a processing to the rolled chips 22. As the adhesive sheet 41, a sheet is used in which a slit 41a as a notch is provided on a peripheral region located on a periphery of the holding region.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070218 A 20150413

Applicant: MURATA MFG CO LTD
Inventor: MIZUKAMI MIYUKI; TANAKA JUNYA
Prio:
Appl.No: JP2013205512
IPC: H01G 4/30 2006.01 (IA)



BINDER COMPOSITION FOR ELECTROCHEMICAL CAPACITORS, SLURRY COMPOSITION FOR ELECTROCHEMICAL CAPACITORS, ELECTRODE FOR ELECTROCHEMICAL CAPACITORS, AND ELECTROCHEMICAL CAPACITOR

PROBLEM TO BE SOLVED: To provide a binder composition for electrochemical capacitors which makes possible to suppress the degradation of an electrolytic solution owing to halide ions, and the corrosion of a collector in an electrochemical capacitor.SOLUTION: A binder composition for electrochemical capacitors comprises: particulate polymer; and water-soluble polymer. The water-soluble polymer includes: 20-70 wt.% of ethylenic unsaturated carboxylic acid monomer units; 0.1-10 wt.% of carboxylic acid amide-containing monomer units; and 0.1-5.0 wt.% of cross-linkable monomer units.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015070245 A 20150413

Applicant: NIPPON ZEON CO LTD
Inventor: SASAKI TOMOKAZU
Prio:
Appl.No: JP2013206166
IPC: H01G 11/38 2013.01 (IA)


(19) JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: **2015070245 A**
(43) Date of publication of application: **13.04.2015**

(51) Int. Cl ***H01G 11/38*** (2013.01)

(21) Application number: **2013206166**
(22) Date of filing: **01.10.2013**

(71) Applicant: **NIPPON ZEON CO LTD**
(72) Inventor: **SASAKI TOMOKAZU**

(54) **BINDER COMPOSITION FOR ELECTROCHEMICAL CAPACITORS, SLURRY COMPOSITION FOR ELECTROCHEMICAL CAPACITORS, ELECTRODE FOR ELECTROCHEMICAL CAPACITORS, AND ELECTROCHEMICAL CAPACITOR**

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a binder composition for electrochemical capacitors which makes possible to suppress the degradation of an electrolytic solution owing to halide ions, and the corrosion of a collector in an electrochemical capacitor.

SOLUTION: A binder composition for electrochemical capacitors comprises: particulate polymer; and water-soluble polymer. The water-soluble polymer includes: 20-70 wt.% of ethylenic unsaturated carboxylic acid monomer units; 0.1-10 wt.% of carboxylic acid amide-containing monomer units; and 0.1-5.0 wt.% of cross-linkable monomer units.

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SEPARATOR FOR ELECTRIC DOUBLE-LAYER CAPACITOR AND ELECTRIC DOUBLE-LAYER CAPACITOR

PROBLEM TO BE SOLVED: To provide a separator for an electric double-layer capacitor, having a sufficient tensile strength and simultaneously capable of reducing a value of resistance, and an electric double-layer capacitor.SOLUTION: A separator for an electric double layer capacitor includes a glass fiber nonwoven fabric made by wet papermaking, and a resin binder binding between fibers of the glass fiber nonwoven fabric. The resin binder comprises a urethane resin, a styrene-butadiene rubber, an epoxy resin, an acrylic resin, a phenol resin or a polyimide resin.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015072951 A 20150416

Applicant: NIPPON SHEET GLASS CO LTD
Inventor: TSUDA MASAHIRO
Prio:
Appl.No: JP2013206757
IPC: H01G 11/52 2013.01 (IA)

(19) JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

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(43) Date of publication of application: 16.04.2015

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(21) Application number: 2013206757
(22) Date of filing: 01.10.2013
(71) Applicant: NIPPON SHEET GLASS CO LTD
(72) Inventor: TSUDA MASAHIRO

(54) SEPARATOR FOR ELECTRIC DOUBLE-LAYER CAPACITOR AND ELECTRIC DOUBLE-LAYER CAPACITOR

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a separator for an electric double-layer capacitor, having a sufficient tensile strength and simultaneously capable of reducing a value of resistance, and an electric double-layer capacitor.

SOLUTION: A separator for an electric double layer capacitor includes a glass fiber nonwoven fabric made by wet papermaking, and a resin binder binding between fibers of the glass fiber nonwoven fabric. The resin binder comprises a urethane resin, a styrene-butadiene rubber, an epoxy resin, an acrylic resin, a phenol resin or a polyimide resin.

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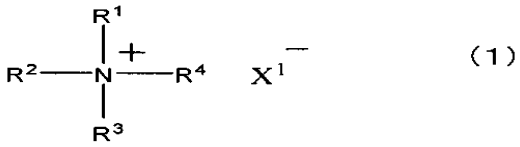
ELECTROLYTIC SOLUTION FOR CAPACITORS, AND CAPACITOR ARRANGED BY USE THEREOF

PROBLEM TO BE SOLVED: To provide an electrolytic solution for capacitors which has a high specific conductance.SOLUTION: An electrolytic solution for capacitors comprises: lactone (A) having 3-8 carbon atoms; a heterocyclic aromatic compound (B), of which the aromatic ring has 2-6 nitrogen atoms as its constituent atoms; and an ammonium salt (C1) expressed by the general formula (1) or an amidinium salt (C2) expressed by a particular general structural formula.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015073014 A 20150416

Applicant: SANYO CHEM IND LTD
Inventor: WADA MAYUKO; SEIKE HIDEO
Prio:
Appl.No: JP2013207971
IPC: H01G 9/035 2006.01 (IA)



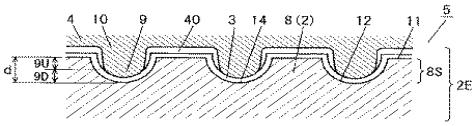
(1)

ELECTRODE FOIL, ELECTROLYTIC CAPACITOR AND METHOD OF MANUFACTURING ELECTRODE FOIL

PROBLEM TO BE SOLVED: To provide an electrode foil that can implements increase of the capacity, reduction of occurrence of short-circuit, and enhancement of repair of damage of a dielectric layer, a method of manufacturing the same and an electrolytic capacitor.SOLUTION: An electrode foil has a base material which is formed of first valve metal or alloy thereof and has many recess portions and a surface having no recess portion on the surface layer portion thereof, and a dielectric layer formed on the inner walls of the recess portions and the surfaces. A protection layer is formed above the dielectric layer provided on the surface and above the dielectric layer in a recess portion upper side area at the upper side of a half position of the depth of the recess portion. The dielectric layer contains the largest amount of the first valve metal at a portion which is formed below at least the protection layer, and secondly largest amount of second valve metal different form the first valve metal. The protection layer contains the largest amount of second valve metal, and also contains secondly largest amount of first valve metal.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015073015 A 20150416

Applicant: PANASONIC IP MANAGEMENT CORP
Inventor: ISHIMOTO HITOSHI; SHOJI MASASHI
Prio:
Appl.No: JP2013208013
IPC: H01G 9/055 2006.01 (IA)



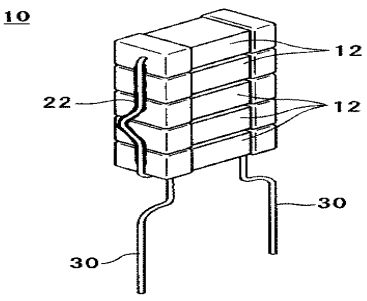
RADIAL LEAD TYPE LARGE-CAPACITY CAPACITOR AND METHOD FOR MANUFACTURING THE SAME

PROBLEM TO BE SOLVED: To provide a radial lead type large-capacity capacitor capable of reducing packaging density while achieving high capacity, and a method for manufacturing the radial lead type large-capacity capacitor.SOLUTION: A radial lead type large-capacity capacitor includes a plurality of chip capacitors each of which has main surfaces, side surfaces and end surfaces covered with an electrode, and has a length in a direction connecting the main surfaces to each other shorter than the length in a direction connecting the side surfaces to each other. Further, the radial lead type large-capacity capacitor includes two lead wires each of which is disposed so as to extend along the plurality of chip capacitors disposed so that the main surfaces thereof face to each other, and soldered to the electrode so as to be nearly orthogonal to the main surfaces of the chip capacitors. Each lead wire includes a terminal junction connected to the electrodes of the chip capacitors and a terminal extension part extending from the terminal junction. The tip of each terminal junction is bent on a chip capacitor side, and a part of the terminal extension part is bent so as to hold a main surface of the chip capacitor at the end.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015073038 A 20150416

Applicant: MURATA MFG CO LTD
Inventor: MASAKO YASUHISA; FUKUDA TOSHIYUKI; HARA TOSHIKAZU; FUKUDA SAKAE
Prio:
Appl.No: JP2013208626

図 1



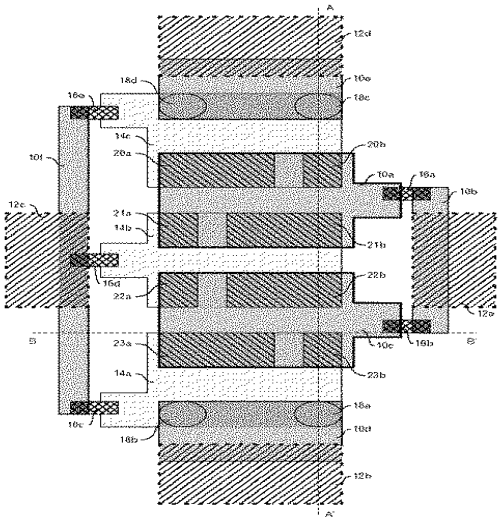
IPC: H01G 4/228 2006.01 (IA)

VARIABLE CAPACITY DEVICE

PROBLEM TO BE SOLVED: To achieve a variable capacity device having a structure capable of easily coping with a plurality of initial capacities.SOLUTION: A variable capacity device includes: a first conductor layer; a dielectric layer formed on the first conductor layer; and a second conductor layer formed on the dielectric layer. The variable capacity device includes one or more variable capacity elements each varying its capacity by applying a voltage between the first conductor layer and the second conductor layer. Then, the dielectric layer is divided into two or more areas in the same layer, and the conductor layer is formed on at least one predetermined area of the dielectric layer.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015073047 A 20150416

Applicant: TAIYO YUDEN CO LTD
Inventor: IKENAGA MICHIKAZU; ISHII DAIKI
Prio:
Appl.No: JP2013208943
IPC: H01G 7/06 2006.01 (IA)

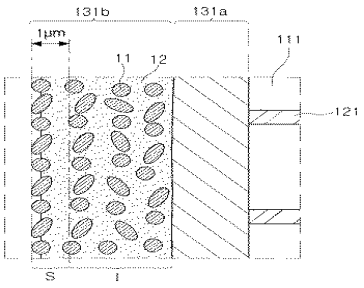


LAMINATED CERAMIC ELECTRONIC COMPONENT AND METHOD OF MANUFACTURING THE SAME

PROBLEM TO BE SOLVED: To provide a laminated ceramic electronic component and a method of manufacturing the same.SOLUTION: According to one embodiment of the present invention, the laminated ceramic electronic component can be provided which includes: a ceramic body including an internal electrode and a dielectric layer; an electrode layer formed on at least one surface of the ceramic body and electrically connected to the internal electrode; and a conductive resin layer formed on the electrode layer and containing a plurality of metal particles and a base resin. When the mass ratio of metal to carbon on a surface part of the conductive resin layer is A and the mass ratio of metal to carbon inside the conductive resin layer is B, A>B is satisfied.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015073074 A 20150416

Applicant: SAMSUNG ELECTRO-MECHANICS CO LTD
Inventor: CHUN BYONG-JIN; MOON JE IK; HAN JAE HWAN; YOO SEUNG HEE
Prio: KR 20131002 2013 2013118113
Appl.No: JP2014132324
IPC: H01G 4/232 2006.01 (IA)

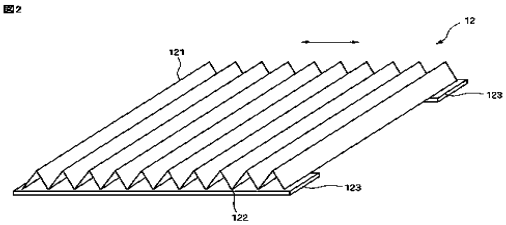


JIG FOR HEAT TREATMENT

PROBLEM TO BE SOLVED: To provide a jig for heat treatment capable of securing a passage of atmosphere gas and securing sufficient structural strength, with a simple configuration.SOLUTION: A jig for heat treatment 12 is used in heat treatment of chip-shaped electronic components. This jig includes: a mounting member which has a waving shape in which a mountain fold and valley fold are alternately repeated, is used for mounting the electronic components thereon, and has a plurality of through-holes smaller than a size of the electronic component; and reinforcement plates 123 as a pair of first reinforcement members which, when a traveling direction of waves in the waving form is defined as a first direction, and a horizontal direction orthogonal to the first direction is defined as a second direction, are provided in bottom parts or side parts at both ends in the second direction of the mounting member without being provided at both ends in the first direction of the mounting member.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015073079 A 20150416

Applicant: MURATA MFG CO LTD; TAIYO KANAAMI KK
Inventor: AKIMOTO SHIGERU; MORII HIROSHI; KONDO NOBUYUKI
Prio: JP 20130904 2013182887
Appl.No: JP2014140707
IPC: H01G 13/00 2013.01 (IA)

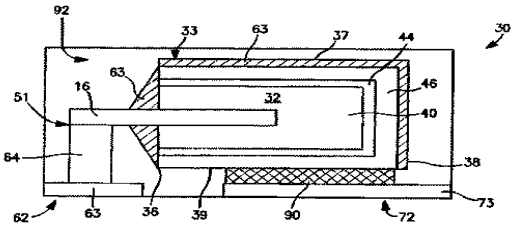


SOLID ELECTROLYTIC CAPACITOR FOR USE UNDER HIGH TEMPERATURE AND HIGH HUMIDITY CONDITION

PROBLEM TO BE SOLVED: To provide a solid electrolytic capacitor capable of exhibiting excellent electrical characteristics even under extreme conditions of high temperature and high humidity.SOLUTION: There is provided a solid electrolytic capacitor capable of exhibiting excellent electrical characteristics even under extreme conditions of high temperature and high humidity. The solid electrolytic capacitor includes a capacitor element including a sintered porous anode body, a dielectric that overlies the anode body, and a solid electrolyte that overlies the dielectric. The solid electrolyte contains a conductive polymer and an organometallic coupling agent. The capacitor also includes a moisture barrier layer that overlies the solid electrolyte and is formed from a hydrophobic elastomer which has a low surface energy so that it is not readily wettable by an aqueous medium.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015073097 A 20150416

Applicant: AVX CORP
Inventor: TATSUNO JUNYA; AOKI KIYOBUMI
Prio: US 20131002 2013 044290
Appl.No: JP2014203134
IPC: H01G 9/028 2006.01 (IA)



ELECTROCHEMICAL ENERGY STORAGE SYSTEM

PROBLEM TO BE SOLVED: To provide high stability in a large electric potential domain and under a high temperature and a property for improving permeation of an electrolyte to an electrode for an electrochemical energy storage system.SOLUTION: An energy storage system 120 comprises: a positive electrode 121, a negative electrode 122 arranged near the positive electrode 121 but not contacting it; a nonaqueous electrolyte 124 in which the positive electrode 121 and the negative electrode 122 are immersed; and a closed container 125 for housing the electrolyte 124, the positive electrode 121 and the negative electrode 122. The positive electrode 121 includes a porous matrix having plural pores of a micrometer size and made of three-dimentional meso-porous metal or a three-dimensional open structure carbonaceous material, and a metal oxide of a nano-structure coating insides of the pores. The electrolyte 124 contains an organic salt having an acylamino group, and a lithium salt expressed as LiX, and X includes ClO<SB>4</SB><SP>-</SP>, SCN<SP>-</SP>, PF<SB>6</SB><SP>-</SP>, B(C<SB>2</SB>O<SB>4</SB>)<SB>2</SB><SP>-</SP>, N(SO<SB>2</SB>CF<SB>3</SB>)<SB>2</SB><SP>-</SP>, CF<SB>3</SB>SO<SB>3</SB><SP>-</SP>, and a combination thereof.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015073104 A 20150416

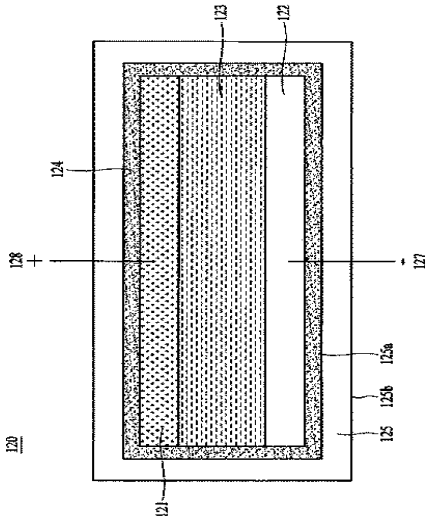
Applicant: NATINAL SYNCHROTRON RADIATION RESEARCH CENTER

Inventor: DENG MING JAY; CHANG JENG KUEI; CHEN JIN MING; LU KUEIH TZU

Prio: US 20111222 2011 579495, US 20120524 2012 480224

Appl.No: JP2014220082

IPC: H01G 11/62 2013.01 (IA)



METALLIZED FILM CAPACITOR AND CASE MOLD TYPE CAPACITOR USING THE SAME

PROBLEM TO BE SOLVED: To provide a small size case mold type capacitor with a superior leakage current characteristic and a humidity resistance property.SOLUTION: The metalized film of the metallized film capacitor includes: a dielectric film 2A; a first metal vapor deposition electrode 4A formed over the upper face of the dielectric film 2A; and a second metal vapor deposition electrode 9A which has the upper face faced to the bottom face of the first metal vapor deposition electrode 4A being interposed by the dielectric film 2A. At least one of the metal vapor deposition electrodes in the first metal vapor deposition electrode 4A and the second metal vapor deposition electrode 9A contains aluminum and magnesium. In the at least one metal vapor deposition electrode, the magnesium is unevenly distributed in a vertical thickness direction with respect to the upper face of the metal vapor deposition electrode.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015073112 A 20150416

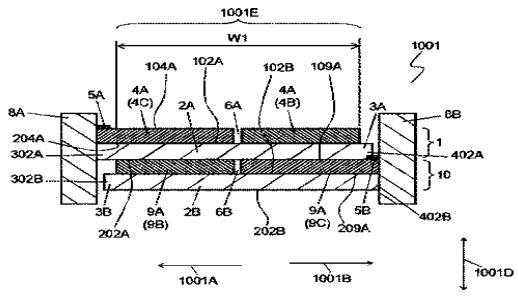
Applicant: PANASONIC IP MANAGEMENT CORP

Inventor: TAKEOKA HIROKI; KUBOTA HIROSHI; OCHI YUKIKAZU; FUJII HIROSHI; SHIMASAKI YUKIHIRO

Prio: JP 20091104 2009252599, JP 20100311 2010053984

Appl.No: JP2014234158

IPC: H01G 4/015 2006.01 (IA)

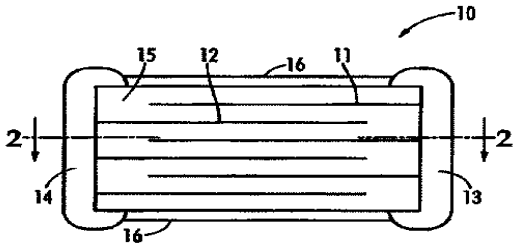


HIGH CAPACITANCE MULTILAYER WITH HIGH VOLTAGE CAPABILITY

PROBLEM TO BE SOLVED: To provide a multilayer ceramic capacitor with high voltage capability without the need of coating a part to prevent capacitor surface arc-over.SOLUTION: A capacitor 10 comprises a multiplicity of conductive inner electrodes 11 and 12 of alternating polarity, with dielectric ceramic layers 15 dispersed between the electrodes. The alternating conductive inner electrodes terminate at external terminals 13 or 14. The capacitor further has an insulating layer 16.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015073115 A 20150416

Applicant: KEMET ELECTRONICS CORP
Inventor: JOHN BULTITUDE; JAMES R MAGEE; LONNIE G JONES
Prio: US 20090701 2009 222296
Appl.No: JP2014238703
IPC: H01G 4/232 2006.01 (IA)

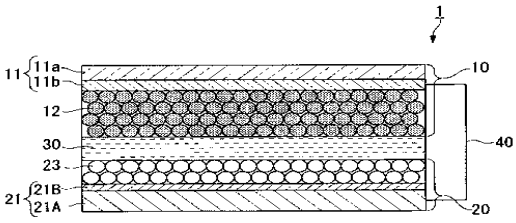


COUNTER ELECTRODE FOR DYE-SENSITIZED SOLAR CELL AND DYE-SENSITIZED SOLAR CELL

PROBLEM TO BE SOLVED: To provide a counter electrode for a dye-sensitized solar cell which can be arranged in proximity to a photo-electrode while preventing an electrical short circuit with the photo-electrode.SOLUTION: A counter electrode 20 for a dye-sensitized solar cell comprises: a conductive layer 21; and a contact prevention layer 23 formed of an insulation substance and formed on one surface of the conductive layer 21.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015073116 A 20150416

Applicant: TOKYO UNIV OF SCIENCE; TOPPAN PRINTING CO LTD
Inventor: WATANABE NAOYA; KUDO TOMOHIRO; MUROYA SHOGO; NOZAWA KOYA; OZAWA HIRONOBU; ARAKAWA HIRONORI; SHIBAYAMA NAOYUKI
Prio: JP 20120918 2012204696, JP 20130125 2013012408, JP 20130822 2013172711
Appl.No: JP2014239321
IPC: H01G 9/20 2006.01 (IA)

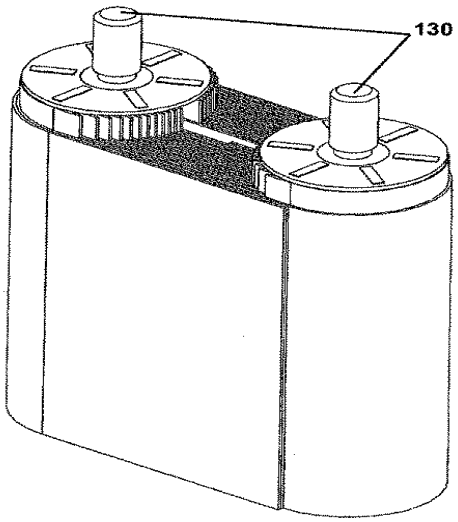


OBLONG ELECTROCHEMICAL DOUBLE LAYER CAPACITOR

PROBLEM TO BE SOLVED: To provide efficient, high density energy storage in a capacity device including a plurality of electrochemical double layer capacitors.SOLUTION: A device includes a plurality of electrochemical double layer capacitors configured in an at least two-dimensional array. In the device, each of the plurality of electrochemical double layer capacitors has an oblong cross section and has two electrodes in each of which a body capable of storing electrical charge and a plurality of finger-like pieces extended from the body are disposed. The finger-like piece extended from the body with respect to one electrode and the finger-like piece extended from the body with respect to the other electrode protrude in the same direction. The two-dimensional array defines a plurality of passages between the electrochemical double layer capacitors, a two-dimensional surface on which the electrochemical double layer capacitors are arranged is in parallel with the oblong cross section in the electrochemical double layer capacitors, and a cooling fluid can pass through each passage.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015073125 A 20150416

Applicant: CORNING INC
Inventor: KAMJULA P REDDY; JAMES S SUTHERLAND; TODD M WETHERILL
Prio: US 20071031 2007 981096
Appl.No: JP2014248787
IPC: H01G 11/10 2013.01 (IA)

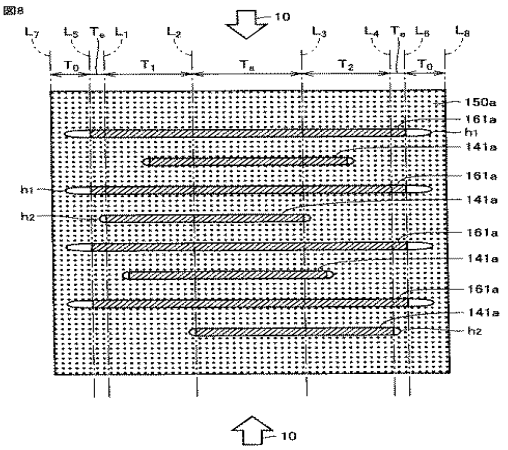


CERAMIC ELECTRONIC COMPONENT

PROBLEM TO BE SOLVED: To reduce the size of a gap portion which opens so as to be adjacent to an end of an inner electrode in an end surface of a laminate thereby improving reliability of a ceramic electronic component.SOLUTION: A ceramic electronic component includes: a laminate configured by alternatively laminating a ceramic layer 150a and a flat plate-like inner electrode 141a; an outer electrode electrically connected to the inner electrode 141a; and an auxiliary inner conductor 161a provided inside the laminate at an interval from the inner electrode 141a and electrically connected to the outer electrode. When a portion of the inner electrode 141a located at an end surface and a portion of the auxiliary inner conductor 161a located at the end surface are projected on a principal surface, each of one ends and the other ends which are located at the outermost side among one ends and the other ends of all the inner electrodes in a direction orthogonal to a side surface is provided so as to be included by at least one auxiliary inner electrode.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015076413 A 20150420

Applicant: MURATA MFG CO LTD
Inventor: OSHIUMI KENICHI; ITO SHUICHI
Prio:
Appl.No: JP2013209344
IPC: H01G 4/232 2006.01 (IA)

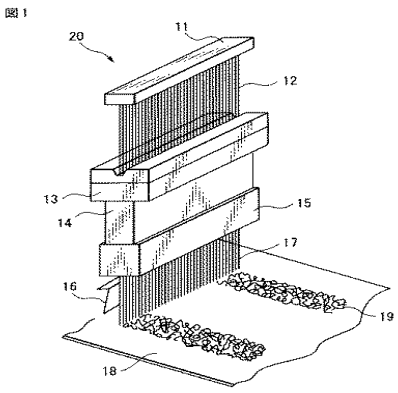


NONWOVEN CLOTH, SEPARATOR USING THE SAME, AND SOLID ELECTROLYTIC CAPACITOR

PROBLEM TO BE SOLVED: To provide a nonwoven cloth capable of stably providing a high performance separator for a capacitor.SOLUTION: The nonwoven cloth includes at least one layer constituted of a thermoplastic resin fiber. A variation coefficient of a formation is less than 2.5.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015076416 A 20150420

Applicant: ASAHI KASEI FIBERS CORP
Inventor: KUSAKABE JUNICHI; KOO RUMINA; OKAJIMA SHINICHI; KATO KAZUFUMI
Prio:
Appl.No: JP2013209464
IPC: H01G 9/02 2006.01 (IA)

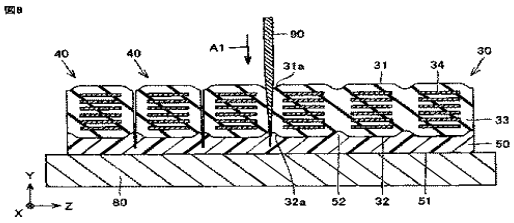


METHOD FOR MANUFACTURING CAPACITOR ELEMENT

PROBLEM TO BE SOLVED: To provide a method for manufacturing a capacitor element by which cutting can be realized with high accuracy and thereby improving yield without reducing productivity even when a mother block is divided by using a press-cutting.SOLUTION: A method for manufacturing a capacitor element includes steps of: manufacturing a mother block 30 by crimping a laminated sheet body; filling a groove 32a generated in a principal surface of the mother block 30 and fixing the groove 32a to the principal surface 32 so as to cover the principal surface 32 as well as forming a fixed layer 50 containing a resin material as a main component and having an exposed surface 51 being flatly formed; fixing the mother block 30 on a table 80 with the fixed layer 50 interposed therebetween; and cutting the mother block 30 by making a press-cutting blade 90 to enter up to the fixed layer 50 against the mother block 30 on a position corresponding to a portion where the groove 32a is located.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015076452 A 20150420

Applicant: MURATA MFG CO LTD
Inventor: SAKAI TETSUO
Prio:
Appl.No: JP2013210477
IPC: H01G 4/30 2006.01 (IA)



ELECTROLYTE FOR ELECTROLYTIC CAPACITORS, AND ELECTROLYTIC CAPACITOR ARRANGED BY USE THEREOF

PROBLEM TO BE SOLVED: To provide an electrolyte for electrolytic capacitors with a high specific conductance.SOLUTION: An electrolyte for electrolytic capacitors comprises: an organic solvent (A) which includes lactone (A1) having 3-8 carbon atoms, and a compound (A2) having 1-6 carbon atoms, and a boiling point of 80°C or higher, of which the viscosity measured by a cone plate type rotational viscometer at 25°C is 0.1-1.9 mPa s; and an amidinium organic salt (B) expressed by a particular general structural formula.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015076482 A 20150420

Applicant: SANYO CHEM IND LTD
Inventor: WADA MAYUKO; SEIKE HIDEO
Prio:
Appl.No: JP2013211278
IPC: H01G 9/035 2006.01 (IA)

(19) JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: 2015076482 A
(43) Date of publication of application: 20.04.2015

(51) Int. Cl H01G 9/035 (2006.01)

(21) Application number: 2013211278
(22) Date of filing: 08.10.2013
(71) Applicant: SANYO CHEM IND LTD
(72) Inventor: WADA MAYUKO
SEIKE HIDEO

(54) ELECTROLYTE FOR ELECTROLYTIC CAPACITORS, AND ELECTROLYTIC CAPACITOR ARRANGED BY USE THEREOF

(57) Abstract:

PROBLEM TO BE SOLVED: To provide an electrolyte for electrolytic capacitors with a high specific conductance.

SOLUTION: An electrolyte for electrolytic capacitors comprises: an organic solvent (A) which includes lactone (A1) having 3-8 carbon atoms, and a compound (A2) having 1-6 carbon atoms, and a boiling point of 80°C or higher, of which the viscosity measured by a cone plate type rotational viscometer at 25°C is 0.1-1.9 mPa s; and an amidinium organic salt (B) expressed by a particular general structural formula.

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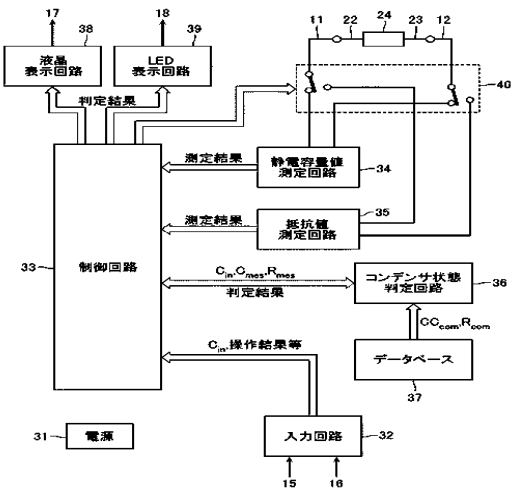
DEVICE FOR AUTOMATICALLY DETERMINING CAPACITOR STATE AND METHOD FOR AUTOMATICALLY DETERMINING CAPACITOR STATE

PROBLEM TO BE SOLVED: To provide a device for automatically determining a capacitor state and a method for automatically determining the capacitor state for enabling even a person who does not have any knowledge experience related to handling of a capacitor to confirm the deterioration state of a capacitor.SOLUTION: A device for automatically determining a capacitor state compares an input capacitance value as an input capacitance value with a measured capacitance value as a capacitance value obtained by measuring the electric characteristics of a capacitor to be measured to determine whether or not first conditions are satisfied, and compares a measured resistance value as a resistance value obtained by measuring the electric characteristics of the capacitor to be measured with a resistance threshold set as a predetermined value to determine whether or not second conditions are satisfied, and compares the measured capacitance value and the measured resistance value with data for comparison in accordance with the result of determination about first and second conditions to determine whether or not third conditions are satisfied, and determines the deterioration state of the capacitor to be measured from the result of determination.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015076501 A 20150420

Applicant: LOVEOX CO LTD
Inventor: NISHIO KOJI
Prio:
Appl.No: JP2013211619
IPC: H01G 13/00 2013.01 (IA)



ELECTROLYTE AND ELECTROCHEMICAL DEVICE

PROBLEM TO BE SOLVED: To provide an electrolyte which enables the materialization of an electrochemical device superior in the long-term reliability under the condition of a high voltage, and the low-temperature characteristic.SOLUTION: An electrolyte comprises a solvent (I) for dissolving an electrolytic salt, and an electrolytic salt (II). The solvent (I) for dissolving an electrolytic salt includes 10-40 vol.% of a sulfolane compound.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015076531 A 20150420

Applicant: DAIKIN IND LTD
Inventor: TAKAHASHI KENZO
Prio:
Appl.No: JP2013212267
IPC: H01G 11/60 2013.01 (IA)

(19) JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: 2015076531 A

(43) Date of publication of application: 20.04.2015

(51) Int. Cl H01G 11/60 (2013.01)
H01M 10/0569 (2010.01)
H01M 10/0568 (2010.01)

(21) Application number: 2013212267

(22) Date of filing: 09.10.2013

(71) Applicant: DAIKIN IND LTD

(72) Inventor: TAKAHASHI KENZO

(54) ELECTROLYTE AND ELECTROCHEMICAL DEVICE

(57) Abstract:

PROBLEM TO BE SOLVED: To provide an electrolyte which enables the materialization of an electrochemical device superior in the long-term reliability under the condition of a high voltage, and the low-temperature characteristic.

SOLUTION: An electrolyte comprises a solvent (I) for dissolving an electrolytic salt, and an electrolytic salt (II). The solvent (I) for dissolving an electrolytic salt includes 10-40 vol.% of a sulfolane compound.

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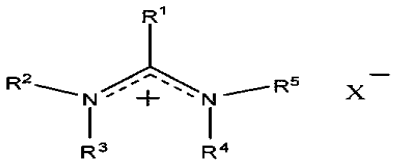
ELECTROLYTE FOR ELECTROLYTIC CAPACITORS, AND ELECTROLYTIC CAPACITOR ARRANGED BY USE THEREOF

PROBLEM TO BE SOLVED: To provide an electrolyte for electrolytic capacitors with a high specific conductance.SOLUTION: An electrolyte for electrolytic capacitors comprises: an organic solvent (A) which includes lactone (A1) having 3-8 carbon atoms and N-ethyl formamide (A2); and an amidinium organic salt (B) expressed by the general formula (1).COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015076538 A 20150420

Applicant: SANYO CHEM IND LTD
Inventor: WADA MAYUKO; SEIKE HIDEO
Prio:
Appl.No: JP2013212546
IPC: H01G 9/035 2006.01 (IA)



(1)

ALL-SOLID TYPE ELECTRIC DOUBLE LAYER CAPACITOR

PROBLEM TO BE SOLVED: To provide an all-solid type electric double layer capacitor which has a high electrostatic capacitance, enables the downsizing thereof, and is small in frequency dependence of the electrostatic capacitance.SOLUTION: An all-solid type electric double layer capacitor (1) comprises: an inorganic solid electrolyte (2) including crystal grains (21); and a pair of collectors (3) which are provided on both sides of the inorganic solid electrolyte (2). Supposing that the thickness of the inorganic solid electrolyte (2) between the pair of collectors (3) is T μm, the maximum of the grain sizes (D) of the crystal grains (21) is 33 μm to T μm in the inorganic solid electrolyte (2).COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015076573 A 20150420

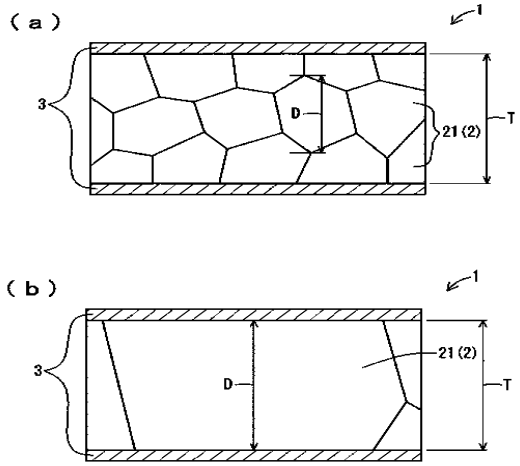
Applicant: KYOCERA CORP; ENERGY STORAGE MATERIALS CO LTD

Inventor: NAGAYOSHI MAIKO; HIRAHARA SEIICHIRO; ONO TOMOYUKI; KOUCHI FUMITO; SEKI YOJI; TSURUMI TAKAAKI

Prio:

Appl.No: JP2013213683

IPC: H01G 11/56 2013.01 (IA)



FEEDTHROUGH CAPACITOR

PROBLEM TO BE SOLVED: To provide a feedthrough capacitor capable of preventing occurrence of surface leakage.SOLUTION: Inside an element assembly 10, which has a pair of side faces 10a and 10b, a pair of end faces 10c and 10d and a pair of main faces 10e and 10f and is constituted of a dielectric ceramic, first inner electrodes 20 and second inner electrodes 22 are alternately laminated through dielectric layers 24. First terminal electrodes 30 and 32 are formed on the end faces 10c and 10d of the element assembly 10. Second terminal electrodes 34 and 36 are formed on the side faces 10a and 10b of the element assembly 10. On a surface, where the distance between the first terminal electrodes 30 and 32 and the second terminal electrodes 34 and 36 is the shortest, of the element assembly 10, are formed both insulator film region in which insulator layers 40 are formed and an element assembly-surface exposed region 42 in which the insulator layers 40 are not formed.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015076591 A 20150420

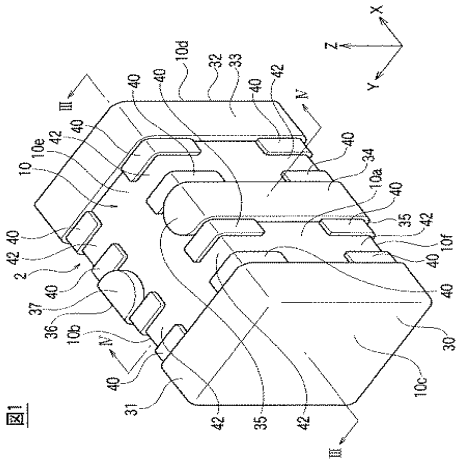
Applicant: TDK CORP

Inventor: FUKUSHIMA KENJI; IGUCHI TOSHIHIRO

Prio:

Appl.No: JP2013213960

IPC: H01G 4/35 2006.01 (IA)

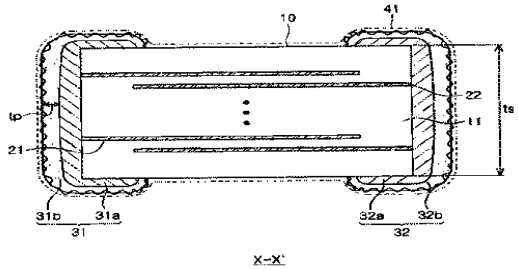


MULTILAYER CERAMIC ELECTRONIC COMPONENT TO BE EMBEDDED IN BOARD AND MULTILAYER CERAMIC ELECTRONIC COMPONENT EMBEDDED PRINTED CIRCUIT BOARD

PROBLEM TO BE SOLVED: To provide a multilayer ceramic electronic component to be embedded in a board and a multilayer ceramic electronic component embedded printed circuit board.SOLUTION: A multilayer ceramic electronic component to be embedded in a board includes: a ceramic body including a dielectric layer and having first and second main surfaces opposing each other, first and second side surfaces opposing each other, and first and second end surfaces opposing each other; a plurality of first and second internal electrodes formed to be alternately exposed through both end surfaces of the ceramic body, the dielectric layer being disposed between the plurality of first and second internal electrodes; and first and second external electrodes formed on both side end portions of the ceramic body, respectively. The first external electrode includes a first base electrode and a first terminal electrode formed on the first base electrode, and the second external electrode includes a second base electrode and a second terminal electrode formed on the second base electrode. In the first and second terminal electrodes, a surface roughness Ra in a region of 50x50 μm satisfies 400 nm≤Ra≤600 nm, and a surface roughness Ra' in a region of 10x10 μm satisfies 130 nm≤Ra'≤400 nm.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015076600 A 20150420

Applicant: SAMSUNG ELECTRO-MECHANICS CO LTD
Inventor: LEE BYOUNG HWA; LEE HAI JOON; CHAE EUN HYUK; LEE BAE GEN; JUNG JIN MAN
Prio: KR 20131008 2013 2013120074
Appl.No: JP2014067229
IPC: H01G 4/30 2006.01 (IA)



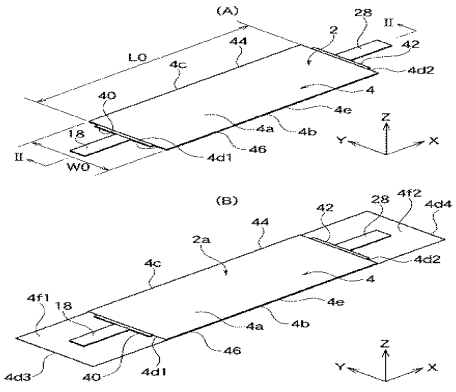
ELECTROCHEMICAL DEVICE

PROBLEM TO BE SOLVED: To provide an electrochemical device which can be made thinner, and which is superior in resistance to bending.SOLUTION: An electrochemical device comprises: a device main body 10 arranged by laminating a pair of a first internal electrode and a second internal electrode together with a separator layer sandwiched therebetween; a package sheet 4 covering the device main body; a first lead terminal 18 led to outside the package sheet 4; and a second lead terminal 28 led to outside the package sheet 4. The package sheet has a proof strength of 390-980 N/mm<SP>2</SP>, of which the hardness, especially Vickers hardness is 230-380 Hv.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015079836 A 20150423

Applicant: TDK CORP
Inventor: SAYA HIROKO
Prio:
Appl.No: JP2013215637
IPC: H01G 11/78 2013.01 (IA)

図1

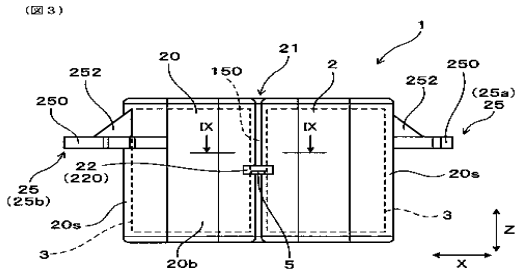


CAPACITOR

PROBLEM TO BE SOLVED: To provide a capacitor that allows reducing the amount of projection of a gate mark from a surface of a case.SOLUTION: A capacitor includes a resin case 2, a plurality of capacitor elements 3 housed in the case 2, and a sealing member 4 sealing the capacitor elements 3. A groove 21 is formed on the case 2 so as to be recessed inside the case. The groove 21 is formed along a space 150 between a pair of the capacitor elements 3 when viewed from the opening direction of the groove 21. At least a part of a gate mark 5 remaining after formation of the case 2 is formed in the groove 21.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015079837 A 20150423

Applicant: DENSO CORP
Inventor: TACHIBANA HIDEAKI
Prio:
Appl.No: JP2013215642
IPC: H01G 2/10 2006.01 (IA)

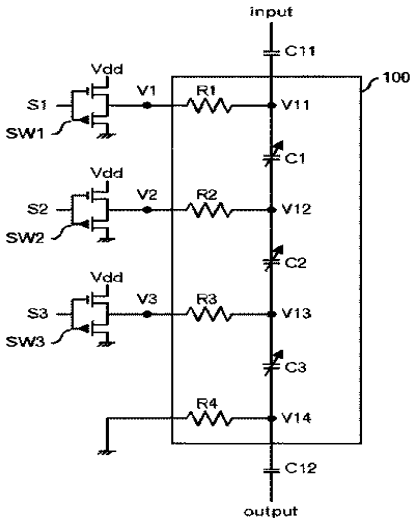


VARIABLE CAPACITANCE DEVICE

PROBLEM TO BE SOLVED: To provide a variable capacitance device capable of digitally controlling capacitance.SOLUTION: The variable capacitance device includes: (A) N (N is an integer of 2 or more) variable capacitance elements connected in series; (B) (N+1) bias lines connected to the input side of a top variable capacitance element out of the N variable capacitance elements, the output side of the final variable capacitance element and a connection part in each pair of connected variable capacitance elements; and (C) N switching elements connected to N bias lines out of the (N+1) bias lines to switch a state where a predetermined voltage is applied to both ends of each variable capacitance element in the N variable capacitance elements and a state where the predetermined voltage is not applied.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015079860 A 20150423

Applicant: TAIYO YUDEN CO LTD
Inventor: NATSUME SHINJI; NAKAJIMA KATSUAKI; KUSUMI SHINYA
Prio:
Appl.No: JP2013216222
IPC: H01G 7/00 2006.01 (IA)



ELECTROCHEMICAL DEVICE

PROBLEM TO BE SOLVED: To provide an electrochemical device which can be made thinner, and which is low in capacitance and superior in resistance to bending.SOLUTION: An electrochemical device comprises: a device main body 10 arranged by laminating a pair of a first internal electrode and a second internal electrode together with a separator layer sandwiched therebetween; a package sheet 4 covering the device main body; a first lead terminal 18 led to outside the package sheet 4; and a second lead terminal 28 led to outside the package sheet 4. The first lead terminal 18 and the second lead terminal 28 are led from position opposite to each other to outside seal parts 40 and 42. In a position corresponding to the seal parts 40 and 42, the first lead terminal 18 and the second lead terminal 28 have thinner regions 60. In the regions 60, the first lead terminal 18 and the second lead terminal 28 are smaller in thickness than lead end portions thereof. At least a part of each thinner region 60 protrudes from peripheral edges 4d1 and 4d2 of the package sheet 4 outwardly; and the parts of the thinner regions 60 so protruding outwardly are also covered by the respective seal parts 40 and 42.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015079907 A 20150423

Applicant: TDK CORP
Inventor: SAYA HIROKO
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Appl.No: JP2013217262
IPC: H01G 11/74 2013.01 (IA)

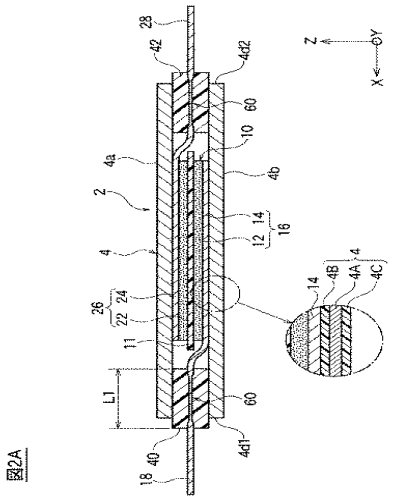

図2A

METHOD FOR MANUFACTURING ELECTRODE FOIL FOR ELECTROLYTIC CAPACITOR

PROBLEM TO BE SOLVED: To provide a method for manufacturing an electrode foil for an electrolytic capacitor capable of stably manufacturing the electrode foil having a high surface expansion rate.SOLUTION: A method for manufacturing an electrode foil for an electrolytic capacitor includes: a mother die preparation process S1 for preparing a mother die having projections arranged according to a predetermined pattern manufactured using electroforming; an oxide film creation process S3 for creating an oxide film on the surface of the electrode foil; a pattern transfer process S4 for depressing the projections of the mother die onto the surface of the electrode foil after the process S3 to form dimples to be etch pits; a remaining film removal process S5 for applying a voltage to the electrode foil after the process S4 in an electrolytic solution to remove the oxide film remaining in the dimples; and an etching process S 6 for etching the electrode foil after the process S5. In the process S5, a voltage at a level of destroying the oxide film remaining in the dimples is applied.COPYRIGHT: (C)2015,JPO&INPIT

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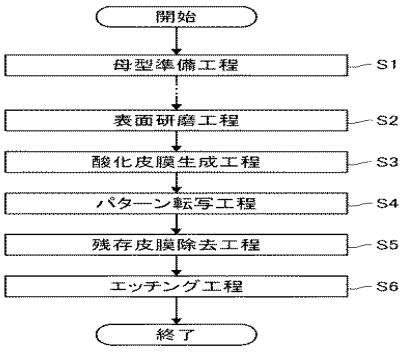
Applicant: NICHICON CORP
Inventor: IZAKI TATSUHIKO; NAKABO TORU; OBI ISAMU
Prio:
Appl.No: JP2013217450
IPC: H01G 9/04 2006.01 (IA)



DYE-SENSITIZED SOLAR CELL, TANDEM DYE-SENSITIZED SOLAR CELL, AND COMPOSITE NANOSTRUCTURE

PROBLEM TO BE SOLVED: To provide a dye-sensitized solar cell including an anode layer of a nanostructure of a titanium oxide (TiO<SB>2</SB>) coated with a tin oxide (SnO<SB>2</SB>).SOLUTION: A dye-sensitized solar cell comprises: a substrate; an anode layer; a dye; and a cathode. The anode layer includes a TiO<SB>2</SB> nanostructure coated with SnO<SB>2</SB> whose coating thickness is in a range of 2-10 nm regardless of the form of the TiO<SB>2</SB> nanostructure. The TiO<SB>2</SB> nanostructure coated with SnO<SB>2</SB> comprises a shell composed of a dielectric layer whose thickness may be in a range of 0.3-2 nm. The dye overlies the anode layer. The cathode overlies the dye. The cathode has a counter electrode. The TiO<SB>2</SB> nanostructure may be a nano particle, a nano wire, or a nano tube of TiO<SB>2</SB>. When TiO<SB>2</SB> nanostructure is a nano wire or nano tube of TiO<SB>2</SB>, the central axis is perpendicular to the upper surface of the substrate.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015079939 A 20150423

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Appl.No: JP2014168787
IPC: H01G 9/20 2006.01 (IA)

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(30) Priority: 28.08.2013 US 2013 012159
(71) Applicant: SHARP CORP

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(54) DYE-SENSITIZED SOLAR CELL, TANDEM DYE-SENSITIZED SOLAR CELL, AND COMPOSITE NANOSTRUCTURE

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a dye-sensitized solar cell including an anode layer of a nanostructure of a titanium oxide (TiO_2) coated with a tin oxide (SnO_2).

SOLUTION: A dye-sensitized solar cell comprises: a substrate; an anode layer; a dye; and a cathode. The anode layer includes a TiO_2 nanostructure coated with SnO_2 whose coating thickness is in a range of 2-10 nm regardless of the form of the TiO_2 nanostructure. The TiO_2 nanostructure coated with SnO_2 comprises a shell composed of a dielectric layer whose thickness may be in a range of 0.3-2 nm. The dye overlies the anode layer. The cathode overlies the dye. The cathode has a counter electrode. The TiO_2 nanostructure may be a nano particle, a nano wire, or a nano tube of TiO_2. When TiO_2 nanostructure is a nano wire or nano tube of TiO_2, the central axis is perpendicular to the upper surface of the substrate.

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ELECTROCHEMICAL ENERGY STORAGE DEVICE WITH HIGH CAPACITY AND HIGH POWER USING CONDUCTIVE POLYMER COMPOSITE

PROBLEM TO BE SOLVED: To provide techniques simultaneously satisfying high capacity, high output and reduced internal resistance of an electrochemical device such as electric dual layer capacitors, super capacitors and pseudocapacitors.SOLUTION: An electrode of an electrochemical device contains conductive polymer particles, and inorganic nanoparticles having conductivity higher than the conductive polymer. The conductive inorganic nanoparticles are dispersed on surfaces of and/or inside the conductive polymer particles.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015079966 A 20150423

Applicant: LG CHEM LTD
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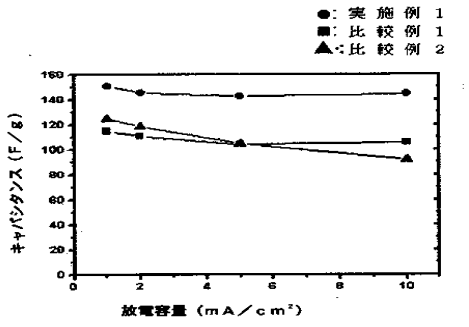
Prio: KR 20060504 2006 200640779
Appl.No: JP2014228693
IPC: H01G 11/30 2013.01 (IA)

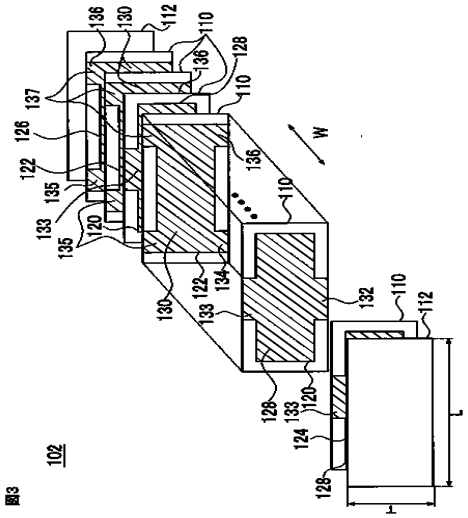


THREE-TERMINAL TYPE CAPACITOR

PROBLEM TO BE SOLVED: To provide a three-terminal type capacitor capable of suppressing reduction in a capacitor function by suppressing cracks with respect to a conductive layer contributing electrostatic capacitance.SOLUTION: A three-terminal type capacitor includes a capacitor element 102. The capacitor element includes a second external electrode provided on one end and the other end in a length direction of a first surface, and a first external electrode provided between the two second external electrodes. The capacitor element includes: an inner layer dielectric layer 110 disposed between the first conductive layer 120 and the second conductive layer 122; two outermost conductive layers 124, 126 disposed so as to sandwich the inner layer dielectric layer; and an outer layer dielectric layer 112 disposed so as to sandwich the outermost conductive layer. One outermost conductive layer is connected to the first external electrode shared with the adjacent first conductive layer via the inner layer conductive layer, and the other outermost conductive layer is connected to the second external electrode shared with the adjacent second conductive layer via the inner layer conductive layer.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015079980 A 20150423

Applicant: MURATA MFG CO LTD
Inventor: IKEDA MITSURU; ADACHI HIROFUMI; KIMURA YOSHIAKI
Prio:
Appl.No: JP2014245980
IPC: H01G 4/30 2006.01 (IA)



POWER STORAGE DEVICE

PROBLEM TO BE SOLVED: To provide an electrolyte easily produced at a low cost, and a power storage device including such an electrolyte.SOLUTION: A power storage device includes: a positive electrode having a positive electrode current collector and positive electrode active material; a negative electrode having a negative electrode current collector and negative electrode active material; and an electrolyte having a 1-piperidine-1-propanesulfonic acid or a 1-piperidine-1-butanesulfonic acid which is provided between the positive electrode and the negative electrode. Larger capacitance can be obtained when water is added to the manufactured electrolyte and temperature of the power storage device rises.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015079985 A 20150423

Applicant: SEMICONDUCTOR ENERGY LAB CO LTD
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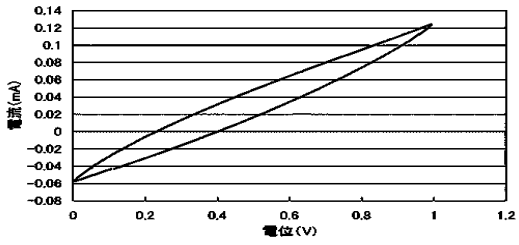
Prio: JP 20090930 2009228400
Appl.No: JP2014252862
IPC: H01G 11/62 2013.01 (IA)

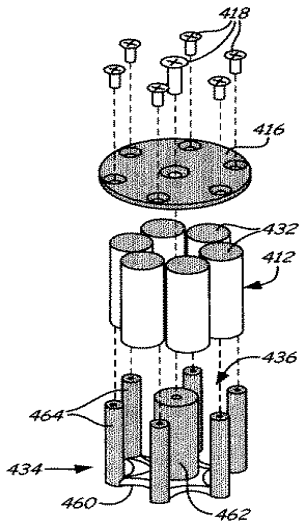


CAPACITOR CLAMP ASSEMBLY

PROBLEM TO BE SOLVED: To configure a capacitor clam assembly so as to ease damage due to twisting and heat during operation.SOLUTION: A capacitor clam assembly 414 includes: a mounting base part 460; a center pole 462 projected from the base part 460 in a vertical direction and a plurality of outer peripheral side poles 464 arranged in a peripheral direction on the periphery of the center pole 462 so as to be projected from the base part 460 in the vertical direction. The combination of the center pole 462 and the plurality of outer peripheral side poles 464 demarcates a plurality of recess portions 436 located on the periphery of the center pole 462 in a peripheral direction in posture in the vertical direction to hold a plurality of corresponding capacitor elements 412 arranged vertically on a mounting surface, between the center pole 462 and the plurality of outer peripheral side poles 464. The capacitor elements 412 are a plurality of axial lead wire capacitor elements held by the assembly 414 so that first lead wires 430 are projected from the assembly 414 generally to the mounting surface and are exposed to a peripheral environment.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015079989 A 20150423

Applicant: HAMILTON SUNDSTRAND CORP
Inventor: MASSOLLE DALE W
Prio: US 20111028 2011 284175
Appl.No: JP2014255736
IPC: H01G 2/02 2006.01 (IA)

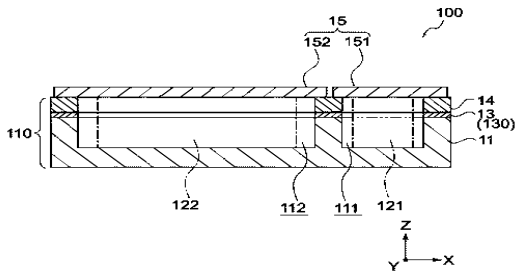


POWER-SUPPLY UNIT FOR MODULES, CASE, AND MODULE

PROBLEM TO BE SOLVED: To provide: a module arranged so that a power-storage device including a liquid or gel electrolyte and a circuit device can be mounted therein; a case main body used for the module; and a power-supply unit for the module.SOLUTION: A module according to an embodiment of the present invention comprises: a case main body; a power-storage device; and a circuit device. The case main body has: a first cavity and a second cavity. The power-storage device includes a liquid or gel electrolyte, and is disposed in the first cavity. The circuit device is disposed in the second cavity, and electrically connected with the power-storage device.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015082515 A 20150427

Applicant: TAIYO YUDEN CO LTD
Inventor: ISHIDA KATSUHIDE; YOSHITO JUN
Prio:
Appl.No: JP2013218133
IPC: H01G 11/78 2013.01 (IA)



PHOTOELECTRODE, METHOD OF MANUFACTURING THE SAME, AND MARINE MICROBIAL FUEL CELL INCLUDING THE SAME

PROBLEM TO BE SOLVED: To provide a photoelectrode which has metal oxide layers formed therein and is more excellent in electrode performance and anti-corrosion properties (durability).SOLUTION: The photoelectrode includes a substrate, a metal oxide layer (A) provided on the substrate, and a metal oxide layer (B) provided on the metal oxide layer (A). Both the metal oxide layer (A) and the metal oxide layer (B) have a photocatalytic action. The band gap of the metal oxide layer (A) is narrower than that of the metal oxide layer (B).COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015082549 A 20150427

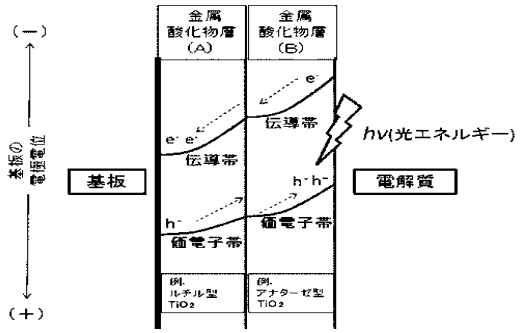
Applicant: TOKYO UNIV OF MARINE SCIENCE & TECHNOLOGY

Inventor: MOTODA SHINICHI; MORITA MOTOAKI; TAMURA SHO

Prio:

Appl.No: JP2013219060

IPC: H01G 9/20 2006.01 (IA)



MULTILAYER ELECTRONIC COMPONENT

PROBLEM TO BE SOLVED: To provide a multilayer electronic component which has excellent dielectric characteristics and can reduce the probability of occurrence of delamination even when a ceramic layer and an inner electrode layer are multilayered.SOLUTION: In a multilayer electronic component including an electronic component body 1 in which a ceramic layer 5 and an inner electrode layer 7 are alternately laminated, the inner electrode layer 7 includes: a ceramic binder 9 which penetrates the inner electrode layer 7 and is integrated with the ceramic layer 5; and a plurality of holes 11 scattered on a periphery of the ceramic binder 9, and a mean diameter D<SB>1</SB> of the ceramic binder 9 and a mean diameter D<SB>2</SB> of the hole 11 are smaller than a thickness t of the inner electrode layer 7.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015082636 A 20150427

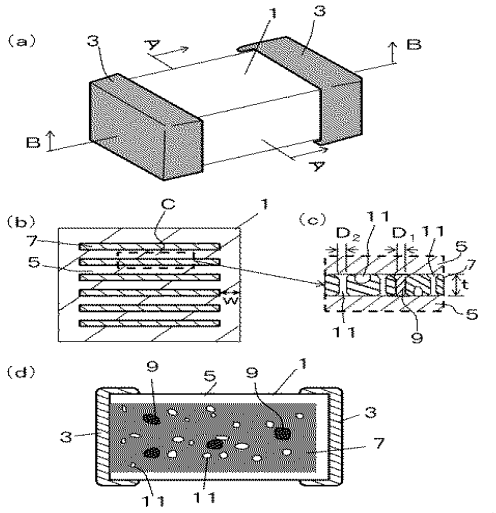
Applicant: KYOCERA CORP

Inventor: KIMURA TETSUYA

Prio:

Appl.No: JP2013221234

IPC: H01G 4/232 2006.01 (IA)

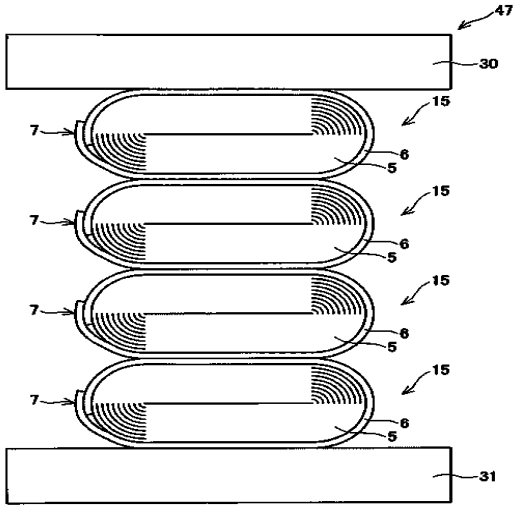


MANUFACTURING METHOD OF WOUND TYPE CAPACITOR

PROBLEM TO BE SOLVED: To provide a technology that suppresses a glass sheet to break when a wound type capacitor whose circumferential face is wound with the glass sheet is loaded with a weight to become flat.SOLUTION: The manufacturing method of a wound type capacitor includes flattening one or a plurality of laminated wound type capacitors 15 whose outer circumferential faces are wound with glass sheets 6 are loaded with a weight to be flattened. The wound type capacitors are loaded with a weight in a state where a mating part 7 where both ends of the glass sheet are overlapped is positioned at such a place as not to be in contact with a load surface of the press machine or a neighboring capacitor when being loaded.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015082640 A 20150427

Applicant: TOYOTA MOTOR CORP
Inventor: IMAI YOHEI
Prio:
Appl.No: JP2013221265
IPC: H01G 13/00 2013.01 (IA)

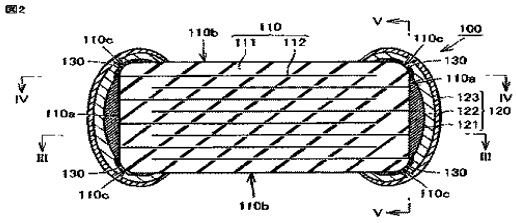


MULTILAYER CERAMIC CAPACITOR

PROBLEM TO BE SOLVED: To suppress occurrence of a crack in an element body due to heat stress while suppressing intrusion of water into the element body from the crack when the crack occurs.SOLUTION: A multilayer ceramic capacitor includes: a rectangular parallelepiped element body 110 which is formed of a dielectric ceramic with an inner electrode 112 embedded therein and has a pair of end surfaces 110a facing each other and four side surfaces 110b connecting the pair of end surfaces to each other; and an external electrode 120 provided over from each end surface 110a to at least one side surface 110b among the four side surfaces 110b in a surface of the element body 110 and electrically connected to the inner electrode 112. The external electrode 120 includes a sinter metal layer 121 formed on the element body 110 and a plating layer covering the sinter metal layer 121. The sinter metal layer 121 has an opening on at least one of ridge lines 110c, 110d of the element body 110. At least a part of the opening is filled with a glass layer 130.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015084360 A 20150430

Applicant: MURATA MFG CO LTD
Inventor: MIYAZAKI TOSHIKI; TAKASHIMA HIROKAZU
Prio:
Appl.No: JP2013222156
IPC: H01G 4/232 2006.01 (IA)

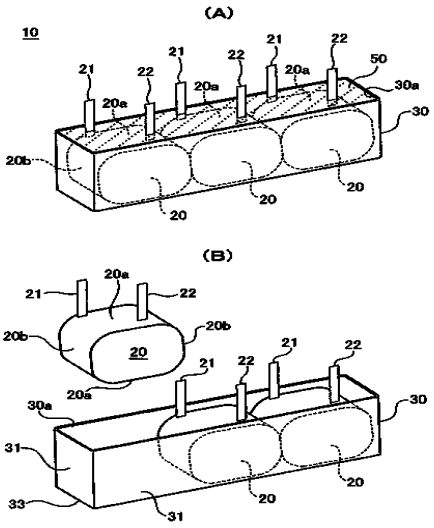


INSTALLATION STRUCTURE OF FILM CAPACITOR

PROBLEM TO BE SOLVED: To provide a technology of preventing noise due to vibration of a capacitor from entering the inside of a vehicle.SOLUTION: In an installation structure of a capacitor 20, a plurality of capacitors 20 are housed in a capacitor case 30, with larger wound surfaces 20a of flat wound surfaces 20a, 20b, which are formed by winding a metal film in a flat shape, facing an opening 30a of the capacitor case 30. A potting material 50 charged between the capacitor case 30 and the capacitors 20 covers the opening 30a. The structure is mounted on an electric vehicle, with the opening 30a facing outward. A flat wound surface 20a which is likely to be vibrated faces the opening 30a of the capacitor case 30, thereby emitting noise due to the vibration to the outside of the capacitor case 30. The emitted noise is transmitted not inward but outward. The noise due to the vibration of the capacitor 20 is prevented from entering the inside of the vehicle, accordingly.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015084370 A 20150430

Applicant: TOYOTA MOTOR CORP
Inventor: SHONO YUMI
Prio:
Appl.No: JP2013222414
IPC: H01G 4/18 2006.01 (IA)

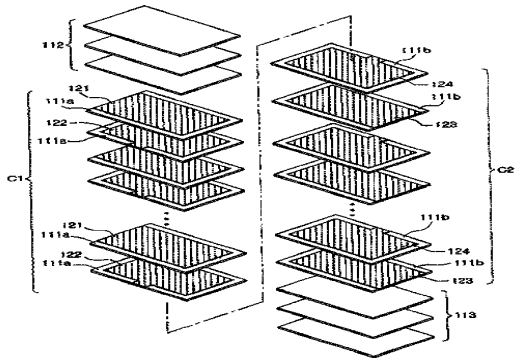


ARRAY-TYPE MULTILAYER CERAMIC ELECTRONIC COMPONENT AND BOARD HAVING THE SAME MOUNTED THEREON

PROBLEM TO BE SOLVED: To provide an array-type multilayer ceramic electronic component and a board having the array-type multilayer ceramic electronic component mounted thereon.SOLUTION: An array-type multilayer ceramic electronic component includes: a ceramic body formed by stacking a plurality of first dielectric layers and a plurality of second dielectric layers in a thickness direction and having first and second main surfaces facing each other in the thickness direction, first and second side surfaces facing each other in a width direction, and first and second end surfaces facing each other in a length direction; first and second internal electrodes formed on the plurality of first dielectric layers and disposed to face each other with one of the first dielectric layers interposed therebetween; third and fourth internal electrodes formed on the plurality of second dielectric layers and disposed to face each other with one of the second dielectric layers interposed therebetween; a first external electrode formed on the first end surface of the ceramic body and connected to the first internal electrode; a second external electrode formed on the first side surface of the ceramic body and connected to the second internal electrode; a third external electrode formed on the second end surface of the ceramic body and connected to the third internal electrode; and a fourth external electrode formed on the second side surface of the ceramic body and connected to the fourth internal electrode.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015084399 A 20150430

Applicant: SAMSUNG ELECTRO-MECHANICS CO LTD
Inventor: LEE JAE HOON; ONO MASAAKI; PARK JAE YOUNG
Prio: KR 20131025 2013 2013127778, KR 20131217 2013 2013156986
Appl.No: JP2014082963



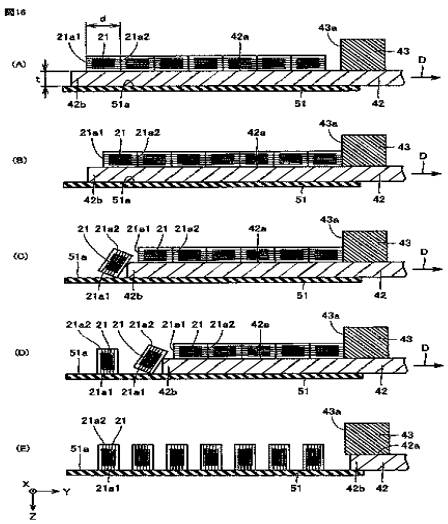
IPC: H01G 4/38 2006.01 (IA)

MANUFACTURING METHOD AND MANUFACTURING APPARATUS FOR CAPACITOR ELEMENT

PROBLEM TO BE SOLVED: To provide a manufacturing method for capacitor element that can efficiently manufacture a compact capacitor element having large capacity and high reliability.SOLUTION: A manufacturing method for capacitor element includes the processes of: parting a mother block in rows to individualize a plurality of laminate blocks 21 in a thin and long substantially rectangular parallelepiped shape; rolling the plurality of laminate blocks 21 respectively; and parting the plurality of laminate blocks 21 having been rolled in columns to individualize a plurality of laminate chips in a substantially rectangular parallelepiped shape. The process of rolling the plurality of laminate blocks 21 respectively includes a process of moving and pushing the plurality of laminate blocks 21, mounted on a stage 42 in a direction where the plurality of laminate blocks 21 line up, away to an end 42b of the stage 42 in order to rotate and drop them from the end 42b, and landing the plurality of laminate blocks 21 having been rotated and dropped on a region outside the stage 43 respectively.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015084406 A 20150430

Applicant: MURATA MFG CO LTD
Inventor: TANAKA JUNYA
Prio: JP 20130920 2013195411
Appl.No: JP2014159440
IPC: H01G 13/00 2013.01 (IA)

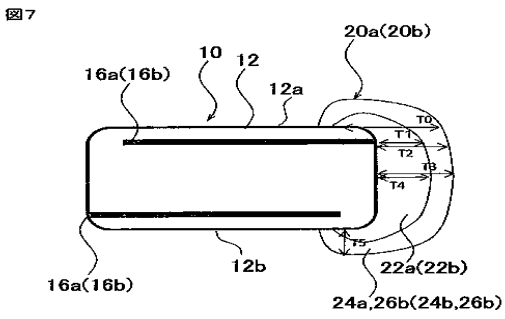


LAMINATE CERAMIC ELECTRONIC PART

PROBLEM TO BE SOLVED: To provide a laminate ceramic electronic part which makes possible to prevent a plating layer from being damaged owing to the electrolytic concentration.SOLUTION: A laminate ceramic capacitor 10 that is a laminate ceramic electronic part comprises a ceramic elemental body 12. The ceramic elemental body 12 has internal electrodes 16a and 16b embedded therein. On the sides of end faces of the ceramic elemental body 12, external electrodes 20a and 20b which are electrically connected with exposed portions of the internal electrodes 16a and 16b are formed. As to the external electrodes 20a and 20b, the difference between thicknesses T0 and T2 is larger than the difference between thicknesses T3 and T2. The difference between the thicknesses T0 and T2, and the difference between the thicknesses T3 and T2 are each 10-40 μm.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015084435 A 20150430

Applicant: MURATA MFG CO LTD
Inventor: TERASHITA YOSUKE; SUGIYAMA HIDETAKA; HAMANAKA KENICHI; HORI HIROYUKI
Prio:
Appl.No: JP2014246258
IPC: H01G 4/232 2006.01 (IA)

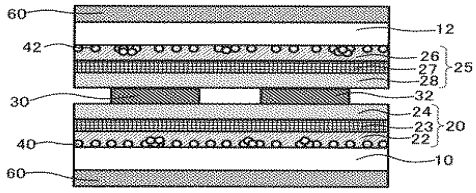


INSULATING FILM FOR CAPACITOR TYPE STORAGE BATTERY

PROBLEM TO BE SOLVED: To provide a thin film capacitor type storage battery with high electrostatic capacity and excellent strength.SOLUTION: A capacitor type storage battery includes a substrate composed of a conductive film or a semiconductor film and an insulating film which are laminated in this order, and a first conducting path and a second conducting path that are formed in parallel with each other on the insulating film. Furthermore, a surface of the substrate with which the insulating film is in contact has projections and recesses with the maximum height of the projections of 10 μm and the maximum width of the projections of 10 μm. The projections are disposed with intervals for each other. The maximum width of the recesses disposed at the interval is 3 μm. The insulating film disposed to contact with the projections and recesses on the surface of the substrate comprises two or more layers including a first adhesive layer and a second adhesive layer. The first adhesive layer disposed adjacent to the first substrate is a layer closely adhered between the projections and recesses on the surface of the first substrate. The second adhesive layer disposed at a side nearer to the first and second conductive paths than the first adhesive layer is a layer for preventing the projections and recesses on the surface of the first substrate from contacting with the first and second conductive paths.COPYRIGHT: (C)2015,JPO&INPIT

Publication: JP 2015084445 A 20150430

Applicant: FURUKAWA ELECTRIC CO LTD:THE
Inventor: ASANUMA TAKUMI
Prio:
Appl.No: JP2014260195
IPC: H01G 4/33 2006.01 (IA)

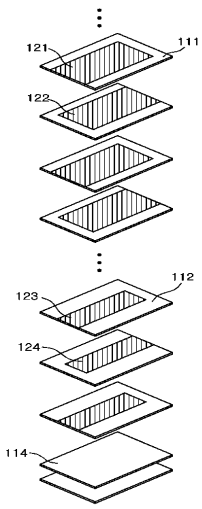


MULTI-LAYERED CERAMIC ELECTRONIC COMPONENT

Provided is a multi-layered ceramic electronic component. The present invention includes: a ceramic body where multiple dielectric layers are stacked; a first active layer which is separated by the dielectric layer and includes first and second internal electrodes which are alternately exposed through both sides of the ceramic body; a second active layer which is separated by the dielectric layer, includes multiple third and fourth internal electrodes which are alternately exposed through both sides of the ceramic body, and are relatively narrower than the first and the second internal electrodes; and first and second external electrodes which are formed at both cross sections of the ceramic body and are connected to the first and the second internal electrodes and the third and the fourth internal electrodes.

Publication: KR 20150033302 A 20150401

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: KIM, SUNG WOO, KR; CHOI, JAE YEOL, KR; KIM, YU NA, KR; LEE, JONG HO, KR
Prio:
Appl.No: KR1020130113127
IPC: H01G 4/12 2006.01 (IA)

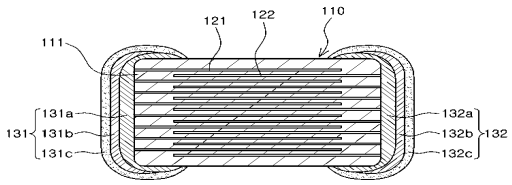


MULTI-LAYERED CERAMIC CAPACITOR AND MANUFACTURING METHOD FOR SAME

Provided is a multi-layered ceramic capacitor. The multi-layered ceramic capacitor includes: a ceramic body which includes multiple dielectric layers; first and second internal electrodes which are separated by the dielectric layer and are alternately exposed through both cross sections of the ceramic body; and first and second external electrodes which are electrically connected to the first and the second internal electrodes. The first and the second external electrodes include a first external electrode layer which is made of copper-glass and is extended from both cross sections of the ceramic body to part of both main sides or part of both lateral sides; and glass. The second external electrode layer is formed on the surface of the first external electrode layer. The second external electrode layer is shorter than the first external electrode layer to expose part of the first external electrode layer. A third external electrode layer is made of copper-glass and covers the first and the second external electrode layers.

Publication: KR 20150033341 A 20150401

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: KIM, BYONG GYUN, KR; CHUN, DUK HYUN, KR; LEE, KYOUNG NO, KR; JIN, YOUN SIK, KR; NA, EUN SANG, KR; KIM, DOO YOUNG, KR
Prio:
Appl.No: KR1020130113226
IPC: H01G 4/12 2006.01 (IA)

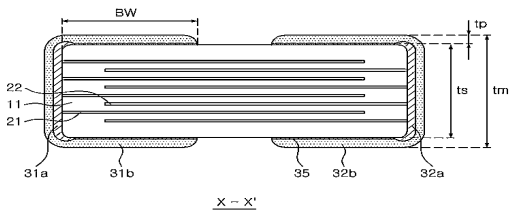


EMBEDDED MULTILAYER CERAMIC ELECTRONIC COMPONENT, MANUFACTURING METHOD THEREOF AND PRINT CIRCUIT BOARD HAVING EMBEDDED MULTILAYER CERAMIC ELECTRONIC COMPONENT

The present invention relates to an embedded multilayer ceramic electronic component and a manufacturing method thereof. More particularly, the present invention relates to an embedded multilayer ceramic electronic component and a manufacturing method thereof. The embedded multilayer ceramic electronic component has an external electrode band surface of a constant distance or more to connect an external line through a via hole and reduces the thickness of the external electrode and increases the thickness of the ceramic body, thereby improving the strength of a chip and preventing the generation of breakage.

Publication: KR 20150033392 A 20150401

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: KIM, HYE SEONG, KR; JUNG, HEE JUNG, KR
Prio:
Appl.No: KR1020130113360
IPC: H01G 4/30 2006.01 (IA)

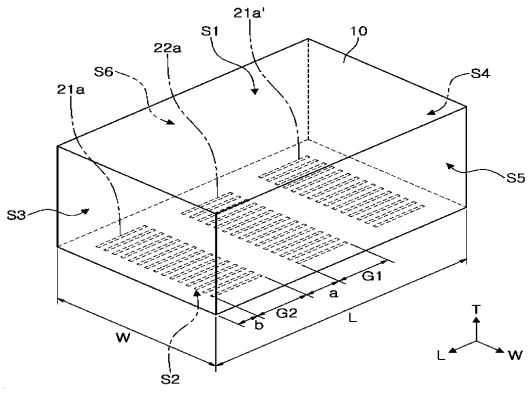


MULTI-LAYERED CERAMIC CAPACITOR AND BOARD FOR MOUNTING SAME

Provided is a multi-layered ceramic capacitor which comprises a ceramic body including multiple dielectric layers; a first internal electrode including a first leader part exposed to a first side surface in the width direction of the ceramic body, and a second internal electrode including a third leader part exposed in the first side surface in the width direction of the ceramic body while being separated from the first leader part in a certain distance arranged inside the ceramic body to be separated in a certain distance; and a first to third external electrode arranged on the first side surface in the width direction of the ceramic body, and connected to the first and the third leader part respectively; wherein if the distance between the first leader part and the third leader part is a, the distance from the end in the longitudinal direction of the ceramic body to the first leader part is b, the length of the third leader part in the longitudinal direction of the ceramic body is G1, and length of the first leader part in the longitudinal direction of the ceramic body is G2, the multi-layered ceramic capacitor satisfies 0.235 <= (G1+2*G2)/[2*(a+b)] <= 2.500

Publication: KR 20150033520 A 20150401

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: LEE, KYO KWANG, KR; NAM, JU EUN, KR; AHN, YOUNG GHYU, KR; KIM, JIN, KR
Prio: KR 20130924 1020130113129
Appl.No: KR1020140087580
IPC: H01G 4/12 2006.01 (IA)

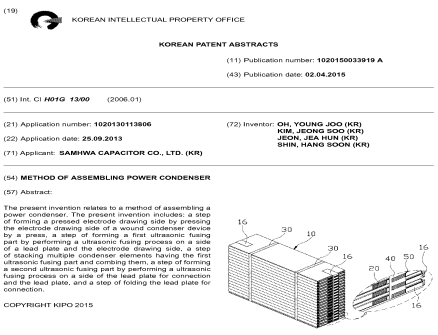


METHOD OF ASSEMBLING POWER CONDENSER

The present invention relates to a method of assembling a power condenser. The present invention includes: a step of forming a pressed electrode drawing side by pressing the electrode drawing side of a wound condenser device by a press, a step of forming a first ultrasonic fusing part by performing a ultrasonic fusing process on a side of a lead plate and the electrode drawing side, a step of stacking multiple condenser elements having the first ultrasonic fusing part and combing them, a step of forming a second ultrasonic fusing part by performing a ultrasonic fusing process on a side of the lead plate for connection and the lead plate, and a step of folding the lead plate for connection.

Publication: KR 20150033919 A 20150402

Applicant: SAMHWA CAPACITOR CO., LTD., KR
Inventor: OH, YOUNG JOO, KR; KIM, JEONG SOO, KR; JEON, JEA HUN, KR; SHIN, HANG SOON, KR
Prio:
Appl.No: KR1020130113806
IPC: H01G 13/00 2006.01 (IA)


(19) KOREAN INTELLECTUAL PROPERTY OFFICE

KOREAN PATENT ABSTRACTS

(11) Publication number: 1020150033919 A
(43) Publication date: 02.04.2015

(51) Int. Cl *H01G 13/00* (2006.01)

(21) Application number: 1020130113806
(22) Application date: 25.09.2013
(71) Applicant: SAMHWA CAPACITOR CO., LTD. (KR)

(72) Inventor: OH, YOUNG JOO (KR)
KIM, JEONG SOO (KR)
JEON, JEA HUN (KR)
SHIN, HANG SOON (KR)

(54) METHOD OF ASSEMBLING POWER CONDENSER

(57) Abstract:

The present invention relates to a method of assembling a power condenser. The present invention includes: a step of forming a pressed electrode drawing side by pressing the electrode drawing side of a wound condenser device by a press, a step of forming a first ultrasonic fusing part by performing a ultrasonic fusing process on a side of a lead plate and the electrode drawing side, a step of stacking multiple condenser elements having the first ultrasonic fusing part and combing them, a step of forming a second ultrasonic fusing part by performing a ultrasonic fusing process on a side of the lead plate for connection and the lead plate, and a step of folding the lead plate for connection.

FUSE BUILT-IN TYPE POWER CAPACITOR AND ASSEMBLING METHOD THEREOF

The present invention relates to a fuse built-in type power capacitor and an assembling method thereof. The fuse built-in type power capacitor can connect a connection plate and a wiring plate stably and reliably by using ultrasonic melting when connecting a lead plate and a capacitor element stacked on the inside of a fuse built-in type power capacitor. The fuse built-in type power capacitor of the present invention includes: multiple capacitor elements which have a first bending part and a second bending part formed on one side and the other side; multiple connection plates which are connected to the outside of the first bending part by ultrasonic melting; multiple fuses which are connected to the inside of the second bending part; multiple insulating boxes which surround the capacitor element to expose the other side of the connection plate and the other side of the fuse; and a first wiring plate which is arranged on the outside of the insulating box and is connected to the fuse by ultrasonic melting.

Publication: KR 20150033920 A 20150402

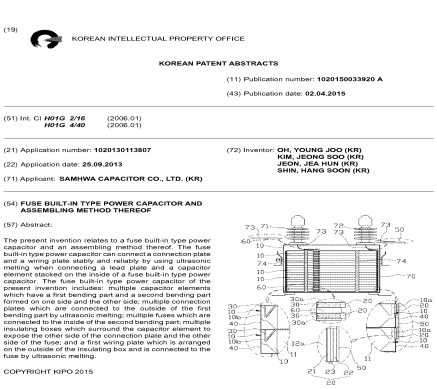
Applicant: SAMHWA CAPACITOR CO., LTD., KR

Inventor: OH, YOUNG JOO, KR; KIM, JEONG SOO, KR; JEON, JEA HUN, KR; SHIN, HANG SOON, KR

Prio:

Appl.No: KR1020130113807

IPC: H01G 2/16 2006.01 (IA)


(19) KOREAN INTELLECTUAL PROPERTY OFFICE

KOREAN PATENT ABSTRACTS

(11) Publication number: 1020150033920 A

(43) Publication date: 02.04.2015

(51) Int. Cl H01G 2/16 (2006.01) H01G 4/40 (2006.01)

(21) Application number: 1020130113807

(22) Application date: 25.09.2013

(71) Applicant: SAMHWA CAPACITOR CO., LTD. (KR)

(72) Inventor: OH, YOUNG JOO (KR) KIM, JEONG SOO (KR) JEON, JEA HUN (KR) SHIN, HANG SOON (KR)

(54) FUSE BUILT-IN TYPE POWER CAPACITOR AND ASSEMBLING METHOD THEREOF

(57) Abstract:

The present invention relates to a fuse built-in type power capacitor and an assembling method thereof. The fuse built-in type power capacitor can connect a connection plate and a wiring plate stably and reliably by using ultrasonic melting when connecting a lead plate and a capacitor element stacked on the inside of a fuse built-in type power capacitor. The fuse built-in type power capacitor of the present invention includes: multiple capacitor elements which have a first bending part and a second bending part formed on one side and the other side; multiple connection plates which are connected to the outside of the first bending part by ultrasonic melting; multiple fuses which are connected to the inside of the second bending part; multiple insulating boxes which surround the capacitor element to expose the other side of the connection plate and the other side of the fuse; and a first wiring plate which is arranged on the outside of the insulating box and is connected to the fuse by ultrasonic melting.

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ALUMINUM ELECTRODE FOIL AND MANUFACTURING METHOD THEREOF

The present invention relates to an aluminum electrode foil capable of reducing sintering time by forming a barrier-type sintering layer by sintering an etching pit part after a sponge-type etching pit part is formed on an etching foil having a straight-type etching pit, and a manufacturing method thereof. The present invention includes: an etching foil which has multiple straight-type etching pits at both sides; a sponge-type etching pit part which is formed along the straight-type etching pits; a barrier-type sintering layer which is formed by anodizing the sponge-type etching pit part; a hydration layer which is formed along the surface of the barrier-type sintering layer.

Publication: KR 20150034009 A 20150402

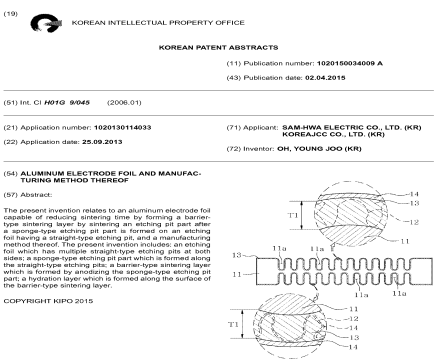
Applicant: SAM-HWA ELECTRIC CO., LTD., KR; KOREAJCC CO., LTD., KR

Inventor: OH, YOUNG JOO, KR

Prio:

Appl.No: KR1020130114033

IPC: H01G 9/045 2006.01 (IA)


(19) KOREAN INTELLECTUAL PROPERTY OFFICE

KOREAN PATENT ABSTRACTS

(11) Publication number: 1020150034009 A

(43) Publication date: 02.04.2015

(51) Int. Cl H01G 9/045 (2006.01)

(21) Application number: 1020130114033

(22) Application date: 25.09.2013

(71) Applicant: SAM-HWA ELECTRIC CO., LTD. (KR) KOREAJCC CO., LTD. (KR)

(72) Inventor: OH, YOUNG JOO (KR)

(54) ALUMINUM ELECTRODE FOIL AND MANUFACTURING METHOD THEREOF

(57) Abstract:

The present invention relates to an aluminum electrode foil capable of reducing sintering time by forming a barrier-type sintering layer by sintering an etching pit part after a sponge-type etching pit part is formed on an etching foil having a straight-type etching pit, and a manufacturing method thereof. The present invention includes: an etching foil which has multiple straight-type etching pits at both sides; a sponge-type etching pit part which is formed along the straight-type etching pits; a barrier-type sintering layer which is formed by anodizing the sponge-type etching pit part; a hydration layer which is formed along the surface of the barrier-type sintering layer.

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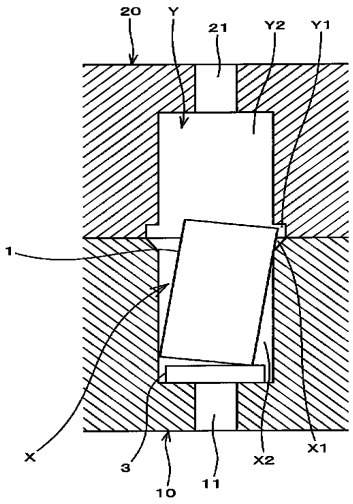
ALIGNING DEVICE AND METHOD FOR PRODUCING ELECTRONIC COMPONENT USING ALIGNING DEVICE

Provided is an aligning device capable of effectively aligning an object and preventing the generation of errors such as the breakage, leakage of the object or the like. In a first concave part (X1) of a first transfer tooth (10), the entire region of a second concave part (X2) viewing as a plane has a shape and dimension with a constant distance. In the first concave part (Y1) of a second transfer tooth (20), the entire region of the second concave part (Y2) has a shape and dimension with a constant distance. When the first and the second transfer tooth are overlapped with each other, in the Y1, the entire region of the X2 has a shape and a dimension with a constant distance. When an object (1) is moved in the cavity (X) of the first transfer tooth, the first transfer tooth and the second transfer tooth are overlapped with each other to move the object from a cavity (X) to a cavity (Y).

Publication: KR 20150034663 A 20150403

Applicant: MURATA MANUFACTURING CO., LTD., JP
Inventor: SHIMIZU KOTARO, JP; SANO MASAHARU, JP
Prio: JP 20140703 2014 2014137662
Appl.No: KR1020140129274
IPC: H01G 13/00 2006.01 (IA)



POROUS-Co3O4 SUPERSTRUCTURE FOR SUPER CAPACITOR ELECTRODE

The present invention relates to an application technique of an electrode material using a porous-Co3O4 superstructure. The present invention relates to a technique of obtaining nanopowder of high yield by simplifying and optimizing a complex synthesis process by using a bio templet. The technique secures superior electrode material properties, can provide high contribution to research related to nanostructure synthesis, energy storage materials and the like, and can be applied to related businesses because of high potential for mass production.

Publication: KR 20150035610 A 20150407

Applicant: AJOU UNIVERSITY INDUSTRY-ACADEMIC COOPERATION FOUNDATION, KR
Inventor: KIM, DONG WAN, KR; SHIM, HYUN WOO, KR
Prio:
Appl.No: KR1020130090058
IPC: H01G 11/36 2013.01 (IA)


(19) KOREAN INTELLECTUAL PROPERTY OFFICE

KOREAN PATENT ABSTRACTS

(11) Publication number: 1020150035610 A

(43) Publication date: 07.04.2015

(51) Int. Cl *H01G 11/36* (2013.01)

(21) Application number: 1020130090058

(22) Application date: 30.07.2013

(71) Applicant: AJOU UNIVERSITY INDUSTRY-ACADEMIC COOPERATION FOUNDATION (KR)

(72) Inventor: KIM, DONG WAN (KR)
SHIM, HYUN WOO (KR)

(54) POROUS-Co3O4 SUPERSTRUCTURE FOR SUPER CAPACITOR ELECTRODE

(57) Abstract:

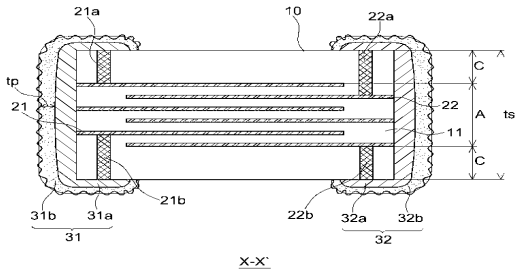
The present invention relates to an application technique of an electrode material using a porous-Co3O4 superstructure. The present invention relates to a technique of obtaining nanopowder of high yield by simplifying and optimizing a complex synthesis process by using a bio templet. The technique secures superior electrode material properties, can provide high contribution to research related to nanostructure synthesis, energy storage materials and the like, and can be applied to related businesses because of high potential for mass production.

EMBEDDED MULTILAYER CERAMIC ELECTRONIC COMPONENT AND PRINT CIRCUIT BOARD HAVING EMBEDDED MULTILAYER CERAMIC ELECTRONIC COMPONENT

The present invention provides an embedded multilayer ceramic electronic component which comprises: a ceramic main body including a dielectric layer, and having first and second main surfaces facing each other, first and second lateral surfaces facing each other, and first and second cross sections facing each other; an active layer forming capacity by including a plurality of first and second internal electrodes formed to be exposed alternately through the both cross sections of the ceramic main body by placing the dielectric layer between the same; upper and lower cover layers formed in an upper part and a lower part of the active layer respectively; and first and second external electrodes formed at both end parts of the ceramic main body. The first external electrode includes a first base electrode and a first terminal electrode formed on the first base electrode, and the second external electrode includes a second base electrode and a second terminal electrode formed on the second base electrode. The outermost first internal electrode of the first and second internal electrodes is connected to the first base electrode by at least one first via extended to at least one of the first and second main surfaces of the ceramic main body, and the outermost second internal electrode is connected to the second base electrode by at least one second via extended to at least one of the first and second main surfaces of the ceramic main body.

Publication: KR 20150035862 A 20150407

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: LEE, BYOUNG HWA, KR; KIM, DOO YOUNG, KR; JUNG, JIN MAN, KR; LEE, HAI JOON, KR
Prio:
Appl.No: KR1020150024992
IPC: H01G 4/232 2006.01 (IA)

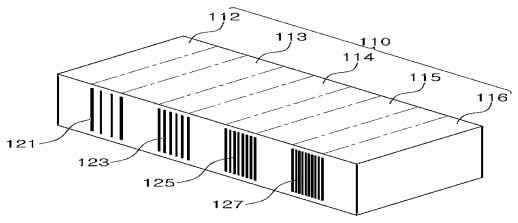


ARRAY-TYPE MULTI-LAYERED CERAMIC ELECTRONIC COMPONENT AND BOARD FOR MOUNTING SAME

The present invention includes a ceramic body wherein multiple dielectric layers are staked on each other in the longitudinal direction; multiple capacitor units having different capacities, arranged at predetermined intervals, and having multiple first and second inner electrodes formed to be alternately exposed through both lateral surfaces of the ceramic body while interposing the dielectric layers; and multiple first and second outer electrodes arranged at predetermined intervals in the longitudinal direction of the ceramic body, formed on the both lateral sides of the ceramic body, and connected to the first and second inner electrodes of the multiple capacitor units. The present invention provides an array-type multi-layered ceramic electrode component that the number of the inner electrode stacked on each capacitor unit is different.

Publication: KR 20150035909 A 20150407

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: LEE, CHANG HO, KR
Prio: KR 20130715 1020130082820
Appl.No: KR1020150030540



IPC: H01G 4/12 2006.01 (IA)

ELECTRODE MATERIAL FOR SUPERCAPACITOR

The present invention relates to an electrode material for a supercapacitor and, more specifically, to an electrode material for a supercapacitor which includes a porous spherical carbon particle doped with nitrogen. The porous spherical carbon particle doped with nitrogen includes a first polymer and a second polymer. The present invention provides the electrode material for the supercapacitor including the porous spherical carbon particle doped with nitrogen and an electrode for the supercapacitor including the electrode material for the supercapacitor.

Publication: KR 20150037073 A 20150408

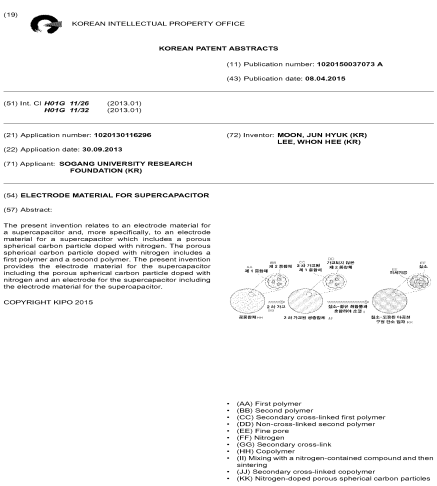
Applicant: SOGANG UNIVERSITY RESEARCH FOUNDATION, KR

Inventor: MOON, JUN HYUK, KR; LEE, WHON HEE, KR

Prio:

Appl.No: KR1020130116296

IPC: H01G 11/26 2013.01 (IA)



(19) KOREAN INTELLECTUAL PROPERTY OFFICE

KOREAN PATENT ABSTRACTS

(11) Publication number: 1020150037073 A

(43) Publication date: 08.04.2015

(51) Int. Cl *H01G 11/26* (2013.01)
H01G 11/32 (2013.01)

(21) Application number: 1020130116296

(22) Application date: 30.09.2013

(71) Applicant: SOGANG UNIVERSITY RESEARCH FOUNDATION (KR)

(72) Inventor: MOON, JUN HYUK (KR)
LEE, WHON HEE (KR)

(54) ELECTRODE MATERIAL FOR SUPERCAPACITOR

(57) Abstract:

The present invention relates to an electrode material for a supercapacitor and, more specifically, to an electrode material for a supercapacitor which includes a porous spherical carbon particle doped with nitrogen. The porous spherical carbon particle doped with nitrogen includes a first polymer and a second polymer. The present invention provides the electrode material for the supercapacitor including the porous spherical carbon particle doped with nitrogen and an electrode for the supercapacitor including the electrode material for the supercapacitor.

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- (AA) First polymer
- (BB) Second polymer
- (CC) Secondary cross-linked first polymer
- (DD) Non-cross-linked second polymer
- (EE) Fine pore
- (FF) Nitrogen
- (GG) Secondary cross-link
- (HH) Copolymer
- (II) Mixing with a nitrogen-contained compound and then sintering
- (JJ) Secondary cross-linked copolymer
- (KK) Nitrogen-doped porous spherical carbon particles

MULTI-LAYERED CERAMIC CAPACITOR, MANUFACTURING METHOD THEREOF AND BOARD FOR MOUNTING SAME

One embodiment of the present invention is to provide a multi-layered ceramic capacitor which includes: a ceramic body which includes a dielectric and an internal electrode; an electrode layer which is arranged on the external surface of the ceramic body and is electrically connected to the internal electrode; a first complex resin layer which is arranged on the electrode layer and includes first conductive powder; and a second complex resin layer which is arranged on the first complex resin layer and includes second conductive power different from the first conductive powder.

Publication: KR 20150037191 A 20150408

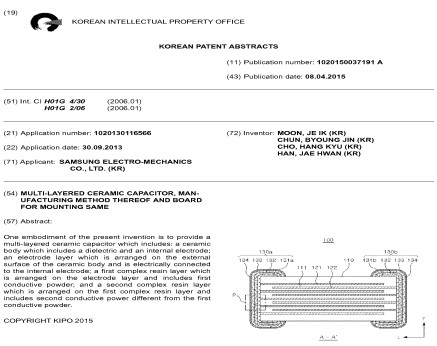
Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR

Inventor: MOON, JE IK, KR; CHUN, BYOUNG JIN, KR; CHO, HANG KYU, KR; HAN, JAE HWAN, KR

Prio:

Appl.No: KR1020130116566

IPC: H01G 4/30 2006.01 (IA)



(19) KOREAN INTELLECTUAL PROPERTY OFFICE

KOREAN PATENT ABSTRACTS

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(21) Application number: 1020130116566

(22) Application date: 30.09.2013

(71) Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD. (KR)

(72) Inventor: MOON, JE IK (KR)
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CHO, HANG KYU (KR)
HAN, JAE HWAN (KR)

(54) MULTI-LAYERED CERAMIC CAPACITOR, MANUFACTURING METHOD THEREOF AND BOARD FOR MOUNTING SAME

(57) Abstract:

One embodiment of the present invention is to provide a multi-layered ceramic capacitor which includes: a ceramic body which includes a dielectric and an internal electrode; an electrode layer which is arranged on the external surface of the ceramic body and is electrically connected to the internal electrode; a first complex resin layer which is arranged on the electrode layer and includes first conductive powder; and a second complex resin layer which is arranged on the first complex resin layer and includes second conductive power different from the first conductive powder.

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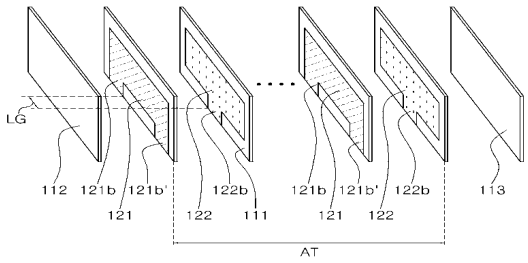
MULTI-LAYERED CERAMIC CAPACITOR AND BOARD FOR MOUNTING SAME

Provided in the present invention are a multi-layered ceramic capacitor in which three external electrodes are arranged on a mounting surface of a ceramic body to be separated from each other, and when width of an active layer including multiple first and second internal electrodes is AT, and distance between a first or second lead part of a first internal electrode and a third lead part of a second internal electrode is LG, the multi-layered ceramic capacitor satisfies 0.00044 <= LG*log[1/AT] <= 0.00150, and a board for mounting the same.

Publication: KR 20150039090 A 20150409

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: LEE, BYOUNG HWA, KR; LEE, KYO KWANG, KR; PARK, MIN CHEOL, KR; AHN, YOUNG GHYU, KR; PARK, SANG SOO, KR
Prio: KR 20131001 1020130117571
Appl.No: KR1020140126164
IPC: H01G 4/30 2006.01 (IA)

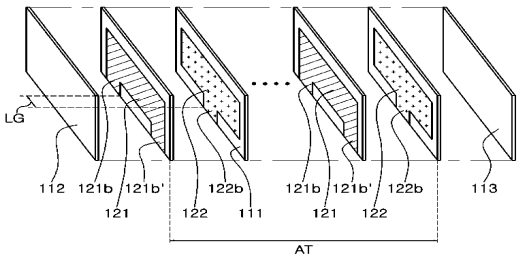


MULTI-LAYERED CERAMIC CAPACITOR AND BOARD FOR MOUNTING SAME

Provided in the present invention are a multi-layered ceramic capacitor in which three external electrodes are arranged on a mounting surface of a ceramic body to be separated from each other, and when width of an active layer including multiple first and second internal electrodes is AT, and distance between a first or second lead part of a first internal electrode and a third lead part of a second internal electrode is LG, the multi-layered ceramic capacitor satisfies 0.00044 m <= LG*log[1/AT] <= 0.00150 m, and a board for mounting the same.

Publication: KR 20150039132 A 20150409

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: LEE, BYOUNG HWA, KR; LEE, KYO KWANG, KR; PARK, MIN CHEOL, KR; AHN, YOUNG GHYU, KR; PARK, SANG SOO, KR
Prio: KR 20131001 1020130117571
Appl.No: KR1020150010240
IPC: H01G 4/12 2006.01 (IA)

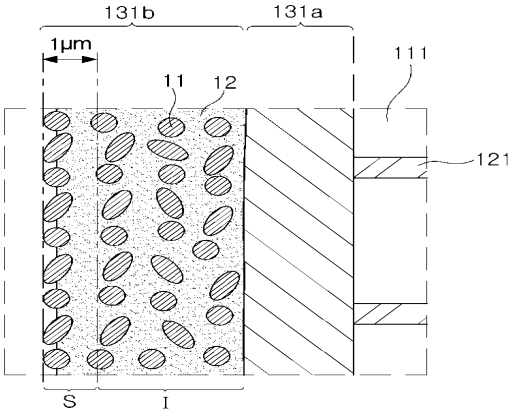


MULTILAYER CERAMIC ELECTRONIC COMPONENT AND MANUFACTURING METHOD THEREOF

According to one embodiment of the present invention, provided is a multilayer ceramic electronic component which includes a ceramic body which includes an internal electrode and a dielectric layer, an electrode layer which is formed on at least one side of the ceramic body and is electrically connected to the internal electrode, and a conductive resin layer which is formed on the electrode layer and includes a plurality of metal particles and a base resins. When a mass ratio of metal to carbon on the surface of the conductive resin layer is A and the mass ratio of metal to carbon inside the conductive resin layer is B. A>B is satisfied.

Publication: KR 20150039479 A 20150410

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: CHUN, BYOUNG JIN, KR; MOON, JE IK, KR; HAN, JAE HWAN, KR; YOO, SEUNG HEE, KR
Prio:
Appl.No: KR1020130118113
IPC: H01G 4/12 2006.01 (IA)

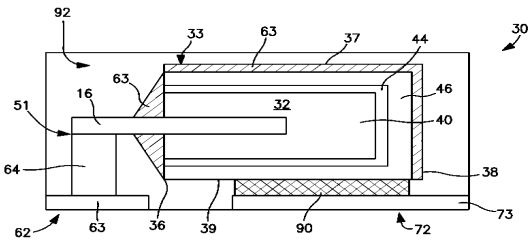


SOLID ELECTROLYTIC CAPACITOR FOR USE UNDER HIGH TEMPERATURE AND HUMIDITY CONDITIONS

A solid electrolytic capacitor which is capable of exhibiting good electrical properties even under the extreme conditions of high temperature and humidity levels is provided. More particularly, the capacitor contains a capacitor element that includes a sintered porous anode body, a dielectric that overlies the anode body, and a solid electrolyte which overlies the dielectric. The solid electrolyte contains a conductive polymer and an organometallic coupling agent. The capacitor also contains a moisture barrier layer that overlies the solid electrolyte and is formed from a hydrophobic elastomer which has a low surface energy not to be readily wettable by an aqueous medium.

Publication: KR 20150039580 A 20150410

Applicant: AVX CORPORATION, US
Inventor: TATSUNO JYUNYA, JP; AOKI KIYOFUMI, JP
Prio: US 20131002 2013 14/044290
Appl.No: KR1020140132482
IPC: H01G 9/08 2006.01 (IA)

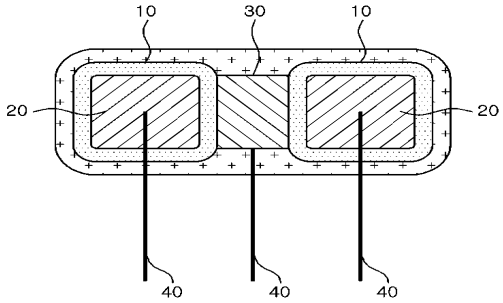


3 TERMINAL EMI SUPPRESSING CAPACITOR

The present invention relates to a 3 terminal EMI suppressing capacitor. The 3 terminal EMI suppressing capacitor according to one embodiment of the present invention includes a pair of ceramic dielectric elements which are arranged on the same plane in parallel, a plurality of individual electrodes which are formed on the first surfaces of the pair of ceramic dielectric elements, a common electrode which is formed in contact with the second surfaces of the pair of ceramic dielectric elements at the same time, and three lead terminals which are connected to the individual electrodes and the common electrode, respectively.

Publication: KR 20150039974 A 20150414

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: LEE, DONG JIN, KR
Prio:
Appl.No: KR1020130118431
IPC: H01G 4/228 2006.01 (IA)

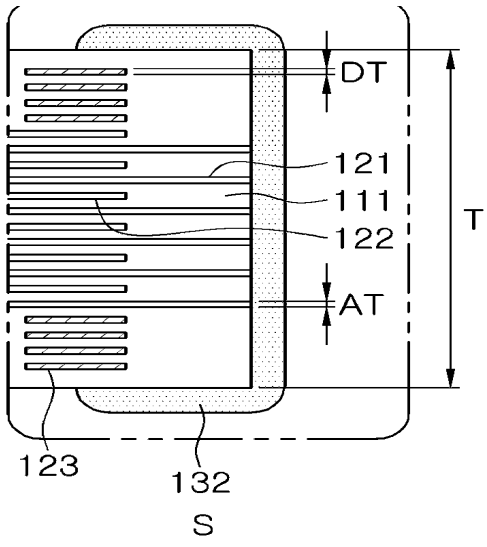


MULTI-LAYERED CERAMIC CAPACITOR AND BOARD FOR MOUNTING SAME

Provided in the present invention are a multi-layered ceramic capacitor which comprises a ceramic body including a dielectric layer; a first and second internal electrodes arranged to face each other on both sides of the dielectric layer; and a first and second external electrodes formed to cover both cross sections of the ceramic body, wherein the ceramic body comprises an active layer which is a capacity formation part and a cover layer which is a capacity non-formation part formed on at least one side among upper surface and lower surface of the active layer, and the cover layer comprises multiple dummy electrode layers formed in a certain distances in left and right directions around a region corresponding to the end of the upper and lower surfaces of the ceramic body where the first and second external electrodes are formed, and a board for mounting the same. When thickness of the ceramic body is T, the number of layers of the first and second internal electrodes is AL, thickness of the dummy electrodes is DT, and the number of layers of the dummy electrode layers is DL. The number (DL) of a dummy electrode layer satisfies {(T x x) - (AL x AT)} / DT, and the x satisfies 9.0% or more.

Publication: KR 20150041489 A 20150416

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: HONG, KYUNG PYO, KR; KIM, DOO YOUNG, KR; KIM, CHANG HOON, KR; PARK, SANG HYUN, KR; CHUNG, HAE SOCK, KR
Prio:
Appl.No: KR1020130120073
IPC: H01G 4/30 2006.01 (IA)

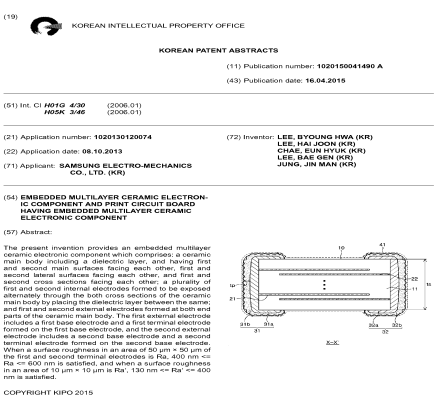


EMBEDDED MULTILAYER CERAMIC ELECTRONIC COMPONENT AND PRINT CIRCUIT BOARD HAVING EMBEDDED MULTILAYER CERAMIC ELECTRONIC COMPONENT

The present invention provides an embedded multilayer ceramic electronic component which comprises: a ceramic main body including a dielectric layer, and having first and second main surfaces facing each other, first and second lateral surfaces facing each other, and first and second cross sections facing each other; a plurality of first and second internal electrodes formed to be exposed alternately through the both cross sections of the ceramic main body by placing the dielectric layer between the same; and first and second external electrodes formed at both end parts of the ceramic main body. The first external electrode includes a first base electrode and a first terminal electrode formed on the first base electrode, and the second external electrode includes a second base electrode and a second terminal electrode formed on the second base electrode. When a surface roughness in an area of 50 μm x 50 μm of the first and second terminal electrodes is Ra, 400 nm <= Ra <= 600 nm is satisfied, and when a surface roughness in an area of 10 μm x 10 μm is Ra′, 130 nm <= Ra′ <= 400 nm is satisfied.

Publication: KR 20150041490 A 20150416

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: LEE, BYOUNG HWA, KR; LEE, HAI JOON, KR; CHAE, EUN HYUK, KR; LEE, BAE GEN, KR; JUNG, JIN MAN, KR
Prio:
Appl.No: KR1020130120074
IPC: H01G 4/30 2006.01 (IA)


(19) KOREAN INTELLECTUAL PROPERTY OFFICE

KOREAN PATENT ABSTRACTS

(11) Publication number: 1020150041490 A

(43) Publication date: 16.04.2015

(51) Int. Cl H01G 4/30 (2006.01) H05K 3/46 (2006.01)

(21) Application number: 1020130120074

(22) Application date: 08.10.2013

(71) Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD. (KR)

(72) Inventor: LEE, BYOUNG HWA (KR) LEE, HAI JOON (KR) CHAE, EUN HYUK (KR) LEE, BAE GEN (KR) JUNG, JIN MAN (KR)

(54) EMBEDDED MULTILAYER CERAMIC ELECTRONIC COMPONENT AND PRINT CIRCUIT BOARD HAVING EMBEDDED MULTILAYER CERAMIC ELECTRONIC COMPONENT

(57) Abstract:

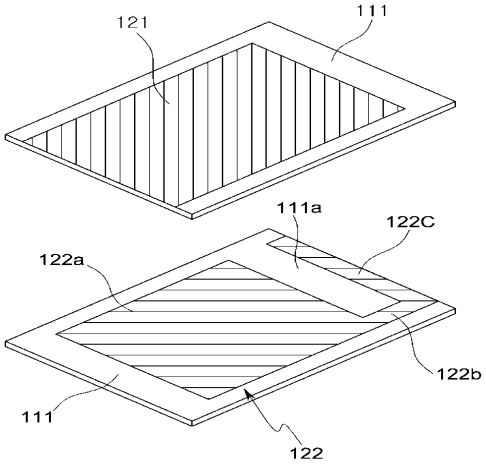
The present invention provides an embedded multilayer ceramic electronic component which comprises: a ceramic main body including a dielectric layer, and having first and second main surfaces facing each other, first and second lateral surfaces facing each other, and first and second cross sections facing each other; a plurality of first and second internal electrodes formed to be exposed alternately through the both cross sections of the ceramic main body by placing the dielectric layer between the same; and first and second external electrodes formed at both end parts of the ceramic main body. The first external electrode includes a first base electrode and a first terminal electrode formed on the first base electrode, and the second external electrode includes a second base electrode and a second terminal electrode formed on the second base electrode. When a surface roughness in an area of 50 μm × 50 μm of the first and second terminal electrodes is Ra, 400 nm <= Ra <= 600 nm is satisfied, and when a surface roughness in an area of 10 μm × 10 μm is Ra', 130 nm <= Ra' <= 400 nm is satisfied.

MULTI-LAYERED CERAMIC ELECTRONIC COMPONENT AND MANUFACTURING METHOD THEREOF

The present invention relates to a multi-layered ceramic electronic component including: a ceramic body with multi-dielectric layers; first and second internal electrodes allocated to be exposed alternatively through the sides of the ceramic body with the dielectric layers interposed. The second internal electrodes provide a space unit not to be overlapped with the first internal electrode on the area exposed through the sides of the ceramic body.

Publication: KR 20150042500 A 20150421

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: HWANG, SEOK JOON, KR
Prio:
Appl.No: KR1020130121227
IPC: H01G 4/30 2006.01 (IA)



BOARD FOR MOUNTING ELECTRONIC PART AND PASTE FOR MOUNTING ELECTRONIC PART

A board for mounting electronic parts according to an embodiment of the present invention comprises a board; electronic parts disposed on the board; a bonding agent that is used to mount the electronic parts on the board and contains a thermosetting resin and a powder having a higher melting point than a thermosetting temperature of the thermosetting resin.

Publication: KR 20150044259 A 20150424

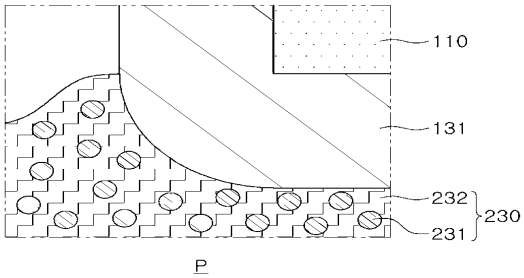
Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR

Inventor: JEON, BYUNG JUN, KR; CHUN, BYOUNG JIN, KR; LEE, KYU HA, KR; MOON, JE IK, KR; KIM, CHANG HOON, KR; CHO, HANG KYU, KR; CHOI, HYE YOUNG, KR

Prio:

Appl.No: KR1020130123431

IPC: H01G 2/06 2006.01 (IA)



P

METHOD FOR FORMING GRAPHENE ELECTRODE AND CAPACITOR INCLUDING SAME

A method for forming a graphene electrode according to embodiments of the present invention includes the steps of: supplying solutions including graphene on a substrate; alternatively arranging the graphene on the surface of the substrate by filling a pattern with the solutions by pressing a mold with the pattern on the substrate and applying a temperature and pressure to the mold; removing the solutions; and forming the electrode including the graphene on the substrate by separating the mold from the substrate.

Publication: KR 20150045043 A 20150428

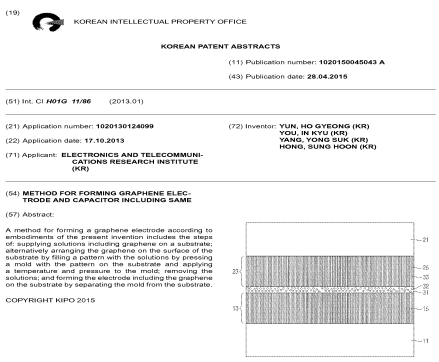
Applicant: ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE, KR

Inventor: YUN, HO GYEONG, KR; YOU, IN KYU, KR; YANG, YONG SUK, KR; HONG, SUNG HOON, KR

Prio:

Appl.No: KR1020130124099

IPC: H01G 11/86 2013.01 (IA)


(19) KOREAN INTELLECTUAL PROPERTY OFFICE

KOREAN PATENT ABSTRACTS

(11) Publication number: 1020150045043 A

(43) Publication date: 28.04.2015

(51) Int. Cl *H01G 11/86* (2013.01)

(21) Application number: 1020130124099

(22) Application date: 17.10.2013

(71) Applicant: ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE (KR)

(72) Inventor: YUN, HO GYEONG (KR)
YOU, IN KYU (KR)
YANG, YONG SUK (KR)
HONG, SUNG HOON (KR)

(54) METHOD FOR FORMING GRAPHENE ELECTRODE AND CAPACITOR INCLUDING SAME

(57) Abstract:

A method for forming a graphene electrode according to embodiments of the present invention includes the steps of: supplying solutions including graphene on a substrate; alternatively arranging the graphene on the surface of the substrate by filling a pattern with the solutions by pressing a mold with the pattern on the substrate and applying a temperature and pressure to the mold; removing the solutions; and forming the electrode including the graphene on the substrate by separating the mold from the substrate.

METHOD FOR MANUFACTURING ELECTRODE FOIL FOR ACCUMULATED TYPE ALUMINUM CAPACITOR

The present invention relates to a method for manufacturing electrode foil for accumulated type aluminum capacitor and, more specifically, to a method for manufacturing electrode foil for accumulated type aluminum capacitor which overcomes defect of film occurring in an existing hydration step and troubles caused by fibrous tissue, obtains stability of oxidized film, and reduces current leakage by perforing preprocess aging by accumulating an etched aluminum foil in acid electrolyte to from a protective layer instead of an existing hydration process.

Publication: KR 20150045051 A 20150428

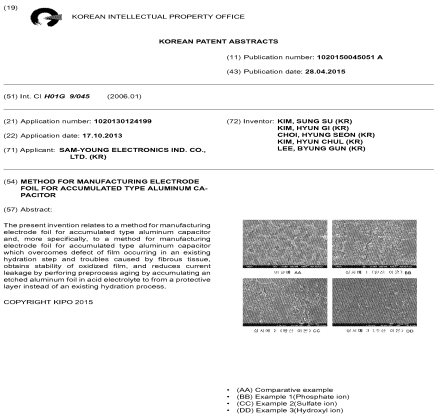
Applicant: SAM-YOUNG ELECTRONICS IND. CO., LTD., KR

Inventor: KIM, SUNG SU, KR; KIM, HYUN GI, KR; CHOI, HYUNG SEON, KR; KIM, HYUN CHUL, KR; LEE, BYUNG GUN, KR

Prio:

Appl.No: KR1020130124199

IPC: H01G 9/045 2006.01 (IA)



(19) KOREAN INTELLECTUAL PROPERTY OFFICE

KOREAN PATENT ABSTRACTS

(11) Publication number: 1020150045051 A

(43) Publication date: 28.04.2015

(51) Int. Cl *H01G 9/045* (2006.01)

(21) Application number: 1020130124199

(22) Application date: 17.10.2013

(71) Applicant: SAM-YOUNG ELECTRONICS IND. CO., LTD. (KR)

(72) Inventor: KIM, SUNG SU (KR)
KIM, HYUN GI (KR)
CHOI, HYUNG SEON (KR)
KIM, HYUN CHUL (KR)
LEE, BYUNG GUN (KR)

(54) METHOD FOR MANUFACTURING ELECTRODE FOIL FOR ACCUMULATED TYPE ALUMINUM CAPACITOR

(57) Abstract:

The present invention relates to a method for manufacturing electrode foil for accumulated type aluminum capacitor and, more specifically, to a method for manufacturing electrode foil for accumulated type aluminum capacitor which overcomes defect of film occurring in an existing hydration step and troubles caused by fibrous tissue, obtains stability of oxidized film, and reduces current leakage by perforing preprocess aging by accumulating an etched aluminum foil in acid electrolyte to from a protective layer instead of an existing hydration process.

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- (AA) Comparative example
- (BB) Example 1(Phosphate ion)
- (CC) Example 2(Sulfate ion)
- (DD) Example 3(Hydroxyl ion)

METHOD FOR PRODUCING ELECTRODE FOIL FOR ACCUMULATED TYPE ALUMINUM CAPACITOR HAVING PRELIMINARY PROCESS

The present invention relates to a method for producing an electrode foil for an accumulated type aluminum capacitor and, more specifically, to a method for producing electrode foil for an accumulated type aluminum capacitor which can overcome defect of a film occurring in an existing hydration step and troubles caused by fine pores, obtain stability of oxidized film, and reduce current leakage by performing preliminary process of accumulating an etched aluminum electrode foil in an acid electrolyte.

Publication: KR 20150045052 A 20150428

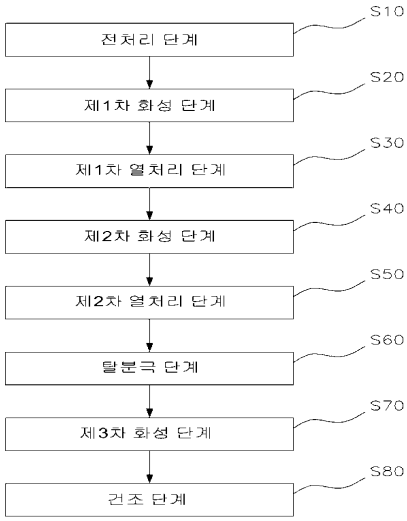
Applicant: SAM-YOUNG ELECTRONICS IND. CO., LTD., KR

Inventor: KIM, SUNG SU, KR; KIM, HYUN GI, KR; CHOI, HYUNG SEON, KR; KIM, HYUN CHUL, KR; LEE, BYUNG GUN, KR

Prio:

Appl.No: KR1020130124208

IPC: H01G 9/045 2006.01 (IA)



COMPOSITE ELECTRONIC COMPONENT AND BOARD FOR MOUNTING SAME

The present invention relates to a composite electronic component which comprises a composite having capacitor consisting of multiple dielectric layers and a ceramic body in which a first and second internal electrode arranged on both side of dielectric layers to face each other and an inductor consisting of a magnet body including a coil part; an input terminal formed on a first cross section of the composite, and connected to the coil part of the inductor; an output terminal including a first output terminal formed on the second cross section of the composite and connected to the coil part, and a second output terminal formed on the second cross section of the composite and connected to the first internal electrode of the capacitor; and a ground terminal formed on anyone or more among upper and lower surfaces and the first cross section of the capacitor in the composite, and connected to the second internal electrode of the capacitor, wherein the capacitor and the inductor is vertically combined, and a magnet sheet layer is inserted between the inductor and the capacitor.

Publication: KR 20150045246 A 20150428

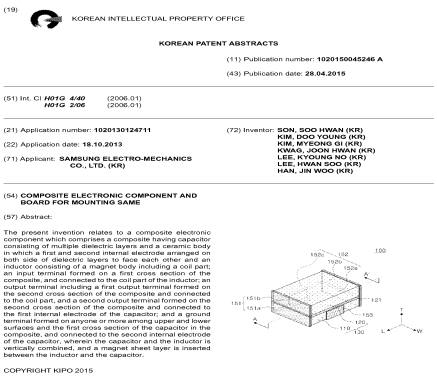
Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR

Inventor: SON, SOO HWAN, KR; KIM, DOO YOUNG, KR; KIM, MYEONG GI, KR; KWAG, JOON HWAN, KR; LEE, KYOUNG NO, KR; LEE, HWAN SOO, KR; HAN, JIN WOO, KR

Prio:

Appl.No: KR1020130124711

IPC: H01G 4/40 2006.01 (IA)



(19) KOREAN INTELLECTUAL PROPERTY OFFICE

KOREAN PATENT ABSTRACTS

(11) Publication number: 1020150045246 A

(43) Publication date: 28.04.2015

(51) Int. Cl H01G 4/40 (2006.01) H01G 2/06 (2006.01)

(21) Application number: 1020130124711

(22) Application date: 18.10.2013

(71) Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD. (KR)

(72) Inventor: SON, SOO HWAN (KR) KIM, DOO YOUNG (KR) KIM, MYEONG GI (KR) KWAG, JOON HWAN (KR) LEE, KYOUNG NO (KR) LEE, HWAN SOO (KR) HAN, JIN WOO (KR)

(54) COMPOSITE ELECTRONIC COMPONENT AND BOARD FOR MOUNTING SAME

(57) Abstract:

The present invention relates to a composite electronic component which comprises a composite having capacitor consisting of multiple dielectric layers and a ceramic body in which a first and second internal electrode arranged on both side of dielectric layers to face each other and an inductor consisting of a magnet body including a coil part; an input terminal formed on a first cross section of the composite, and connected to the coil part of the inductor; an output terminal including a first output terminal formed on the second cross section of the composite and connected to the coil part, and a second output terminal formed on the second cross section of the composite and connected to the first internal electrode of the capacitor; and a ground terminal formed on anyone or more among upper and lower surfaces and the first cross section of the capacitor in the composite, and connected to the second internal electrode of the capacitor, wherein the capacitor and the inductor is vertically combined, and a magnet sheet layer is inserted between the inductor and the capacitor.

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MULTILAYER CERAMIC ELECTRONIC COMPONENT EMBEDDED IN SUBSTRATE AND PRINTED CIRCUIT BOARD WITH EMBEDDED MULTILAYER CERAMIC ELECTRONIC COMPONENT

One embodiment of the present invention provides a multilayer ceramic electronic component which includes: a ceramic body which includes a dielectric layer, first and second main sides which face each other in a thickness direction, first and second lateral sides which face each other in a width direction, first and second cross sections which face in a longitudinal direction, and a length of 1300um or less, a first external electrode which is extended to the first and second main sides and the first and second lateral sides on the first cross section, a second external electrode which is extended to the first and second main sides and the first and second lateral sides on the second cross section, a third external electrode which is arranged between the first external electrode and the second external electrode with preset intervals from the first external electrode and the second external electrode, a first internal electrode which is formed on the dielectric layer in the ceramic body and is connected to the first external electrode and the second external electrode, and a second internal electrode which is arranged to face the first internal electrode by interposing the dielectric layer and is connected to the third external electrode. When the thicknesses of the first external electrode, the second external electrode, and the third external electrode formed on the first and second main sides and the first and second lateral sides are te, and an interval between the adjacent external electrodes among the first to third external electrodes is G, 5<=G/te is satisfied.

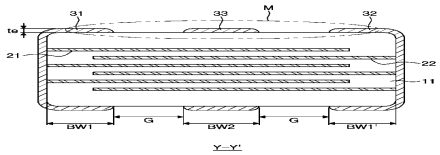
Publication: KR 20150046712 A 20150430

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR

Inventor: CHOI, YOUNG DON, KR

Prio: KR 20131022 1020130126138

Appl.No: KR1020140055776



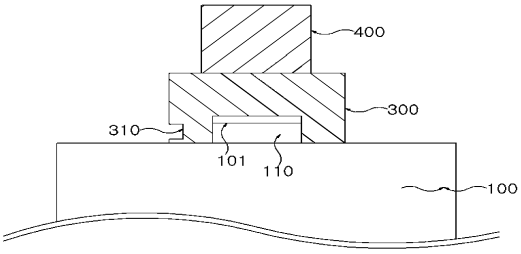
IPC: H01G 4/12 2006.01 (IA)

ENERGY STORAGE DEVICE WITH IMPROVED FUNCTION OF PREVENTING SHORT CIRCUIT AND MANUFACTURING METHOD THEREOF

The present invention relates to an energy storage device. More particularly, the present invention relates to an energy storage device with improved function of preventing short circuit capable of preventing the possibility of electrical short due to bad assembly by forming a recess part in a combination member, and a manufacturing method thereof. More particularly, in the energy storage device of the present invention, an energy storage device with improved function of preventing short circuit includes: a harness which comprise a main body part having a bar shape of a preset length, a circuit terminal connection part formed on one end of the main body, and a ring-shaped cell terminal connection part which is formed at the opposite end of the main body to allow a cell terminal to be inserted through an internal hollow part; a cell terminal which is combined with the cell terminal connection part of the harness; a combination member which has a recess part which is formed in the outer surface of the combination part to prevent electric short generated due to the bad assembly of the combination member.

Publication: KR 101513811 B1 20150420

Applicant: LS MTRON LTD., KR
Inventor: SUH, TAE HO, KR
Prio:
Appl.No: KR1020130141249
IPC: H01G 11/08 2013.01 (IA)

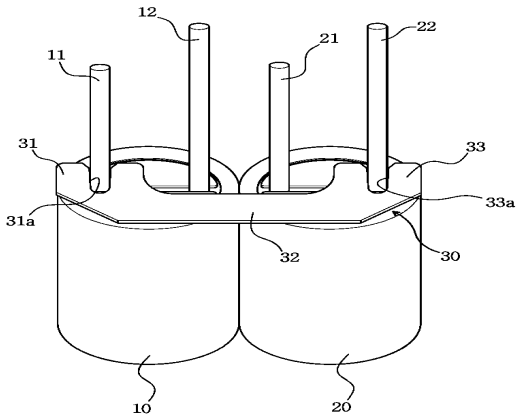


CAPACITOR MODULE CONNECTED IN SERIES AND METHOD FOR FABRICATING SAME

The present invention relates to a capacitor module connected in series fabricated by connecting two capacitors in series. The purpose of the present invention is to provide a capacitor module connected in series capable of connecting two capacitors in series by a simple process. A capacitor module connected in series according to the present invention includes: a first capacitor which has a first cathode terminal and a first anode terminal, a second capacitor which has a second cathode terminal and a second anode terminal, a plate-shaped connection plate which is connected to one of the first cathode terminal and the second anode thermal and the first anode thermal and the second cathode terminal, and a case which is inserted into the first capacitor, the second capacitor, and the connection plate.

Publication: KR 101513965 B1 20150421

Applicant: VINATECH CO., LTD., KR
Inventor: BANG, JE JONG, KR
Prio:
Appl.No: KR1020130126338
IPC: H01G 4/38 2006.01 (IA)



MANUFACTURING METHOD OF SINGLE ELECTRODE INTEGRATED ION GEL ELECTROLYTE

The present invention relates to a manufacturing method of single electrode integrated ion gel electrolyte, and more specifically, to a manufacturing method of single electrode integrated ion gel electrolyte, by which, by placing one electrode in the inside of a formation space of a Teflon frame and applying a material solution thereon, electrode integrated ion gel electrolyte is produced, so that the ion gel electrolyte is formed with the most thin thickness to improve the performance of an electrical double layer capacitor. The present invention is to form the electrical double layer capacitor, and the manufacturing method of the single electrode integrated ion gel electrolyte disposed between a first electrode and a second electrode, comprises the steps of: creating a composite solution through a defoamation after ionic liquid reacts with a high molecular substance by a mixing and stirring; forming a material solution by removing water of the composite solution through artificial drying under vacuum; fixing the first electrode in the Teflon frame so that the first electrode is included in the inside of the formation space penetrated in the Teflon frame; applying the material solution to the formation space of the Teflon frame; heat-processing upper and lower parts of the Teflon frame after the parts are fixed using a pressure member; and removing a form of ion gel electrolyte integrated with the first electrode after natural drying of the Teflon frame.

Publication: KR 101514280 B1 20150422

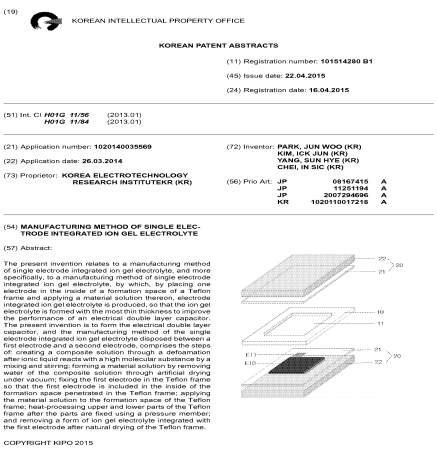
Applicant: KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, KR

Inventor: PARK, JUN WOO, KR; KIM, ICK JUN, KR; YANG, SUN HYE, KR; CHEI, IN SIC, KR

Prio:

Appl.No: KR1020140035569

IPC: H01G 11/56 2013.01 (IA)



(19) KOREAN INTELLECTUAL PROPERTY OFFICE

KOREAN PATENT ABSTRACTS

(11) Registration number: 101514280 B1

(45) Issue date: 22.04.2015

(24) Registration date: 16.04.2015

(51) Int. Cl. H01G 11/56 (2013.01), H01G 11/84 (2013.01)

(21) Application number: 1020140035569

(22) Application date: 26.03.2014

(73) Proprietor: KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTEKR (KR)

(72) Inventor: PARK, JUN WOO (KR), KIM, ICK JUN (KR), YANG, SUN HYE (KR), CHEI, IN SIC (KR)

(56) Prio Art: JP 08167415 A, JP 11251194 A, JP 2007294696 A, KR 1020110017218 A

(54) MANUFACTURING METHOD OF SINGLE ELECTRODE INTEGRATED ION GEL ELECTROLYTE

(57) Abstract:

The present invention relates to a manufacturing method of single electrode integrated ion gel electrolyte, and more specifically, to a manufacturing method of single electrode integrated ion gel electrolyte, by which, by placing one electrode in the inside of a formation space of a Teflon frame and applying a material solution thereon, electrode integrated ion gel electrolyte is produced, so that the ion gel electrolyte is formed with the most thin thickness to improve the performance of an electrical double layer capacitor. The present invention is to form the electrical double layer capacitor, and the manufacturing method of the single electrode integrated ion gel electrolyte disposed between a first electrode and a second electrode, comprises the steps of: creating a composite solution through a defoamation after ionic liquid reacts with a high molecular substance by a mixing and stirring; forming a material solution by removing water of the composite solution through artificial drying under vacuum; fixing the first electrode in the Teflon frame so that the first electrode is included in the inside of the formation space penetrated in the Teflon frame; applying the material solution to the formation space of the Teflon frame; heat-processing upper and lower parts of the Teflon frame after the parts are fixed using a pressure member; and removing a form of ion gel electrolyte integrated with the first electrode after natural drying of the Teflon frame.

COMPOSITE ELECTRONIC COMPONENT AND BOARD FOR MOUNTING SAME

The present invention relates to a composite electronic component which comprises a composite having capacitor consisting of multiple dielectric layers and a ceramic body in which a first and second internal electrode arranged on both side of dielectric layers to face each other and an inductor consisting of a magnet body including a coil part; an input terminal formed on a first cross section of the composite, and connected to the coil part of the inductor; an output terminal including a first output terminal formed on the second cross section of the composite and connected to the coil part, and a second output terminal formed on the second cross section of the composite and connected to the first internal electrode of the capacitor; and a ground terminal formed on anyone or more among upper and lower surfaces and the first cross section of the capacitor in the composite, and connected to the second internal electrode of the capacitor, wherein the capacitor is combined with the side surface of the inductor.

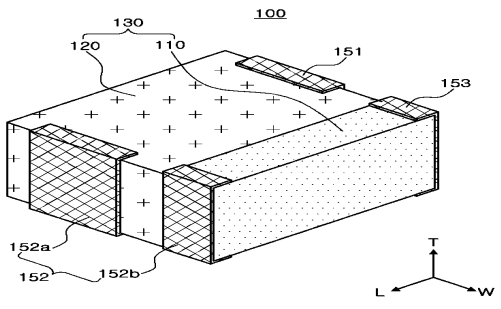
Publication: KR 101514554 B1 20150422

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR

Inventor: SON, SOO HWAN, KR; HAN, JIN WOO, KR; KWAG, JOON HWAN, KR; LEE, KYOUNG NO, KR; KIM, MYEONG GI, KR; LEE, HWAN SOO, KR

Prio:

Appl.No: KR1020130124710



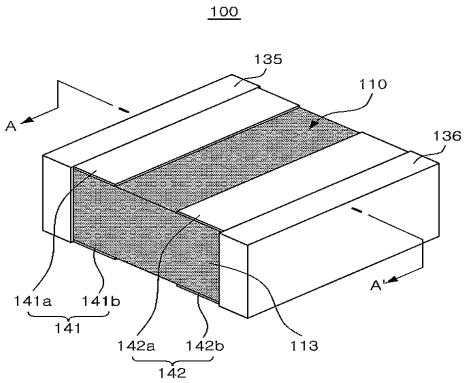
IPC: H01G 4/40 2006.01 (IA)

MULTI-LAYERED CERAMIC CAPACITOR

The present invention provides a multi-layered ceramic capacitor which comprises: a ceramic body in which a plurality of dielectric layers are layered in a widthwise direction, wherein the ceramic body has first and second circumferential faces in a thickness direction of facing each other, first and second sections in a longitudinal direction, and first and second sides in the widthwise direction; a plurality of first and second internal electrodes disposed to be alternately exposed through the first and second sections of the ceramic body around the dielectric layers; a plurality of first dummy electrodes formed to be exposed through the first circumferential face and the first section of the ceramic body on the dielectric layer; a plurality of second dummy electrodes formed to be exposed through the first circumferential face and the second section of the ceramic body on the dielectric layer; first and second external electrodes formed on the first and second sections of the ceramic body; first and second plating layers formed on the first and second external electrodes; and first and second terminal electrodes formed to be respectively connected to the first and second plating layers in an area in which the first and second dummy electrodes are exposed in the first circumferential face. The first and second eternal electrodes comprise an inner external electrode layer not in contact with the first and second dummy electrodes, and an outer external electrode layer in contact with the first and second dummy electrodes.

Publication: KR 101514558 B1 20150422

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: PARK, MIN CHEOL, KR; PARK, HEUNG KIL, KR
Prio:
Appl.No: KR1020130128631
IPC: H01G 4/12 2006.01 (IA)

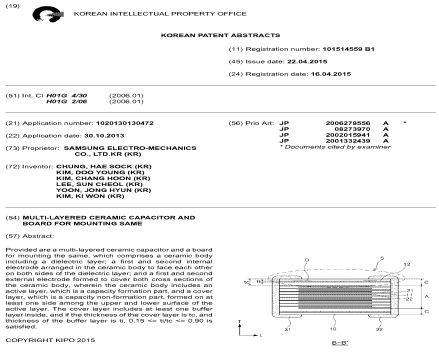


MULTI-LAYERED CERAMIC CAPACITOR AND BOARD FOR MOUNTING SAME

Provided are a multi-layered ceramic capacitor and a board for mounting the same, which comprises a ceramic body including a dielectric layer; a first and second internal electrode arranged in the ceramic body to face each other on both sides of the dielectric layer; and a first and second external electrode formed to cover both cross sections of the ceramic body, wherein the ceramic body includes an active layer, which is a capacity formation part, and a cover layer, which is a capacity non-formation part, formed on at least one side among the upper and lower surface of the active layer. The cover layer includes at least one buffer layer inside, and if the thickness of the cover layer is tc, and thickness of the buffer layer is ti, 0.15 <= ti/tc <= 0.90 is satisfied.

Publication: KR 101514559 B1 20150422

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: CHUNG, HAE SOCK, KR; KIM, DOO YOUNG, KR; KIM, CHANG HOON, KR; LEE, SUN CHEOL, KR; YOON, JONG HYUN, KR; KIM, KI WON, KR
Prio:
Appl.No: KR1020130130472
IPC: H01G 4/30 2006.01 (IA)


KOREAN INTELLECTUAL PROPERTY OFFICE

KOREAN PATENT ABSTRACTS

(11) Registration number: 101514559 B1
(45) Issue date: 22.04.2015
(24) Registration date: 16.04.2015

(51) Int. Cl. H01G 4/30 (2006.01), H01G 2/06 (2006.01)

(21) Application number: 1020130130472
(22) Application date: 30.10.2013
(73) Proprietor: SAMSUNG ELECTRO-MECHANICS CO., LTD.KR (KR)
(72) Inventor: CHUNG, HAE SOCK (KR), KIM, DOO YOUNG (KR), KIM, CHANG HOON (KR), LEE, SUN CHEOL (KR), YOON, JONG HYUN (KR), KIM, KI WON (KR)

(56) Prio Art: JP 2006278556 A, JP 09273970 A, JP 2002015941 A, JP 2001332439 A
* Documents cited by examiner

(54) MULTI-LAYERED CERAMIC CAPACITOR AND BOARD FOR MOUNTING SAME

(57) Abstract:

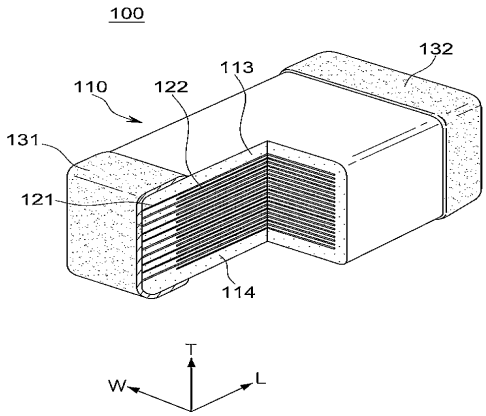
Provided are a multi-layered ceramic capacitor and a board for mounting the same, which comprises a ceramic body including a dielectric layer; a first and second internal electrode arranged in the ceramic body to face each other on both sides of the dielectric layer; and a first and second external electrode formed to cover both cross sections of the ceramic body, wherein the ceramic body includes an active layer, which is a capacity formation part, and a cover layer, which is a capacity non-formation part, formed on at least one side among the upper and lower surface of the active layer. The cover layer includes at least one buffer layer inside, and if the thickness of the cover layer is tc, and thickness of the buffer layer is ti, 0.15 <= ti/tc <= 0.90 is satisfied.

MULTI-LAYERED CERAMIC ELECTRONIC COMPONENT AND MOUNTING CIRCUIT THEREOF

The present invention provides a multi-layered ceramic electronic component comprising: a ceramic body in which a plurality of dielectric layers are layered; an active layer comprising a plurality of first internal electrodes and a plurality of second internal electrodes formed to be alternately exposed through both sections of the ceramic body between the plurality of dielectric layers; and first and second external electrodes formed on both sections of the ceramic body, and connected to the first and second internal electrodes, respectively, in which the active layer is made by alternately layering a first active layer including a ferroelectric layer and a second active layer including a paraelectric layer.

Publication: KR 101514562 B1 20150422

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: PARK, HEUNG KIL, KR; KIM, DOO YOUNG, KR; AHN, YOUNG GHYU, KR
Prio:
Appl.No: KR1020130133963
IPC: H01G 4/30 2006.01 (IA)

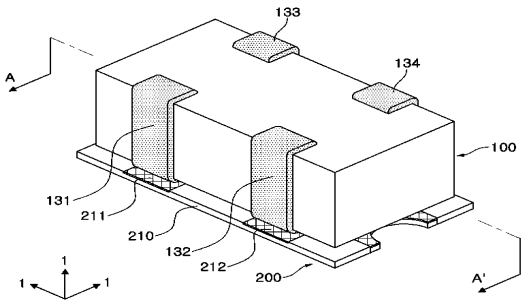


MULTI-LAYERED CERAMIC ELECTRONIC COMPONENTS AND MOUNTING SUBSTRATE OF SAME

A multi-layered ceramic electronic component includes: a ceramic body where multiple dielectric layers are stacked, a pair of first and second external electrodes which are separated from each other in a length direction on both sides of the ceramic body and are extended to part of the mounting surface of the ceramic body, a multi-layered ceramic capacitor which is alternately stacked on the dielectric layer, is exposed though at least one side of the ceramic body, and includes first and second internal electrodes which are respectively connected to the first and the second external electrodes; and an interposer substrate which has an insulating substrate bonded to the mounting surface of the multi-layered ceramic capacitor, and first and second connection terminals which are formed on the insulating substrate and are respectively connected to the first and the second external electrodes.

Publication: KR 101514565 B1 20150422

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: PARK, SANG SOO, KR; PARK, MIN CHEOL, KR
Prio:
Appl.No: KR1020130138632
IPC: H01G 4/30 2006.01 (IA)

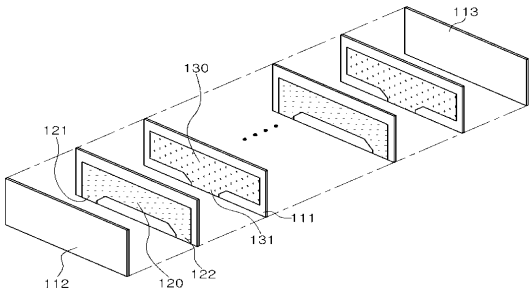


MULTI-LAYERED CERAMIC CAPACITOR AND BOARD FOR MOUNTING SAME

Provided in the present invention are a multi-layered ceramic capacitor and a board for mounting the same in which three external electrodes are arranged on one side of a ceramic body to be separated from each other, at least one part of one side in which at least one among a first to third lead part formed to be extended to be exposed through one side of the ceramic body in a first and second internal electrode is connected to at least one side of the ceramic body comprises a slope extension part.

Publication: KR 101514604 B1 20150423

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: LEE, KYO KWANG, KR; KIM, JIN, KR; AHN, YOUNG GHYU, KR; LEE, BYOUNG HWA, KR
Prio: KR 20131031 1020130131110
Appl.No: KR1020140084594
IPC: H01G 4/30 2006.01 (IA)

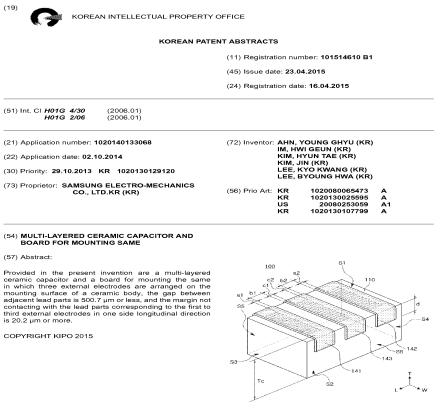


MULTI-LAYERED CERAMIC CAPACITOR AND BOARD FOR MOUNTING SAME

Provided in the present invention are a multi-layered ceramic capacitor and a board for mounting the same in which three external electrodes are arranged on the mounting surface of a ceramic body, the gap between adjacent lead parts is 500.7 μm or less, and the margin not contacting with the lead parts corresponding to the first to third external electrodes in one side longitudinal direction is 20.2 μm or more.

Publication: KR 101514610 B1 20150423

Applicant: SAMSUNG ELECTRO-MECHANICS CO., LTD., KR
Inventor: AHN, YOUNG GHYU, KR; IM, HWI GEUN, KR; KIM, HYUN TAE, KR; KIM, JIN, KR; LEE, KYO KWANG, KR; LEE, BYOUNG HWA, KR
Prio: KR 20131029 1020130129120
Appl.No: KR1020140133068
IPC: H01G 4/30 2006.01 (IA)


(19) KOREAN INTELLECTUAL PROPERTY OFFICE

KOREAN PATENT ABSTRACTS

(11) Registration number: 101514610 B1
(45) Issue date: 23.04.2015
(24) Registration date: 16.04.2015

(51) Int. Cl *H01G 4/30* (2006.01)
H01G 2/06 (2006.01)

(21) Application number: 1020140133068
(22) Application date: 02.10.2014
(30) Priority: 29.10.2013 KR 1020130129120
(73) Proprietor: SAMSUNG ELECTRO-MECHANICS CO., LTD.KR (KR)

(72) Inventor: AHN, YOUNG GHYU (KR)
IM, HWI GEUN (KR)
KIM, HYUN TAE (KR)
KIM, JIN (KR)
LEE, KYO KWANG (KR)
LEE, BYOUNG HWA (KR)

(56) Prio Art: KR 1020080065473 A
KR 1020130025995 A
US 20080253059 A1
KR 1020130107799 A

(54) MULTI-LAYERED CERAMIC CAPACITOR AND BOARD FOR MOUNTING SAME

(57) Abstract:

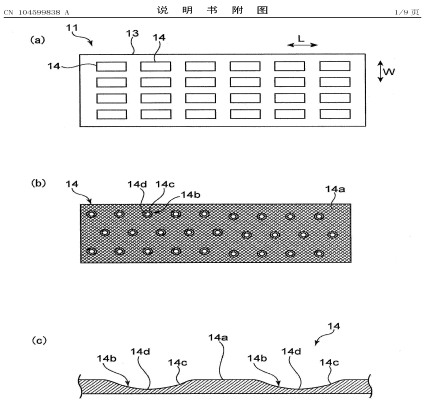
Provided in the present invention are a multi-layered ceramic capacitor and a board for mounting the same in which three external electrodes are arranged on the mounting surface of a ceramic body, the gap between adjacent lead parts is 500.7 μm or less, and the margin not contacting with the lead parts corresponding to the first to third external electrodes in one side longitudinal direction is 20.2 μm or more.

COMPOSITE SHEET, MULTILAYER CERAMIC ELECTRONIC COMPONENT, AND METHOD FOR MANUFACTURING THE MULTILAYER CERAMIC ELECTRONIC COMPONENT

The invention relates to a composite sheet, a multilayer ceramic electronic component, and a method for manufacturing the multilayer ceramic electronic component. A composite sheet improving sealing connection performance between a conductor film and a ceramic green sheet and capable of eliminating stacked deviation is provided. The composite sheet (11) includes the ceramic green sheet (13) having a lengthwise direction and the conductor film (14) printed on the ceramic green sheet (13). The conductor film (14) has a shape that has a longitudinal dimension extending in the lengthwise direction and a lateral dimension perpendicular or substantially perpendicular to the longitudinal direction. The conductor film (14) includes a plurality of thickness-varied regions (14b) arranged in a row or a plurality of rows extending in the lengthwise direction while being dispersed in the lengthwise direction. The thickness-varied regions (14b) have a thickness that is different from a thickness of a portion of the conductor film excluding the thickness-varied regions (14a).

Publication: CN 104599838 A 20150506

Applicant: MURATA MANUFACTURING CO
Inventor: HIRONORI TSUTSUMI; YOSHIHARU KUBOTA
Prio: JP 20131031 2013226496
Appl.No: CN201410594323
IPC: H01G 4/12

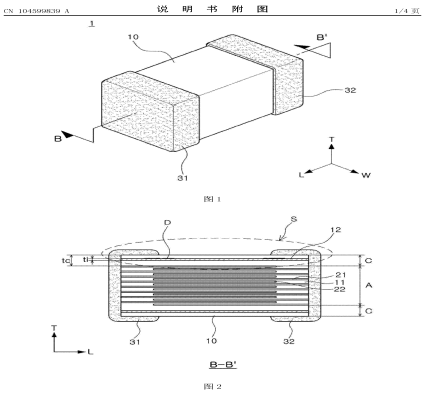


MULTILAYER CERAMIC CAPACITOR AND BOARD WITH THE SAME MOUNTED THEREON

Provided are a multilayer ceramic capacitor and a board with the same mounted thereon. The multilayer ceramic capacitor may include a ceramic body including dielectric layers, first and second internal electrodes disposed in the ceramic body to face each other, the dielectric layer being interposed between the first and second internal electrodes, and first and second external electrodes covering both end surfaces of the ceramic body. The ceramic body may include an active layer as a capacitance forming part and a cover layer as a non-capacitive part disposed on at least one surface of upper and lower surfaces of the active layer, the cover layer including at least one buffer layer, and when a thickness of the cover layer is defined as tc, and a thickness of the buffer layer is defined as ti, ti/tc being in a range of 0.15 to 0.90 (0.15<=ti/tc<=0.90).

Publication: CN 104599839 A 20150506

Applicant: SAMSUNG ELECTRO MECH
Inventor: CHUNG HAE SOCK; KIM CHANG HOON; KIM DOO YOUNG; KIM KI WON; LEE SUN CHEOL; YOON JONG HYUN
Prio: KR 20131030 20130130472
Appl.No: CN201410211289
IPC: H01G 4/30

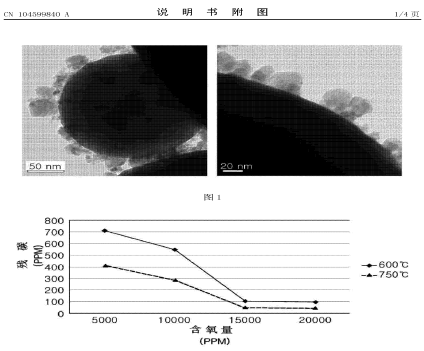


CONDUCTIVE PASTE COMPOSITION FOR EXTERNAL ELECTRODE, MULTILAYER CERAMIC ELECTRONIC COMPONENT USING THE SAME, AND MANUFACTURING METHOD THEREOF

The invention provides a conductive paste composition of an external electrode, wherein the composition comprises copper powder and copper oxide powder. The invention further provides a conductive paste composition for an external electrode, and a manufacturing method thereof. And more specifically, the invention provides a conductive paste composition for an external electrode, allowing for decreased blister and glass beading defects by improving a removal of residual carbon at low temperature before necking between metal particles is generated and the metal particles are densified during a firing process of the external electrode, a multilayer ceramic electronic component using the conductive paste composition, and a manufacturing method thereof.

Publication: CN 104599840 A 20150506

Applicant: SAMSUNG ELECTRO MECH
Inventor: CHOI EUN JOO; JEON BYUNG JUN; KANG SIM CHUNG; KIM JUN HYEONG; LEE KYU HA; YOO SEUNG HEE
Prio: KR 20131030 20130130174
Appl.No: CN201410446234
IPC: H01G 4/30



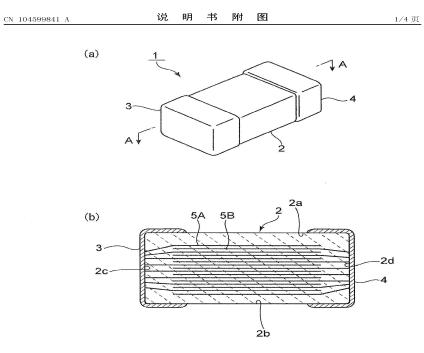
10

METHOD FOR MANUFACTURING MONOLITHIC CERAMIC ELECTRONIC COMPONENT AND MONOLITHIC CERAMIC ELECTRONIC COMPONENT

A method for manufacturing a monolithic ceramic electronic component includes the steps of preparing a first mother ceramic outer layer (7), stacking a plurality of inner electrodes (5) and a plurality of ceramic green sheets (8) on the first mother ceramic outer layer (7), and, further, applying first pressing in the stacking direction after forming a mother ceramic inner side outer layer (9); forming a mother ceramic outer side outer layer on the mother ceramic inner side outer layer (9) to form a second mother ceramic outer layer, applying second pressing in the stacking direction to form a multilayer body; cutting the mother multilayer body to obtain individual multilayer bodies; sintering the individual multilayer bodies to obtain ceramic bodies; and forming first and second outer electrodes on the outer surface of each of ceramic bodies.

Publication: CN 104599841 A 20150506

Applicant: MURATA MANUFACTURING CO
Inventor: HIRONORI TSUTSUMI
Prio: JP 20131030 2013225321, JP 20140718 2014147384
Appl.No: CN201410513512
IPC: H01G 4/30



14

MULTILAYER CERAMIC CAPACITOR AND BOARD FOR MOUNTING THEREOF

Provided is a multilayer ceramic capacitor and a board for mounting thereof. The multi-layered ceramic capacitor includes a ceramic body, three external electrodes disposed on amounting surface thereof so as to be spaced apart from each other, and first, second, and third lead parts extending from first and second internal electrodes of the ceramic body so as to be exposed to the mounting surface of the ceramic body. One side of at least one of the first, second, and third lead parts connected to the mounting surface of the ceramic body may be at least partially formed as an inclined extension portion.

Publication: CN 104599842 A 20150506

Applicant: SAMSUNG ELECTRO MECH
Inventor: AHN YOUNG GHYU; KIM JIN; LEE BYOUNG HWA; LEE KYO KWANG
Prio: KR 20131031 20130131110, KR 20140707 20140084594
Appl.No: CN201410569333
IPC: H01G 4/30

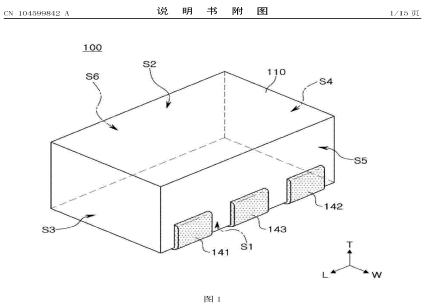


图 1

16

MULTILAYER CERAMIC CAPACITOR AND BOARD FOR MOUNTING THEREOF

The invention discloses a multilayer ceramic capacitor and a board for mounting thereof. The multilayer ceramic capacitor may include: a ceramic body including a plurality of dielectric layers; a capacitor part including a first internal electrode formed in the ceramic body and a second internal electrode formed in the ceramic body; a resistor part including a first internal connection conductor formed in the ceramic body and a second internal connection conductor formed in the ceramic body; a first dummy electrode formed in the ceramic body and a second dummy electrode formed in the ceramic body; and first to sixth external electrodes and the first and second connecting terminals. The capacitor part and the resistor part may be connected in series to each other.

Publication: CN 104599843 A 20150506

Applicant: SAMSUNG ELECTRO MECH
Inventor: PARK MIN CHEOL; PARK SANG SOO
Prio: KR 20131031 20130130786
Appl.No: CN201410190995
IPC: H01G 4/40

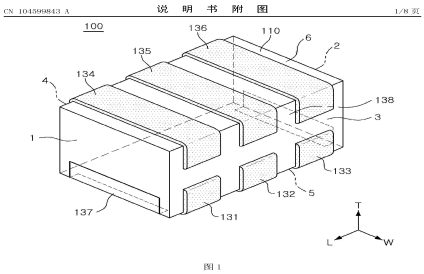


图 1

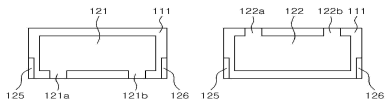


图 2

19

Dye-sensitized solar cell photo-anode producing method

The invention relates to a dye-sensitized solar cell photo-anode producing method. The dye-sensitized solar cell photo-anode producing method mainly comprises the steps of dipping an anode base body of a dye-sensitized solar cell in a mixture formed by a photo-sensitive dye and an organic solvent under the ultrasound condition, taking the anode base body absorbed with the photo-sensitive dye, and performing washing and drying to obtain a target product. The technical problem that the dye-sensitized solar cell in the prior art is long in manufacture time and the dye is unevenly absorbed on the anode base body is solved by means of the dye-sensitized solar cell photo-anode producing method, and the dye-sensitized solar cell photo-anode producing method has commercial prospect.

Publication: CN 104599844 A 20150506

Applicant: UNIV EAST CHINA SCIENCE & TECH

Inventor: CHEN JUE; HUA JIANLI; LI XING; TIAN HE; WANG FEI; WU WENJUN; ZHENG ZHIWEI; ZHOU YING

Prio:

Appl.No: CN201510023717

IPC: H01G 9/04

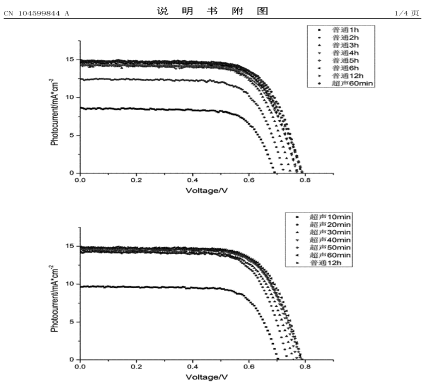


图 1

Production method of low voltage aluminum anode foil for electrolytic condenser

The invention discloses a production method of a low voltage aluminum anode foil for an electrolytic condenser. The production method including the steps of: 1, adding aluminum foil into ammonium adipate solution for formation treatment; 2, performing secondary formation treatment; 3, performing third formation treatment; 4, performing fourth formation treatment; 5, performing fifth formation treatment; 6, performing sixth formation treatment; 7, performing depolarization treatment; 8, performing primary repair formation treatment; 9, performing secondary repair formation treatment; 10, performing aftertreatment; 11, performing thermal treatment: including putting the aluminum foil which is subjected to aftertreatment into a roasting furnace for roasting, then putting the roasted aluminum foil into a drying furnace for drying, and thereby the product is obtained. The aluminum foil manufactured according to the production method provided by the invention is improved in anti-hydration and wet-resistance of the oxide film.

Publication: CN 104599845 A 20150506

Applicant: RIFENG QINGYUAN ELECTRONIC CO LTD

Inventor: CHEN YONGZENG; LI ZHIQIANG; PENG LIANGHONG; PENG SHUHONG

Prio:

Appl.No: CN201410857014

IPC: H01G 9/045

Chip high-voltage miniature long-life aluminum electrolytic capacitor and manufacturing method thereof

The invention belongs to the technical field of chip aluminum electrolytic capacitors and particularly relates to a chip high-voltage miniature long-life aluminum electrolytic capacitor and a manufacturing method thereof. The chip high-voltage miniature long-life aluminum electrolytic capacitor comprises outer electrolytic paper, a positive guide pin, anode foil, a negative guide pin, cathode foil and inner electrolytic paper. The positive guide pin is riveted on the anode foil and the negative guide pin is riveted on the cathode foil. The outer electrolytic paper, the anode foil, the inner electrolytic paper and the cathode foil are wound together into a core package. The riveted portions between the positive guide pin and the anode foil as well as between the negative guide pin and the cathode foil are respectively provided with a hydrophilic high temperature electrically conductive adhesive tape. The anode foil is an anode foil of high voltage withstanding and high specific volume and the cathode foil is a forming cathode foil. The inner electrolytic paper and the outer electrolytic paper are electrolytic paper of low tightness and low thickness. The chip high-voltage miniature long-life aluminum electrolytic capacitor has the advantages of being provided with one hydrophilic high temperature electrically conductive adhesive tape at the riveted portions between the positive guide pin and the anode foil as well as between the negative guide pin and the cathode foil respectively for significantly reducing the size of the core package and increasing the contact area for further achieving the characteristics of miniaturization and high temperature wave resistance of the product.

Publication: CN 104599846 A 20150506

Applicant: CHANGZHOU HUAWU ELECTRONIC CO LTD
Inventor: LI JIN
Prio:
Appl.No: CN201510035941
IPC: H01G 9/145

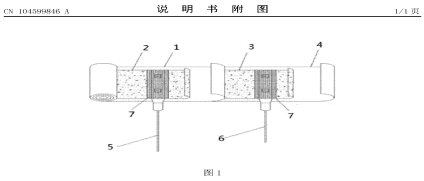


图 1

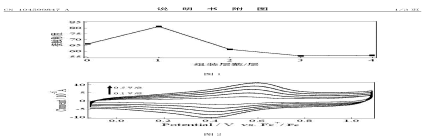
6

Composite film material with electrochemical activity and preparation method thereof

The invention discloses a composite film material with electrochemical activity and a preparation method thereof, and belongs to the field of preparation of the composite material. The composite film is formed by alternately self-assembling an amphiphilic ruthenium complex molecular film, a symmetric ruthenium complex molecular film and graphene; the substrate is ITO (Indium Tin Oxide), wherein the amphiphilic ruthenium complex is [Ru(Py2G1MeBip)(XPOH)](PF6)2, and the symmetric ruthenium complex is [Ru(XPOH)2](PF6)2. The obtained composite film is uniformly and fully modified on a conductive substrate, has good mechanical and chemical stability and combines the respective advantages of three materials, the electrochemical performance and stability are obviously improved compared with a single self-assembled thin film. The operation can be performed by using a simple container at room temperature without special conditions or complex expensive equipment; compared with other layer-by-layer assembly technologies, the material and the preparation method have the advantages of easiness and convenience in operation, short assembly time, no influence by the material and the shape of the substrate, high bonding strength of the composite film and the substrate and higher popularization and application value.

Publication: CN 104599847 A 20150506

Applicant: UNIV KUNMING SCIENCE & TECH
Inventor: LI KONGZHAI; WANG HUA; WEI YONGGANG; YANG LI; ZHU XING
Prio:



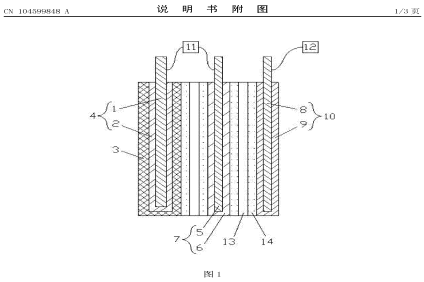
Appl.No: CN201410840900
IPC: H01G 9/20

Hybrid capacitor and manufacturing method thereof

The invention relates to a hybrid capacitor composed of a positive electrode, a negative electrode, a membrane, and an electrolyte. The positive electrode is connected with a super capacitor positive plate and an electrolytic capacitor positive plate. The super capacitor positive plate is composed of a positive current collector and a positive active layer covering the surface of the positive current collector and containing positive active materials. The electrolytic capacitor positive plate is composed of valve metal or niobium monoxide and an oxide of valve metal or an oxide of niobium monoxide covering the surface of valve metal or niobium monoxide. The super capacitor positive plate is not in direct contact with the oxide of valve metal or the oxide of niobium monoxide of the electrolytic capacitor positive plate. The negative electrode is at least connected with a super capacitor negative plate which is composed of a negative current collector and a negative active layer covering the surface of the negative current collector and containing negative active materials. The hybrid capacitor of the invention has the advantages of large capacity, low equivalent series resistance, and excellent frequency characteristics.

Publication: CN 104599848 A 20150506

Applicant: ZHANG CAIXIN
Inventor: YINING ZHANG
Prio:
Appl.No: CN201310523760
IPC: H01G 11/12



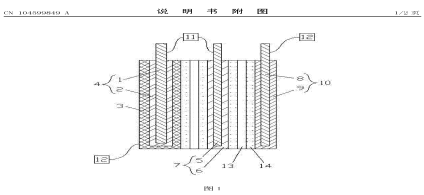
11

Hybrid capacitor and manufacturing method thereof

The invention relates to a hybrid capacitor composed of a positive electrode, a negative electrode, a membrane, and an electrolyte. The positive electrode is connected with a super capacitor positive plate and an electrolytic capacitor positive plate. The super capacitor positive plate is composed of a positive current collector and a positive active layer covering the surface of the negative current collector and containing negative active materials. The electrolytic capacitor positive plate is composed of valve metal or niobium monoxide and an oxide of valve metal or an oxide of niobium monoxide covering the surface of valve metal or niobium monoxide. The surface of the electrolytic capacitor positive plate is further coated with a solid conductive layer. The negative electrode is connected with a super capacitor negative plate and the solid conductive layer. The super capacitor positive plate and the solid conductive layer are not in direct contact. The super capacitor negative plate is composed of a negative current collector and a negative active layer covering the surface of the negative current collector and containing negative active materials. The hybrid capacitor of the invention has the advantages of large capacity, low equivalent series resistance, and excellent frequency characteristic.

Publication: CN 104599849 A 20150506

Applicant: ZHANG CAIXIN
Inventor: YINING ZHANG
Prio:
Appl.No: CN201310523814



12

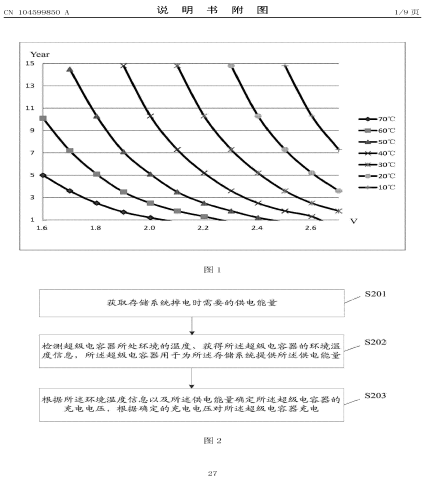
IPC: H01G 11/12

Charging method and device

The invention discloses a charging method and device. The charging method includes that acquiring power supply energy needed for a storage system under a power failure state; detecting the temperature of an environment of a super-capacitor to obtain the environment temperature information of the super-capacitor, wherein the super-capacitor is used for providing the power supply energy for the storage system; confirming a charging voltage of the super-capacitor according to the environment temperature information and power supply energy, and charging the super-capacitor according to the confirmed charging voltage. The charging method and device can charge the super-capacitor according to the actual charging voltage of the super-capacitor, and the life span of the super-capacitor is prolonged.

Publication: CN 104599850 A 20150506

Applicant: HUAWEI TECH CO LTD
Inventor: PENG QI
Prio:
Appl.No: CN201410843040
IPC: H01G 11/14



Application of 3D coralline graphene/NiCo2O4 composite material

The invention belongs to the chemistry field and provides a preparation method of 3D coralline graphene/NiCo2O4 composite material and application thereof in supercapacitor; the method comprises the following steps: 1) compositing the graphite oxide GO; 2) adding the Ni-Co salt and alkali source in the suspension liquid of the graphite oxide, microwave heating for preparing the GO/Ni-Co lamelleted bi-metal hydroxide composite material; 3) calcining the GO/Ni-Co lamelleted bi-metal hydroxide composite material at high temperature for preparing the 3D coralline graphene/NiCo2O4 composite material; 4) preparing the electrode plate and assembling the simulation supercapacitor for evaluating the performance. Compared with the prior art, the 3D coralline graphene/NiCo2O4 composite material has superior electrical conductivity, greater specific surface area, smaller mass transfer resistance and longer cycle service life. In addition, the 3D coralline graphene/NiCo2O4 composite material is used in the electrode material of the supercapacitor, the the 3D coralline graphene/NiCo2O4 composite material is superior to the existing rare metallic oxide on the cost and performance.

Publication: CN 104599851 A 20150506

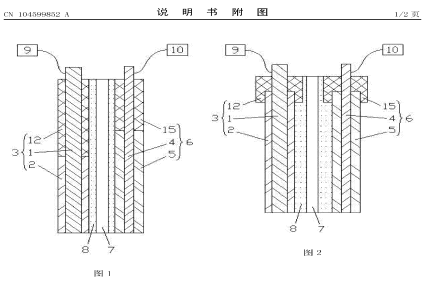
Applicant: JIANGSU JIANGDA ENVIRONMENTAL PROT TECHNOLOGY DEV CO LTD
Inventor: CAI JINFEI; LI ZAIJUN; YAN TAO; ZHANG MING
Prio:
Appl.No: CN201410848880
IPC: H01G 11/24

Super capacitor battery and manufacturing method thereof

The invention relates to a super capacitor battery and a manufacturing method thereof. The super capacitor battery is composed of a positive electrode, a negative electrode, a membrane, and an electrolyte. The positive electrode is connected with a positive electrode plate, and the negative electrode is connected with a negative electrode plate. At least one of the positive electrode plate and the negative electrode plate contains both a super capacitor electrode active material and a battery electrode active material. Each electrode plate is composed of a current collector and electrode active layers covering the surface of the current collector and containing electrode active material. The super capacitor electrode active material and the battery electrode active material are at least contained in different electrode active layers on the surface of the same current collector. No coverage exists or local coverage exists between the different electrode active layers. The super capacitor battery of the invention not only has high energy density and high power density, but also is simple in process and controllable in performance.

Publication: CN 104599852 A 20150506

Applicant: ZHANG CAIXIN
Inventor: YINING ZHANG
Prio:
Appl.No: CN201310523642
IPC: H01G 11/30



10

Nickel-cobalt sulpho-spinel for super capacitor and preparation method of nickel-cobalt sulpho-spinel

The invention discloses a nickel-cobalt sulpho-spinel for super capacitor and a preparation method of the nickel-cobalt sulpho-spinel and aims to further improve the pseudocapacitance feature of nickel-cobalt metal compound composite material and increase the specific discharge capacity and cycling stability of the nickel-cobalt metal compound composite material. The preparation method includes: nickel salt, cobalt salt and penicillamine are used as raw materials, a solvent-thermal method is used, precursor nickel salt, cobalt salt and penicillamine proportion, solvent varieties, solvent-thermal temperature/time, pH values and the varieties of used inorganic acids are controlled, and subsequent procedures of centrifuging/washing/drying/roasting and the like are performed to obtain the nickel-cobalt sulpho-spinel nano material. Tests show that when the nickel-cobalt sulpho-spinel nano material is used as electrode material to produce a super capacitor, high specific discharge capacity and cycling stability are achieved. In addition, the preparation method is low in reaction temperature, controllable in reaction, capable of satisfying the requirements of industrial production, suitable for large-batch production and promising in development prospect.

Publication: CN 104599853 A 20150506

Applicant: MATERIAL INST OF CHINA ACADEMY OF ENGINEERING PHYSICS
Inventor: WANG JINCHUAN; YANG LIJUN; YANG PAN; YANG SUOLONG; ZHAO XIAOCHONG
Prio:
Appl.No: CN201510067892
IPC: H01G 11/30

Preparation method of flake manganese dioxide/graphene composite for supercapacitors

The invention discloses a preparation method of flake manganese dioxide/graphene composite suitable for supercapacitor materials. According to the preparation method, a potassium permanganate solution synergistically reacts with three-dimensional graphene in the presence of diluted hydrochloric acid and under a hydrothermal condition to form the flake manganese dioxide/graphene, thereby obtaining the flake manganese dioxide/graphene composite. The preparation method is simple to operate; the obtained flake manganese dioxide/graphene composite has a relatively high ion transport property and is suitable for the supercapacitor materials.

Publication: CN 104599854 A 20150506

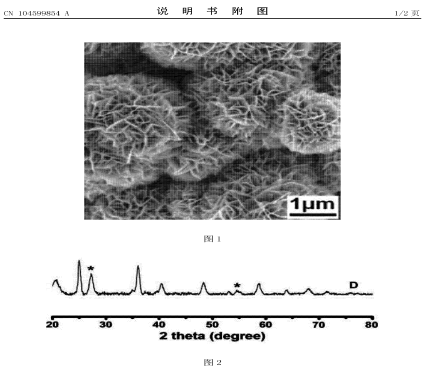
Applicant: WUXI HUAZHEN NEW ENERGY TECHNOLOGY CO LTD

Inventor: SHAODIAN SHEN; TAO GU

Prio:

Appl.No: CN201310528033

IPC: H01G 11/32



5

Preparation for hollow graphite carbon ball/manganese dioxide nano-fiber composite material

The invention discloses a preparation method for hollow graphite carbon ball/manganese dioxide nano-fiber composite material suitable for super-capacitor material. The hollow graphite carbon ball/manganese dioxide nano-fiber composite material is prepared through growing manganese dioxide nano-fiber on a hollow graphite carbon ball by means of the interaction between the hollow graphite carbon ball and potassium permanganate. The preparation method for the hollow graphite carbon ball/manganese dioxide nano-fiber composite material is easy to operate, and the prepared hollow graphite carbon ball/manganese dioxide nano-fiber composite material has high ion transmission performance and is suitable for the super-capacitor material.

Publication: CN 104599855 A 20150506

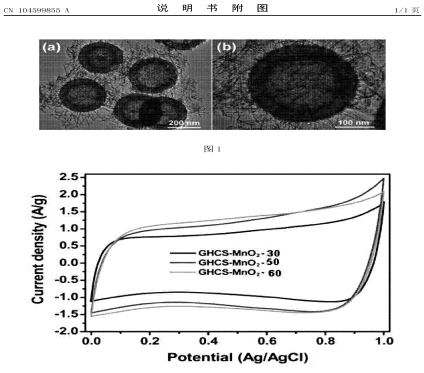
Applicant: WUXI HUAZHEN NEW ENERGY TECHNOLOGY CO LTD

Inventor: SHAODIAN SHEN; TAO GU

Prio:

Appl.No: CN201310529847

IPC: H01G 11/36



5

Single-walled carbon nanotube vertical array and carbon nano onion composite material production method and application thereof to super capacitor

The invention provides a single-walled carbon nanotube vertical array and carbon nano onion composite material production method and the application thereof to a super capacitor and belongs to the technical field of carbon nano materials. A bottom layer is formed by a silicon wafer which is provided with a vertical single-walled carbon nanotube array and the top end of the vertical single-walled carbon nanotube array is of a carbon nano onion structure. The single-walled carbon nanotube array is vertically grown on the silicon wafer, a silicon layer is evaporated at the top end of the single-walled carbon nanotube array, and the carbon nano onion structure is grown through the silicon layer. Single-walled carbon nanotube vertical array and carbon nano onion composite materials are applied to the super capacitor after the bottom layer of silicon wafer is removed.

Publication: CN 104599856 A 20150506

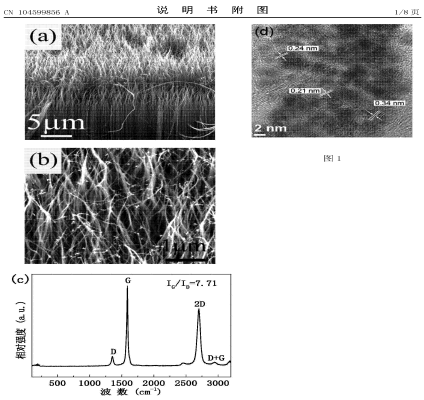
Applicant: UNIV BEIJING TECHNOLOGY

Inventor: DONG JIAN; FAN XIUJUN; GUO XIA; LI CHONG; LIU BAI; LIU QIAOLI

Prio:

Appl.No: CN201410596686

IPC: H01G 11/36



Coaxial nanometer wire with porous graphene/MnO2 pipe and middle line structure, preparation method and application thereof

The invention relates to a coaxial nanometer wire with a porous graphene/MnO2 pipe and a middle line structure, a preparation method of the coaxial nanometer wire and an application of the coaxial nanometer wire. The material can be regarded as a positive-electrode active material of an electrochemical super-capacitor. The material is formed by cladding a MnO2 nanometer wire with a porous graphene pipe, the length is 10-40 micrometers and the diameter is 40-160 micrometers, wherein the diameter of the MnO2 nanometer wire is 30-80 micrometers, and the porous graphene pipe is formed by curling a graphene sheet and provided with different-extent mesoporous structures. The coaxial nanometer wire is relatively high in specific capacity, and excellent in cyclic performance and steadiness and electrochemical performance under high current charge-discharge conditions; secondly, the coaxial nanometer wire is simple in process, after simple hydro-thermal treatment is performed, the coaxial nanometer wire material with the middle line structure and the porous graphene/MnO2 pipe is low in power consumption. The mass of the used graphene only accounts for 2.2% of the total mass, thus the coaxial nanometer wire material is good for marketization and popularization.

Publication: CN 104599857 A 20150506

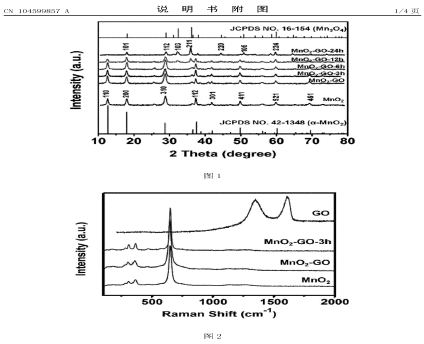
Applicant: UNIV WUHAN TECH

Inventor: HU PING; MAI LIQIANG; SHUANG YI; YAN MENGYU

Prio:

Appl.No: CN201510031856

IPC: H01G 11/36



Preparation method of energy-accumulating cobaltosic oxide/graphene composite

The invention discloses a preparation method of a cobaltosic oxide/graphene composite suitable for supercapacitor materials. According to the preparation method, a cobalt nitrate solution synergistically reacts with three-dimensional graphene in the presence of diluted hydrochloric acid and under a hydrothermal condition to form the cobaltosic oxide/graphene composite. The preparation method is simple to operate; the obtained cobaltosic oxide/graphene composite has a relatively high ion transport property and is suitable for the supercapacitor materials.

Publication: CN 104599858 A 20150506

Applicant: WUXI HUAZHEN NEW ENERGY TECHNOLOGY CO LTD

Inventor: SHAODIAN SHEN; TAO GU

Prio:

Appl.No: CN201310530279

IPC: H01G 11/40

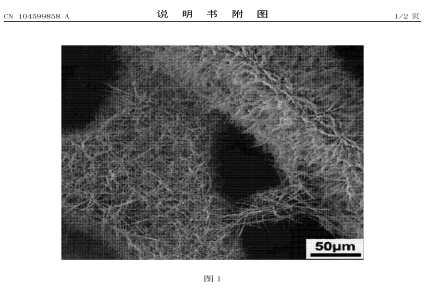


图 1

Lithium ion capacitor and manufacturing method thereof

The invention relates to a lithium ion capacitor and a manufacturing method thereof. The lithium ion capacitor is composed of a positive electrode, a negative electrode, a membrane, and an electrolyte. The positive electrode is connected with a positive electrode plate, and the negative electrode is connected with a negative electrode plate. At least one of the positive electrode plate and the negative electrode plate contains both a super capacitor electrode active material and a lithium ion battery electrode active material. Each electrode plate is composed of a current collector and electrode active layers covering the surface of the current collector and containing an electrode active material. The super capacitor electrode active material at least contains a conductive polymer. The lithium ion capacitor of the invention has the advantages of high energy density and high power density.

Publication: CN 104599859 A 20150506

Applicant: ZHANG CAIXIN

Inventor: YINING ZHANG

Prio:

Appl.No: CN201310523685

IPC: H01G 11/50

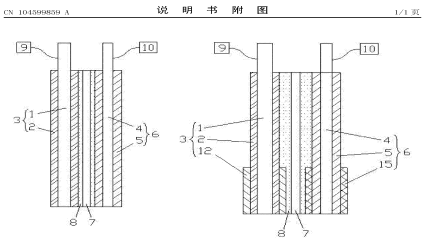


图 1 图 2

Method for assembling capacitor with graphene nanosheets

The invention discloses a method for assembling a capacitor with graphene nanosheets. The method comprises the following steps: flake graphite is oxidized and dried; graphene nanosheets are prepared through thermal exfoliation under the conditions of low temperature and atmospheric pressure; and grapheme, conductive carbon black and PTFE emulsion with a mass fraction of 50% are mixed at a mass ratio of 80: 8: 5, absolute ethyl alcohol is added to the mixture and the mixture is stirred, the mixture is heated to break the emulsion, drying is carried out at the temperature of 50 DEG C to prepare electrode sheets, and the dried electrode sheets are assembled into a capacitor by adopting a special diaphragm for capacitors and using 6mol/L KOH solution as electrolyte. The ratio of grapheme, conductive carbon black and binder is reasonable, and the prepared capacitor has good performance and large specific capacitance.

Publication: CN 104599860 A 20150506

Applicant: QINGDAO TAIHAODA CARBON MATERIAL CO LTD

Inventor: QIAO SHUAI

Prio:

Appl.No: CN201310525306

IPC: H01G 11/84

Preparation method of graphene/xylogen-based active carbon

The invention belongs to the field of chemistry, and provides a preparation method of graphene/xylogen-based active carbon; the method comprises the following steps: 1) preparing xylogen-based active carbon; 2) mixing graphite oxide with active carbon to obtain graphite oxide/xylogen-based active carbon compound; 3) activating the compound by alkali, treating with pyrolysis and reduction, so as to prepare graphene/xylogen-based active carbon composite material; 4) preparing an electrode slice. Comparing to the prior art, the obtained graphene/xylogen-based active carbon provides a larger specific surface, a smaller mass transfer resistance, and a better conductivity. Additionally, applying the synthesized graphene/xylogen-based active carbon to the electrode material of a super capacitor is much better than the existing active carbon material from cost and performance.

Publication: CN 104599861 A 20150506

Applicant: JIANGSU JIANGDA ENVIRONMENTAL PROT TECHNOLOGY DEV CO LTD

Inventor: CAI JINFEI; LI ZAIJUN; YIN YUANYUAN; ZHANG MING

Prio:

Appl.No: CN201410848242

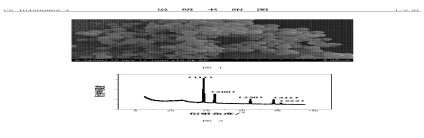
IPC: H01G 11/86

Method for preparing polypyrrole/sliver nano composite material

The invention relates to a method for preparing a polypyrrole/sliver nano composite material; the method comprises the steps: mixing pyrrole monomers and silver nitrate solution into a system and dropwise adding trisodium citrate aqueous solution in a stirring condition; after the dropwise adding is finished, continuously stirring for 10-30 min, dropwise adding ferric trichloride aqueous solution and reacting for 4-12h; at the end of the reaction, pumping and filtering reaction solution; washing an obtained filter cake with ethyl alcohol and de-ionized water for twice or three times; and drying to obtain spherical or sphere-like polypyrrole/sliver nano composite material with particle size of 100-250nm, pore diameter of 3-15nm and pore volume of 0.283-0.356 cm3/g. The preparation method does not need expensive equipment and instruments, is simple and has lower requirement on the reaction environment and low production cost. The prepared polypyrrole/sliver nano composite material is used as the electrode material of supercapacitors and has excellent specific capacitance performance and thermal stability.

Publication: CN 104599862 A 20150506

Applicant: SHANGHAI INST TECHNOLOGY



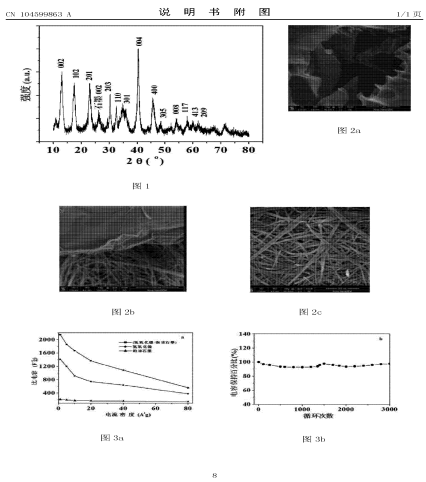
Inventor: SHEN HAIYAN; WAN CHUANYUN; YUAN LIYANG
Prio:
Appl.No: CN201510011314
IPC: H01G 11/86

Method for preparation of composite material, composite material and application thereof

The invention provides a method for preparation of a composite material. The method comprises the following steps that S1, foamy graphite with a three-dimensional porous structure is provided; S2, the foamy graphite is added to a potassium hydroxide solution to be activated, and then is washed and dried, so that activated foamy graphite is obtained; S3, the activated foamy graphite is added to mixed acid to be acidized under the ultrasonic condition, and then is washed and dried, so that acidized foamy graphite is obtained; S4, the acidized foamy graphite is added to a nickel sulfate solution to form uniform suspension liquid through mixing, a precipitating agent is slowly and dropwise added to the suspension liquid, and is washed and dried after hydro-thermal processing is accomplished, so that the composite material made of the foamy graphite and nickel hydroxide nanowires is obtained. The invention further provides the composite material prepared through the method for preparation of the composite material, and application of the composite material serving as an electrode material to a capacitor. All in all, the method for preparation of the composite material is simple in process, easy to control and beneficial to large-scale production, and the provided composite material has high specific capacitance and excellent cycle stability when the composite material serves as the electrode material.

Publication: CN 104599863 A 20150506

Applicant: UNIV EAST CHINA SCIENCE & TECH
Inventor: CHEN YANG; LIU ZHITING; SUI ZHIJUN; ZHANG ZILAN; ZHOU JINGHONG; ZHOU XINGGUI
Prio:
Appl.No: CN201510021386
IPC: H01G 11/86

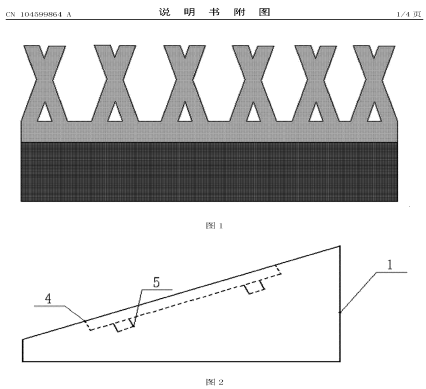


Oblique photoetching method capable of increasing specific surface area of MEMS super-capacitor electrode

The invention discloses an oblique photoetching method capable of increasing the specific surface area of an MEMS super-capacitor electrode. The oblique photoetching method capable of increasing the specific surface area of the MEMS super-capacitor electrode includes steps that firstly, spinning photoresist with a certain thickness on a clean and dry silicon substrate, fixing a silicon wafer spun with the photoresist on a specially designed cast steel frame which inclines by 15 degrees, exposing the photoresist on the silicon wafer for two times, to be specific, rotating the silicon wafer in the plane thereof by 180 degrees to perform the second exposure after finishing the first exposure, finishing the exposure process of the oblique photoetching after ending the two times of exposure, developing to form an X type three-dimensional electrode array structure, and preparing a three-dimensional micro-electrode. The oblique photoetching method capable of increasing the specific surface area of the MEMS super-capacitor electrode improves the specific surface area of the three-dimensional array structure through improving the exposure mode from the design technique perspective, compared with a traditional vertical electrode array structure, the X type array is featured with high depth-to-width ratio, large specific surface area, stable structure and the like. The structure can be broadly used for the MEMS super-capacitor electrode structure design.

Publication: CN 104599864 A 20150506

Applicant: UNIV TAIYUAN TECHNOLOGY
Inventor: HU WENXIU; LI DAWEI; LI GANG; ZHANG JUNHUI; ZHANG WENDONG; ZHAO QINGHUA
Prio:
Appl.No: CN201510030621
IPC: H01G 11/86

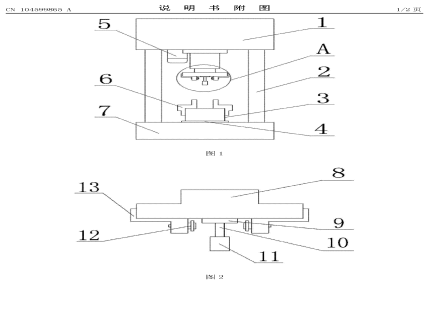


Crimping device for projective jacket of aluminum-shell capacitor

The invention relates to the field of processing of capacitors, in particular to a crimping device for a projective jacket of an aluminum-shell capacitor. The crimping device comprises an upper cabinet, a pneumatic clamping device, a motor and a lower cabinet. A base is arranged on the lower cabinet, the pneumatic clamping device is arranged on the base, the upper cabinet and the lower cabinet are connected through support columns, a secondary cylinder is arranged at the bottom of the upper cabinet, a primary cylinder is arranged in the secondary cylinder, a primary piston rod is arranged at the lower end of the primary cylinder, and a fixed block is arranged at the bottom end of the secondary piston rod. The crimping device has the advantages that crimping efficiency ad crimping quality of the projective jacket of the aluminum-shell capacitor are improved effectively, labor intensity and production cost are reduced, product quality is improved effectively, and product market competitiveness is further improved.

Publication: CN 104599865 A 20150506

Applicant: NINGGUO YUHUA APPLIANCE CO LTD
Inventor: CHEN ZHONGYOU; WANG HAILING
Prio:
Appl.No: CN201510058387



IPC: H01G 13/00

Hybrid electrolytic capacitor and manufacturing method thereof

The invention relates to a hybrid electrolytic capacitor composed of a positive electrode, a negative electrode, a membrane, and an electrolyte. The positive electrode is connected with an electrolytic capacitor positive plate which is composed of valve metal or niobium monoxide and an oxide of valve metal or an oxide of niobium monoxide covering the surface of valve metal or niobium monoxide. The negative electrode is connected with a super capacitor negative plate which is composed of a negative current collector and a negative active layer covering the surface of the negative current collector and containing negative active materials. The super capacitor negative active materials include at least one among a conductive polymer, a lithium compound, grapheme, activated carbon, nanocarbon, carbon gel, carbon fiber, soft carbon, hard carbon and graphite or at least one among a lithium-doped conductive polymer, a lithium compound, grapheme, activated carbon, nanocarbon, carbon gel, carbon fiber, soft carbon, hard carbon and graphite. The hybrid electrolytic capacitor of the invention has the advantages of high energy density, low cost, and simple manufacture process.

Publication: CN 104599866 A 20150506

Applicant: ZHANG CAIXIN
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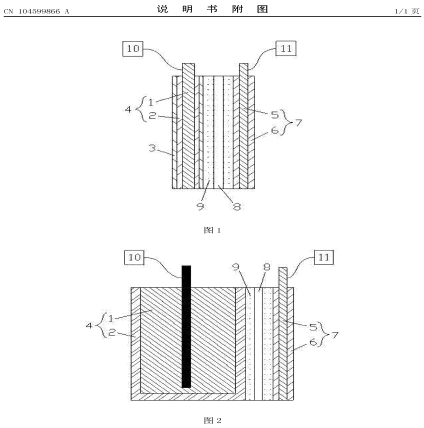
Prio:
Appl.No: CN201310523507
IPC: H01G 15/00



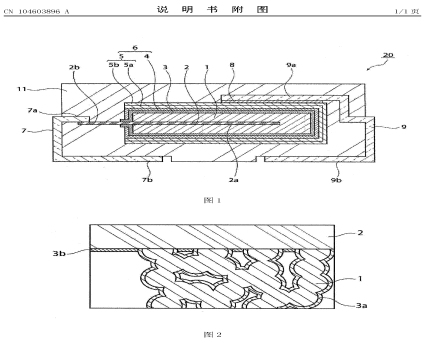
9

Solid electrolytic capacitor

Provided is a solid electrolytic capacitor (20) that includes: a capacitor element including an anode(1) that contains tantalum as a principal component and is formed with a porous sintered body, an anode lead (2) that contains niobium as a principal component and has one end (2a) buried in the anode (1) and the other end (2b) protruded from the anode (1), a dielectric layer (3) that is provided on a surface of the anode (1) and a part of a surface of the anode lead (2), and a cathode layer (6) provided on the dielectric layer (3); an anode terminal (7) electrically connected to the other end (2b) side of the anode lead (2); a cathode terminal (9) electrically connected to a cathode layer (5); and a resin package (11) covering the surfaces of the capacitor element, a part of the anode terminal (7), and a part of the cathode terminal (9). The solid electrolytic capacitor is characterized in that the resin package (11) has a linear expansion coefficient that is greater than any one of linear expansion coefficients of the anode (1), the anode lead (2), the anode terminal (7), and the cathode terminal (9).

Publication: CN 104603896 A 20150506

Applicant: SANYO ELECTRIC CO
Inventor: KATO TOSHIYUKI
Prio: JP 20120829 2012188632, JP 20130826 2013005011
Appl.No: CN201380044719
IPC: H01G 9/08



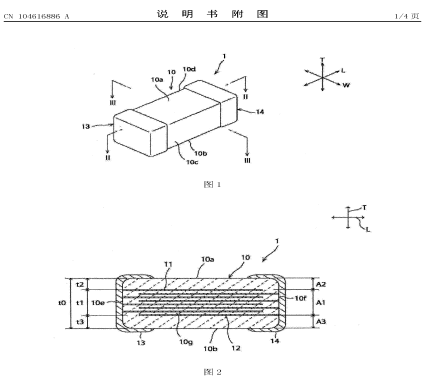
10

CAPACITOR, CAPACITOR MOUNTING STRUCTURE, AND TAPED ELECTRONIC COMPONENT SERIES

In a capacitor main body, a dimension along the thickness direction of a first region where a first inner electrode and a second inner electrode are provided is t1, a dimension along the thickness direction of a second region that is positioned on the side of a first main surface relative to the first region is t2, and a dimension along the thickness direction of a third region that is positioned on the side of a second main surface relative to the first region is t3. A condition of t2/t1>about 0.15 and a condition of t3/t1>about 0.15 are satisfied.

Publication: CN 104616886 A 20150513

Applicant: MURATA MANUFACTURING CO
Inventor: TADATERU YAMADA
Prio: JP 20131105 2013229162, JP 20140320 2014057592
Appl.No: CN201410613596
IPC: H01G 2/06



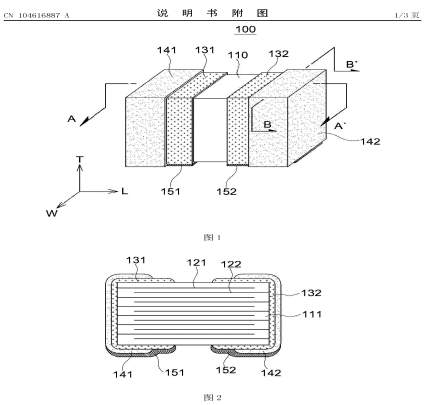
13

MULTILAYER CERAMIC CAPACITOR

A multilayer ceramic capacitor may include a ceramic body having a plurality of dielectric layers; first and second internal electrodes disposed in the ceramic body to be alternately exposed to the first and second end surfaces of the ceramic body, having the dielectric layers interposed therebetween; and first and second external electrodes electrically connected to the first and second internal electrodes, respectively. The first and second external electrodes may include: first and second internal conductive layers; first and second insulating layers; and first and second external conductive layers.

Publication: CN 104616887 A 20150513

Applicant: SAMSUNG ELECTRO MECH
Inventor: AHN YOUNG GHYU; IM HWI GEUN; KIM HYUN TAE; LEE BYOUNG HWA; LEE SOON JU; PARK HEUNG KIL; PARK MIN CHEOL; PARK SANG SOO
Prio: KR 20131105 20130133450
Appl.No: CN201410132378
IPC: H01G 4/12



12

Multilayer ceramic capacitor impregnation wax and preparation method thereof

The invention discloses a multilayer ceramic capacitor impregnation wax and a preparation method thereof. The multilayer ceramic capacitor impregnation wax comprises, by weight, 60-85% of microcrystalline wax, 5-15% of butane polymer, 5-15% of polypropylene wax, 2-10% of insulation oil, and 0.1-1.0% of antioxidant. The impregnation wax of the invention has the characteristics of good insulation performance, moisture resistance, heat resistance and adhesion, suitable physical and chemical properties, good using performance, non-toxicity, no pollution, and environment-friendliness. The impregnation wax of the invention is applicable to impregnation of multilayer ceramic capacitors.

Publication: CN 104616888 A 20150513

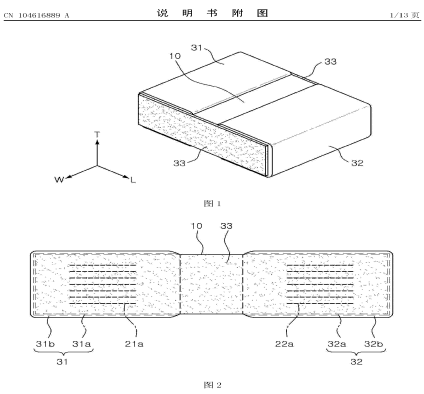
Applicant: CHINA PETROLEUM & CHEMICAL; SINOPEC FUSHUN RES INST PET
Inventor: GUO HUIBING; LI SHANGYONG
Prio:
Appl.No: CN201310540465
IPC: H01G 4/22

EMBEDDED MULTILAYER CERAMIC ELECTRONIC PART AND PRINT CIRCUIT BOARD HAVING EMBEDDED MULTILAYER CERAMIC ELECTRONIC PART

There is provided a multilayer ceramic electronic component to be embedded in a board including: a ceramic body including dielectric layers and having first and second main surfaces opposing one another, first and second lateral surfaces opposing one another, and first and second end surfaces opposing one another; first and second internal electrodes stacked to be spaced apart from both end surfaces of the ceramic body at a predetermined distance with the dielectric layers interposed therebetween, respectively; and first and second external electrodes formed in both end portions of the ceramic body, wherein the first and second external electrodes include first and second base electrodes and first and second terminal electrodes formed on the first and second base electrodes, respectively, and a non-conductive paste layer is formed on both lateral surfaces of the ceramic body.

Publication: CN 104616889 A 20150513

Applicant: SAMSUNG ELECTRO MECH
Inventor: JUNG JIN MAN; LEE HAI JOON
Prio: KR 20131104 20130132847
Appl.No: CN201410047358
IPC: H01G 4/232

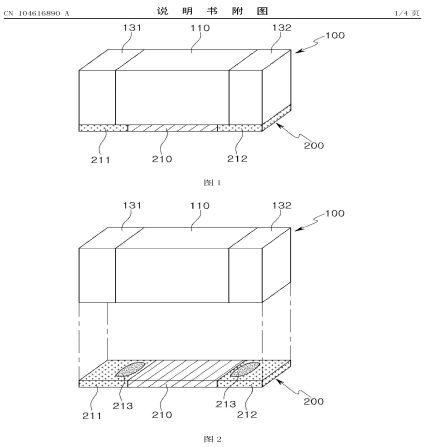


Multilayer ceramic electronic component and board having the same mounted thereon

There is provided a multilayer ceramic electronic component including: a multilayer ceramic capacitor including first and second external electrodes formed of a conductive paste on both ends of a ceramic body; and an interposer substrate attached to a mounting surface of the multilayer ceramic capacitor and including first and second connection terminals connected to the first and second external electrodes at both ends of an insulation substrate, respectively, the first and second connection terminals having a double-layer structure including first and second conductive resin layers and first and second plating layers formed on the first and second conductive resin layers.

Publication: CN 104616890 A 20150513

Applicant: SAMSUNG ELECTRO MECH
Inventor: PARK HEUNG KIL; PARK SANG SOO
Prio: KR 20131105 20130133451
Appl.No: CN201410048829
IPC: H01G 4/30

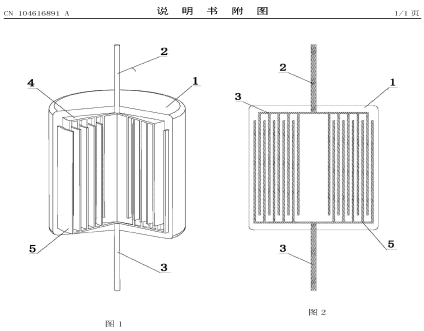


Capacitor

The invention relates to the technical field of a ceramic capacitor and especially relates to a cylindrical stacked ceramic capacitor. The capacitor comprises a cylindrical ceramic body, a first lead, a second lead, a first pole plate group and a second pole plate group, wherein the first lead is welded with the first pole plate group; the second lead is welded with the second pole plate group; the ceramic body is formed by sintering an LTCC (Low Temperature Co-Fired Ceramic) ceramic material added with CaO-R2O-ZrO2 base of Al2O3 at high temperature, so that the dielectric loss of the capacitor is reduced and the anti-bending strength is relatively high; meanwhile the anti-bending strength and the high-pressure resistance breakdown strength are further increased through the first and second pole plate groups of the multi-layer embedded cylindrical structure.

Publication: CN 104616891 A 20150513

Applicant: NINGBO PROSOUND ELECTRONICS CO LTD
Inventor: AI LIKE
Prio:
Appl.No: CN201510057347
IPC: H01G 4/30



Belt heat treatment producing technology for solid electrolyte aluminum electrolytic capacitor

The invention discloses a belt heat treatment producing technology for solid electrolyte aluminum electrolytic capacitor, a positive electrode guide pin is riveted on an anode foil, a negative electrode guide pin is riveted on a cathode foil; a winding machine is used for winding more cathode foil; the cathode foil covers the whole core bag and the high temperature adhesive tape is used for surrounding, clinging and fixing; the glue cover for sealing action is mounted on the core bag; the core bag is soaked in the formation liquid for repairing operation and taken out and absorbed with the redundant water; the processed core bag is processed on carbonization treatment; the soaking treatment and carbonization treatment for the core bag are repeated; the core bag is soaked in the formation liquid for repairing operation and cleaned in the deionized water after the formation treatment, the specific resistance of the water is greater than 2M; the monomer is soaked in the oxidizing agent, polymerized, thermal treated and packed in the aluminum shell, the opening is sealed and the aging treatment is executed for forming the finished product. After polymerizing the core bag, the high temperature treatment is executed, a abundant of impurity is volatilized for hydrolyzing and producing the sulfonic acid, the oxidation film of the core bag is broken, the whole capacitor is corroded and the service life is reduced.

Publication: CN 104616892 A 20150513

Applicant: CHONGQING TUDA ELECTRONIC TECHNOLOGY CO LTD
Inventor: QU CHANGSONG; QU FALIAN; ZHANG HAO
Prio:
Appl.No: CN201510033672
IPC: H01G 9/00

Processing technology of aluminum electrolytic capacitor for solid electrolytes

The invention discloses a processing technology of an aluminum electrolytic capacitor for solid electrolytes. The processing technology includes the steps of: riveting a positive guide pin on an anode foil, and riveting a negative guide pin on a cathode foil; coiling by a coiler, coiling more cathode foil to cover the whole core cladding, and then winding with a high-temperature resistant tape for clinging and fixing; installing a rubber cover for sealing on the core cladding; steeping the core cladding into forming agent for repairing, taking out and then soaking up redundant moisture; performing carbonization treatment on the repaired core cladding; repeating the steps of steeping the core cladding and carbonizing; further steeping the core cladding into the forming agent for repairing, after formation putting into deionized water for cleaning, wherein the electrical resistivity of the water is more than 2M; impregnating by monomer oxidizing agent; after impregnation, polymerizing, thermally processing, finally packaging into an aluminum shell, sealing, aging, and thereby obtaining the finished product. According to the unique impregnating method and technical parameters in impregnation provided by the invention, the produced solid capacitor is stable in quality and low in rejection rate.

Publication: CN 104616893 A 20150513

Applicant: CHONGQING TUDA ELECTRONIC TECHNOLOGY CO LTD
Inventor: QU CHANGSONG; QU FALIAN; ZHANG HAO
Prio:
Appl.No: CN201510034208
IPC: H01G 9/00

Method for producing solid aluminum electrolytic capacitor in use of asymmetric electrolytic paper core cladding

A method for producing a solid aluminum electrolytic capacitor in use of asymmetric electrolytic paper core cladding comprises the steps: clamping electrolytic paper between two guide pins, wherein the electrolytic paper is wider than an electrode foil; two parts, exceeding the electrode foil, at two edges coiled with the electrolytic paper are not the same; the part, exceeding the foil, at one end close to a CP line is more than the other part; and the exceeding part arrives at the joint of the round bars of the guide pins and a flat plate; covering the joint of the round bars of the guide pins and the flat plate in use of the electrolytic paper; and then obtaining the solid aluminum electrolytic capacitor after conventional carbonization, impregnation and polymerization. In the produced solid aluminum electrolytic capacitor, the electrolytic paper covers the junction of the round bars of the guide pins and the flat plate; during the formation of the core cladding, becuase the electrolytic paper is fully absorbed with the electrolyte, the electrolytic paper is clung to the round bars and the flat plate, the gas absorption is damaged and the gas separation to the formed liquid and an aluminum body is avoided or weakened; the junction of the round bars and the flat plate is formed better and the pellumina layer on the surface is covered better.

Publication: CN 104616894 A 20150513

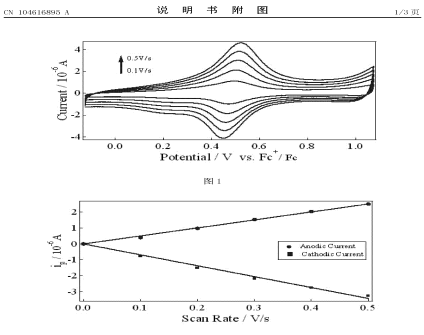
Applicant: CHONGQING TUDA ELECTRONIC TECHNOLOGY CO LTD
Inventor: QU CHANGSONG; QU FALIAN; ZHANG HAO
Prio:
Appl.No: CN201510034210
IPC: H01G 9/00

Ruthenium complex monomolecular film and method for preparing monomolecular film by self-assembling ruthenium complex on graphene

The invention relates to a ruthenium complex monomolecular film and method for preparing the monomolecular film by self-assembling a ruthenium complex on graphene, and belongs to the technical field of molecular self-assembling chemicals. The ruthenium complex monomolecular film is directionally self-assembled on graphene, and pyrenyl in the ruthenium complex of the ruthenium complex monomolecular film interacts with graphene with pi-electronic environment through pi-pi to fix two pyrenyl of ruthenium complex molecule on a graphene interface. The method comprises the steps of preparing a ruthenium complex solution; preparing graphene dispersing liquid; fixing a preprocessed ITO substrate on a rotary coating instrument; uniformly paving the prepared graphene dispersing liquid on the substrate to form a film for preparing a graphene base; directionally assembling the ruthenium complex on the graphene base to prepare the monomolecular film. The film prepared by the method has the advantages of being high in mechanical and chemical stability, and controllable to thickness.

Publication: CN 104616895 A 20150513

Applicant: UNIV KUNMING SCIENCE & TECH
Inventor: LI KONGZHAI; WANG HUA; WEI YONGGANG; YANG LI; ZHU XING
Prio:
Appl.No: CN201410838521
IPC: H01G 9/042

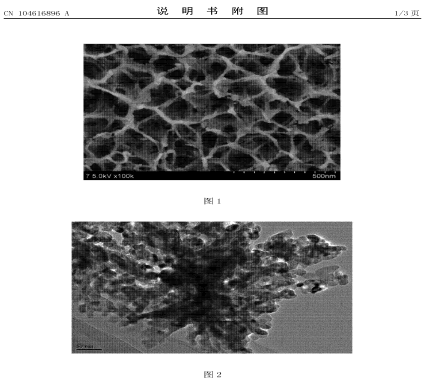


Self-supported titanium nitride/graphene combined electrode and preparation method thereof

The invention relates to a self-supported titanium nitride/graphene combined electrode and a preparation method of the self-supported titanium nitride/graphene combined electrode. The preparation method comprises the steps that (1) titanium foil is soaked with acid liquid, ultrasonic processing is conducted on the titanium foil, the titanium foil is taken out, washed by deionized water, and soaked with a hydrogen peroxide solution, the temperature of the solution is increased to 60DEG C-95DEG C from the room temperature under the normal pressure through heating, the temperature is kept for 10-60 minutes, and the titanium foil is taken out and dried after an reaction ends; (2) the titanium foil is placed into a tubular atmosphere furnace, ammonia is fed into the tubular atmosphere furnace to conduct nitrogen treatment on the titanium foil, and titanium nitride is formed on the surface of the titanium foil; (3) a layer of graphene is formed on the surface of the titanium nitride in a deposition mode through a dipping-pull method or a drop casting method, and the graphene and the titanium nitride are placed into a drying oven at the temperature ranging from 60DEG C to 100DEG C to be dried, so that the self-supported titanium nitride/graphene combined electrode is obtained. Compared with the prior art, a graphene/titanium nitride three-dimensional network is directly formed on the surface of flexible metal foil so that the self-supported electrode can be formed. The combined electrode is low in cost, high in porosity ratio and good in catalytic activity and electrical conductivity, and has the broad application prospect.

Publication: CN 104616896 A 20150513

Applicant: UNIV SHANGHAI ENG SCIENCE
Inventor: RUI YICHUAN; WANG LINLIN; XU JINGLI; ZHANG MIN
Prio:
Appl.No: CN201510060873
IPC: H01G 9/042



Aluminum alloy material for electrolytic capacitor electrodes and manufacturing method thereof

The invention aims to provide an aluminum material for electrolytic capacitor electrodes which is capable of increasing the electrostatic capacity. The purity of aluminum of the aluminum material for electrolytic capacitor electrodes is more than 99.9%. The aluminum material for electrolytic capacitor electrodes contains 5-60ppm of Fe, 5-60ppm of Si, 8-80ppm of Cu, 0.5-20ppm of Mn, 0.5-20ppm of Cr, 0.2-20ppm of Mg, 0.5-20ppm of Zn, 0.5-50ppm of Ga, and 0.2-10ppm of Ti. The aluminum material for electrolytic capacitor electrodes further contains more than one of 0.2-10ppm of V, 0.2-10ppm of Zr, and 0.2-20ppm of B, and more than one of 0.2-5ppm of Pb, 0.2-5ppm of Bi, and 0.2-10ppm of Sn.

Publication: CN 104616897 A 20150513

Applicant: SHOWA DENKO KK
Inventor: NISHIMORI HIDEKI; YAMANOI TOMOAKI
Prio:
Appl.No: CN201310541174
IPC: H01G 9/045

Method for improving hole production performance of aluminum foil through additional annealing treatment

The invention discloses a method for improving the hole production performance of aluminum foil through additional annealing treatment. The aluminum foil after pretreatment is placed in an annealing furnace for three stages of treatment of heating, heat preservation and cooling. The method is characterized in that the heating rate is 3 to 5 DEG C every minute; the number of heat preservation periods is two to three, the heat preservation temperature is 300 to 520 DEG C, and the heat preservation time is 1 to 6 hours; the cooling rate is 5 to 8 DEG C every minute and the subsequent treatment is performed after the cooling to obtain the corrosion foil; a specific volume value of the corrosion foil is improved by 10 to 15% under the condition that the bending and booster value performance of the aluminum foil after the treatment is unchanged. According to the method for improving the hole production performance of the aluminum foil through the additional annealing treatment, the distribution of trace elements on the surface of the aluminum foil is improved through annealing to improve the corrosion hole production performance of the surface of the aluminum foil so as to improve the specific volume of the aluminum foil and the simple and efficient effect is achieved.

Publication: CN 104616898 A 20150513

Applicant: DONGGUAN CHANG AN DONGYANGGUANG ALUMINUM R & D CO LTD
Inventor: ZHENG QIN
Prio:
Appl.No: CN201410856197
IPC: H01G 9/055

Method for preparing dye-sensitized solar photovoltaic panel

The invention discloses a method for preparing a dye-sensitized solar photovoltaic panel. The method comprises the step of preparing solution in a mass ratio of ethylene carbonate 2 to 6:1 to 5/1 - 3, propylene carbonate and methyl-N- methylpyrrolidone mixed and stirred as the solvent uniformly, added elemental iodine and iodine compound, and stirring was continued; then added mass fraction of 8% to 15% gelling agent, 80 DEG C 2 to 5h with stirring to form a uniform solution to obtain a gel polymer electrolyte; Finally, the said gel polymer electrolyte dye solution coated titanium dioxide photoanode film after sensitization, after the platinum electrode coated on the surface of the gel polymer electrolyte, the dye sensitization solar panels. High prepared by the invention of solar photovoltaic panels photovoltaic conversion efficiency, good mechanical strength and photoelectric stability, long life, simple preparation process, low cost and suitable for industrial production.

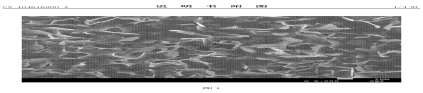
Publication: CN 104616899 A 20150513

Applicant: SUZHOU JIAYIDA ELECTRICAL APPLIANCES CO LTD
Inventor: ZHU GUILIN
Prio:
Appl.No: CN201410797394
IPC: H01G 9/20

Cobalt-nickel metal sulfide, preparation method and application thereof

The invention discloses a preparation method of a dye-sensitized cell of a nanometer flake-like Cobalt-nickel metal sulfide. A nanometer flake-like cobalt-nickel metal sulfide counter electrode is in-situ grown on FTO conductive glass by a two-step hydrothermal method, and dye-sensitized cell counter electrodes with different morphologies and photoelectrochemical properties can be obtained by changing preparation parameters. A prepared transparent thin-film counter electrode obtains photoelectrochemical properties equivalent to Pt and excellent transparency; and the method is low in manufacturing cost, simple in technology and good in repeatability.

Publication: CN 104616900 A 20150513



Applicant: UNIV CHINA THREE GORGES CTGU
Inventor: BAO CHAO; CHEN LINLIN; LUO WEILONG; SUN XIAOHUA; ZHENG LINJIE

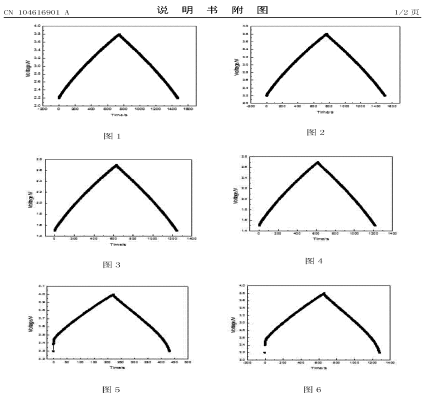
Prio:
Appl.No: CN201510033974
IPC: H01G 9/20

Sodium ion super capacitor and preparation method thereof

The invention discloses a sodium ion super capacitor. The sodium ion super capacitor consists of a positive electrode, a negative electrode, a diaphragm between the positive electrode and the negative electrode and electrolyte. The sodium ion super capacitor is characterized in that the negative electrode is made of active carbon, the negative electrode is made of a negative electrode material of a sodium ion battery; the electrolyte adopts non-aqueous organic electrolyte containing sodium ions. The sodium ion super capacitor is low in utilization cost, the rich sodium ions transfer between positive and negative electrodes to realize a charging and discharging principle of a capacitor to prepare the novel sodium ion super capacitor. The prepared novel sodium ion super capacitor has characteristics of being high in energy density and high in power density, and can be widely applied to the fields of electric vehicles, electronic tools, solar energy storage, and wind energy storage.

Publication: CN 104616901 A 20150513

Applicant: SHANGHAI AOWEI TECHNOLOGY DEV; SHANGHAI RUNTONG ELECTRIC VEHICLE TECHNOLOGY CO LTD
Inventor: AN ZHONGXUN; HUANG TINGLI; WU MINGXIA; XU JIANHONG; YAN LIANGLIANG
Prio:
Appl.No: CN201510042208
IPC: H01G 11/06



11

Energy-storing power supply module

The invention discloses an energy-storing power supply module, the energy-storing power supply module comprises an insulation inflaming retarding baseboard and two insulation inflaming retarding side plates respectively connected to two opposite ends of the insulation inflaming retarding baseboard, the insulation inflaming retarding baseboard and two insulation inflaming retarding side plates can form a frame capable of holding a plurality of capacitor monomers; the middle of the insulation inflaming retarding baseboard is the first hollow part, the insulation inflaming retarding baseboard is provided with a first rib plate passing through the first hollow part and the extending direction of the first rib plate is consistent to the arrangement direction of the capacitor monomers; the middle of the insulation inflaming retarding side plate is provided with a second hollow part; the energy-storing power supply module further comprises an insulation inflaming clapboard formed between any two capacitor monomers, a cascading part used for connecting the insulation inflaming clapboard to the insulation inflaming retarding side plates, and a buckle plate used for pressing the outgoing line copper bar of the capacitor monomer on the top end of the insulation inflaming retarding side plate. According to the structure, the energy-storing power supply module can have higher fireproof performance on the base that the higher insulation grade is guaranteed.

Publication: CN 104616902 A 20150513

Applicant: CSR ZHUZHOU ELEC LOCO RES INST
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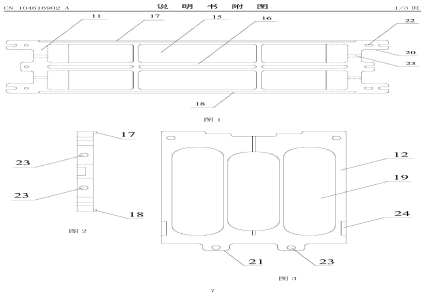
Prio:



7

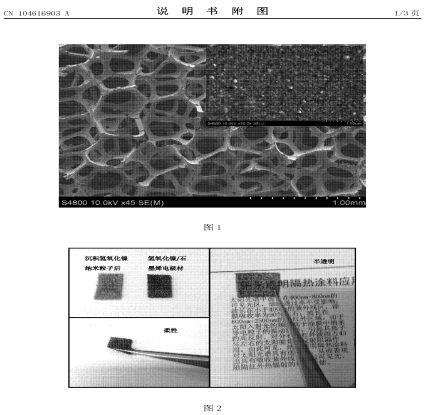
Appl.No: CN201510050149
IPC: H01G 11/10

Semitransparent flexible electrode material and preparation method thereof

The invention discloses a preparation method for a semitransparent flexible electrode material, wherein the method is to adsorb the graphene via the electric conductive foam deposited with the nickelous hydroxide. The semitransparent flexible electrode material integrates the advantages together as ultra light, semitransparent and flexible function, good electrical conductivity and 3D net structure, the material has the function of the dual-layer capacitor, the cycle stability is good, the material has strong potential wide application value; the preparation method for the semitransparent flexible electrode material is low in cost, simple in operation and easy for industrialization mass production.

Publication: CN 104616903 A 20150513

Applicant: NAT CT NANOSCIENCE NCNST CHINA
Inventor: JIANG PENG; WANG YUE
Prio:
Appl.No: CN201510035883
IPC: H01G 11/24



11

Disk gyro spiral wing quantum chromodynamics power generation engine automobile with magnetic chord radio-frequency quantum chromodynamics super power amplifying capacitor and super power amplifying transformer

The invention provides a disk gyro spiral wing quantum chromodynamics power generation engine automobile with magnetic chord radio-frequency quantum chromodynamics super power amplifying capacitor and super power amplifying transformer and relates to the environment-friendly recyclable new energy of magnetic chord radio-frequency quantum chromodynamics field-effect vortex fusion super power amplifiers. The following five original inventions are included: 1, a disk super power amplifying capacitor, 2, tri-prism disk super power amplifying sensing driver and transformer, 3, a disk super power amplifying generator motor automobile, 4, a disk gyro spiral wing chromodynamics super power amplifying generator motor automobile, and 5, a disk gyro spiral wing chromodynamics super power amplifying chain effect generation field. The electromagnetic energy conversion power amplification power is high. The three functions of power amplification, power generation and starting are environment-friendly and pollution-free, and the disk Tai chi pili vortex fusion super power amplifying effect is achieved by exciting the magnetic chord radio-frequency quantum chromodynamics field-effect vortex fusion energy by virtue of the synchronous coupling and polarization of sine wave power and sine wave magnetism. The super power amplifying transformer is used for driving the disk gyro spiral wing super power amplifying generator motor to realize the environment-friendly new energy source and automobile industries; besides, the scaffold is uniformly applied in quantum chromodynamics electromagnetic super power amplification to lay the industrial base of the quantum chromodynamics super power amplifying dynamic electromagnetism of wave chord Tai chi study.

Publication: CN 104616904 A 20150513

Applicant: LIU HUAYING
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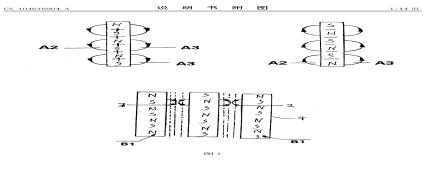
Prio:
Appl.No: CN201410456911



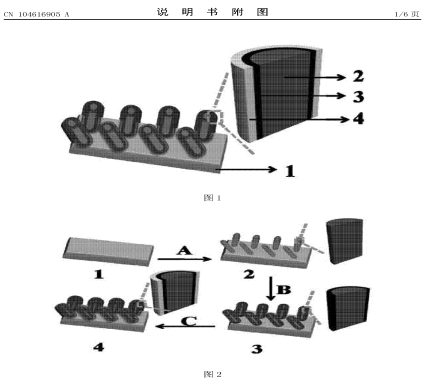
IPC: H01G 11/30

Polyaniline-carbon layer-titanium nitride nanowire array composite material and preparation method and application thereof

The invention provides a polyaniline-carbon layer-titanium nitride nanowire array composite material. The polyaniline-carbon layer-titanium nitride nanowire array composite material comprises a carbon substrate (1), titanium nitride nanowire arrays (2), an unformed carbon layer (3) and a polyaniline film (4); the titanium nitride nanowire arrays (2) are vertically arranged on the surface of the carbon substrate (1) and interconnected to form an integral structure; the unformed carbon layer (3) completely warps the surfaces of the titanium nitride nanowire arrays (2); the polyaniline film (4) completely wraps the surface of the carbon layer (3). The invention further provides a preparation method of the composite material, and application of the composite material in electrochemical energy storage in a super-capacitor. The polyaniline-carbon layer-titanium nitride nanowire array composite material has the characteristic of sequentially arranged housing-housing-kernel coaxial heterogeneous nanometer line structures; the composite material can be directly applied to electrode materials of the super-capacitor and can achieve effective electrochemical energy storing effect.

Publication: CN 104616905 A 20150513

Applicant: UNIV SOUTHEAST
Inventor: XIA CHI; XIE YIBING
Prio:
Appl.No: CN201510012280
IPC: H01G 11/30



11

Cathode embedded magnesium ion supercapacitor and preparing method thereof

The invention discloses a cathode embedded magnesium ion supercapacitor and a preparing method thereof. Magnesium ions in the negative electrode embedded supercapacitor a positive electrode, a negative electrode, in between the membrane and an electrolyte, a positive charge can be absorbed by a porous electric double layer formed of carbon materials as the active material, negative use can be embedded / Escape magnesium ions as the active material carbon materials; electrolytic solution using an organic electrolytic solution may be available to provide the magnesium ions and the formation of the desired double layer charge. The supercapacitor can be embedded Mg2 + introduced into the carbon material as the negative electrode supercapacitor, to be able to form a porous carbon adsorption charge the electric double layer as a cathode, anode and cathode materials by optimizing the use of the ratio, the more compatible use with the electrolyte good membrane, so that all the capacity to play an active material, resistance characteristics and other aspects of life to achieve a good balance, with high power characteristics and high energy density, and low cost without pollution.

Publication: CN 104616906 A 20150513

Applicant: SHANGHAI AOWEI TECHNOLOGY DEV; SHANGHAI RUNTONG ELECTRIC VEHICLE TECHNOLOGY CO LTD
Inventor: AN ZHONGXUN; HUANG TINGLI; WU MINGXIA; XU JIANHONG; YAN LIANGLIANG
Prio:
Appl.No: CN201510040094
IPC: H01G 11/30

Magnesium ion super capacitor and manufacturing method thereof

The invention discloses a magnesium ion super capacitor and a manufacturing method thereof. The magnesium ion super capacitor is composed of a positive electrode, a negative electrode, a diaphragm between the positive electrode and the negative electrode, and electrolyte. The positive electrode is composed of a current collector and a positive mixture, which is coated on the positive electrode current collector and contains positive materials which can embed and release Mg2+; the electrolyte is organic solution capable of providing magnesium ions. The magnesium super capacitor has the advantages of being low in cost, pollution-free, less prone to forming metal dendritic crystal, and capable o improving the safety of relevant super capacitors. By optimizing proportion of materials of the positive electrode and the negative electrode, the manufactured magnesium ion supper capacitor can obtain relatively high energy density and power density.

Publication: CN 104616907 A 20150513

Applicant: SHANGHAI AOWEI TECHNOLOGY DEV; SHANGHAI RUNTONG ELECTRIC VEHICLE TECHNOLOGY CO LTD

Inventor: AN ZHONGXUN; HUANG TINGLI; WU MINGXIA; XU JIANHONG; YAN LIANGLIANG

Prio:

Appl.No: CN201510040222

IPC: H01G 11/30

Composite material of nickel hydroxide/graphene or graphite and preparation method for composite material

The invention discloses a composite material of nickel hydroxide/graphene or graphite which is structurally Ni(OH)2/graphite or layered Ni(OH)2/graphene composite material alternated with Ni(OH)2 and graphene, wherein the weight content of the nickel hydroxide is 10-90%. The invention further discloses a method for preparing the composite material. The composite material is simple in process, low in cost, environment-friendly and easy for batch production.

Publication: CN 104616908 A 20150513

Applicant: UNIV SOUTHWEST PETROLEUM

Inventor: CHEN YONGDONG; DAI ZHEN; HUANG YUN; HUANGFU HAIXIN; SUI LEPING; TANG SHUIHUA; ZHOU YING; ZHU ZHENTAO

Prio:

Appl.No: CN201510045280

IPC: H01G 11/30

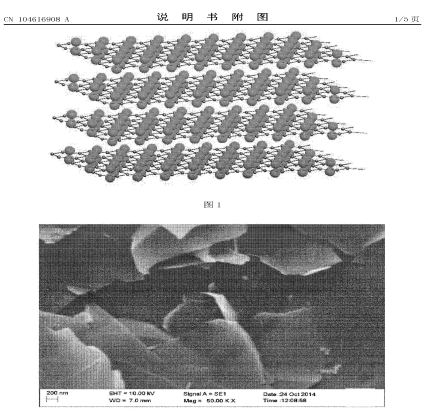


图 1

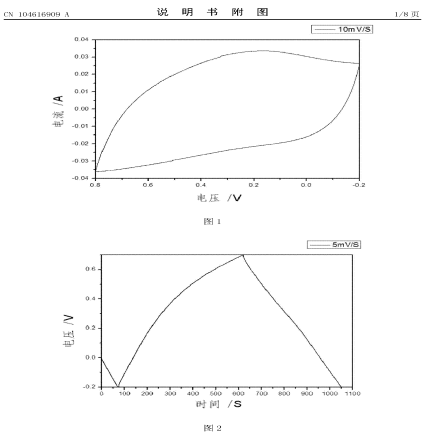
图 2

Electrode material, preparation method and application thereof, and super-capacitor

The invention discloses an electrode material, a preparation method of the electrode material, an application of the electrode material, and a super-capacitor. The electrode material comprises A components and B components, wherein the A components comprise a poly(vinylidene fluoride) polymer and an additive; the additive is alkali metal salt and/or alkaline substance; the B components are conducting polymers. But above all, the poly(vinylidene fluoride) polymer provides space to transmit conducting particles except for the adhesive effect of the traditional electrode material. Under alkali metal salt and/or alkaline substance, activated carbon can be generated in the poly(vinylidene fluoride) polymer, and then the electrode material has the charge transportation ability, thus the performance breakage caused by changing the volume of the conducting polymer can be reduced in discharging and charging processes. Besides the conducting polymer in the electrode material is regarded as an conductive body ingredient, and integration between the conducting polymer and the poly(vinylidene fluoride) polymer is relatively high, so that the contact resistance between the conducting polymer and the poly(vinylidene fluoride) polymer is relatively low.

Publication: CN 104616909 A 20150513

Applicant: UNIV SICHUAN
Inventor: KOU CHUANG; XIE FANGYUAN; ZHU JILIANG; ZHU JUNCHENG
Prio:
Appl.No: CN201510058242
IPC: H01G 11/30



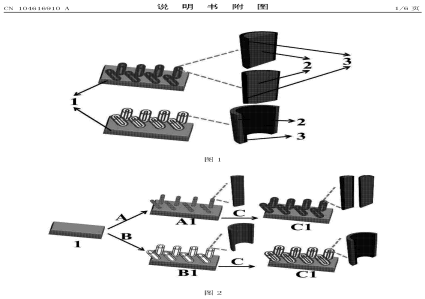
11

Carbon-coating titanium based nano array material and preparation method and application thereof

The invention provides a carbon-coating titanium based nano array material. The carbon-coating titanium based nano array material comprises a conductive substrate (1), titanium based nano arrays (2) and an unformed carbon layer (3); the titanium based nano arrays (2) are vertically arranged on the surface of the conductive substrate (1) and interconnected to form an integral structure; the unformed carbon layer (3) completely uniformly wraps the surfaces of the titanium based nano arrays (2). The invention further provides a preparation method of the nano array material, and the application of the nano array material in electrochemical energy storage of a super-capacitor. The carbon-coating titanium based nano array material has the characteristic of sequentially-arranged housing-kernel nano structure; the carbon-coating titanium based nano array material can be directly applied to the electrode material of the super-capacitor and has the electrochemical electricity storing performances of quick charging and discharging and high capacitance.

Publication: CN 104616910 A 20150513

Applicant: UNIV SOUTHEAST
Inventor: XIA CHI; XIE YIBING
Prio:
Appl.No: CN201510012897



12

IPC: H01G 11/32

Preparation method of vertical carbon nanotube array/ metal oxide composite material

The invention provides a preparation method of a vertical carbon nanotube array/ a metal oxide composite material. The method comprises the steps of feeding an organic metal compound precursor, a cosolvent and a carbon nanotube array sample into a reactor; sealing; charging supercritical carbon dioxide; heating to reach the preset temperature; soaking; performing pyrolysis for the sample in an oxidizing atmosphere to convert the organic metal compound precursor into a metal oxide so as to obtain a carbon nanotube array three-dimensional structural composite material which is uniformly loaded with the metal oxide. According to the method, the uniform compositing of the metal oxide in macro thickness of (0.1-10mm) VACNTs is achieved according to the physiochemical performance of the supercritical carbon dioxide; the damage of liquid surface tension to the VACNTs can be avoided; the directional arrangement characteristic of the VNCNTs can be perfectly remained; the preparation method is environmentally friendly, simple and convenient to operate, and beneficial for mass preparation. The composite material has large application value in the fields of electrochemical energy storage and catalyzing.

Publication: CN 104616911 A 20150513

Applicant: UNIV SHANGHAI SCIENCE & TECH
Inventor: CHENG JUNYE; QIU HANXUN; TANG ZHIHONG; YANG JUNHE; ZHANG HUIJUAN; ZHAO BIN
Prio:
Appl.No: CN201510053195
IPC: H01G 11/36

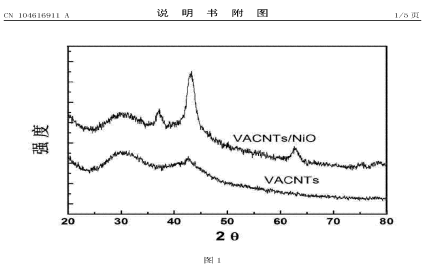


图 1

7

Electrolyte and supercapacitor thereof

The invention provides an electrolyte. The components comprise hydrazine hydrate, water and inorganic salts. The second aspect of the invention provides a supercapacitor, comprising: a positive electrode, a negative electrode, a separator interposed between the positive and negative electrodes and electrolyte; the electrolyte components include hydrazine hydrate, water and inorganic salts. By adding hydrazine hydrate and inorganic low freezing point, which can effectively prevent the electrolyte hypothermia solidification, which is applied as an electrolyte supercapacitor can broaden the super capacitor operating temperature range is particularly effective in increasing the low temperature zone.

Publication: CN 104616912 A 20150513

Applicant: UNIV HUBEI
Inventor: GAO PENG; GONG HUAYANG; SHI DAWEI; WANG RUILONG; XU LINGFANG; YANG CHANGPING
Prio:
Appl.No: CN201510037842
IPC: H01G 11/64

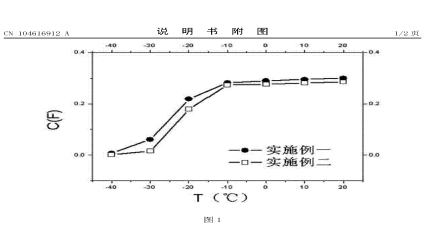


图 1

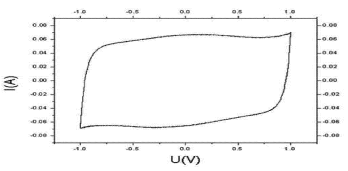


图 2

6

ALL SOLID-STATE ELECTROCHEMICAL DOUBLE LAYER SUPERCAPACITOR

The present invention provides a power system for a vehicle The power system comprising a supercapacitor-like electronic battery that is connected to a battery charger. The battery charger provides energy to the supercapacitor-like electronic battery. A heater is operatively connected to the supercapacitor-like electronic battery to provide energy to heat the supercapacitor-like electronic battery thereby lowering the internal impedance of the supercapacitor-like electronic battery. A charging apparatus is operatively connected to the battery charger. A motor is operatively connected to the vehicle and the supercapacitor-like electronic battery. A feedback loop controller is operatively connected to the heater, the supercapacitor-like electronic battery and the motor.

Publication: CN 104616913 A 20150513

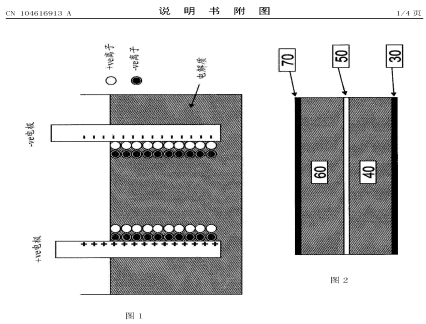
Applicant: JEREMY REYNOLDS GLYN; OC OERLIKON BALZERS AG

Inventor: JEREMY REYNOLDS GLYN; OSKAR MARTIENSSEN WERNER

Prio: US 20090807 23206809, US 20090807 23207109

Appl.No: CN201410419666

IPC: H01G 11/84



12

Preparation method for 3D coralloid grapheme/NiCo2O4 composite materials

The invention belongs to the field of chemistry and provides a preparation method for 3D coralloid grapheme/NiCo2O4 composite materials. The method comprises 1) synthesizing graphite oxide GO; 2) adding nickel and cobalt salt and an alkali source into a GO suspension, and performing microwave heating to assist to prepare GO/nickel and cobalt layer double-metal-hydroxide composite materials; 3)performing high-temperature calcinations on the prepared GO/nickel and cobalt layer double-metal-hydroxide composite materials to prepare the 3D coralloid grapheme/NiCo2O4 composite materials; 4) preparing electrode sheets and assembling a simulation super capacitor to evaluate the performance. Compared with the prior art, the composite materials have the advantages that the electrical conductivity is outstanding, the specific area is large, the mass transfer resistance is small, and the cycle life is long; besides, the composited 3D coralloid grapheme/NiCo2O4 composite materials are applied as electrode materials of super capacitors, and the cost and the performance of the composite materials are better than those of prior precious metal oxides.

Publication: CN 104616914 A 20150513

Applicant: JIANGSU JIANGDA ENVIRONMENTAL PROT TECHNOLOGY CO LTD

Inventor: CAI JINFEI; LI ZAIJUN; YAN TAO; ZHANG MING

Prio:

Appl.No: CN201410848170

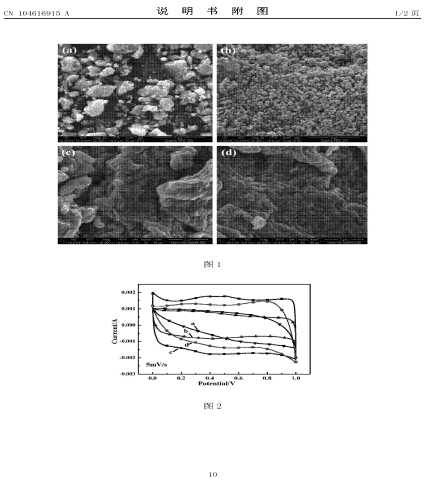
IPC: H01G 11/86

Graphene-ruthenium oxide composite material preparation method

The invention relates to a graphene-ruthenium oxide composite material preparation method and belongs to the technical field of supercapacitor electrode material preparation. According to the implementation scheme, the method includes the steps of uniformly mixing graphene oxide dispersion liquid with liquid containing a ruthenium precursor, adjusting the pH to 5-8, and performing hydrothermal reaction at the temperature of 150 DEG C-250 DEG C; performing solid-liquid separation to obtain a black solid after the hydrothermal reaction, and washing, drying and annealing the black solid to obtain a finished product; or uniformly mixing graphene oxide dispersion liquid with liquid containing a ruthenium precursor, and performing hydrothermal reaction at the temperature of 150 DEG C-250 DEG C; performing solid-liquid separation to obtain a black solid after the hydrothermal reaction, and washing, drying and annealing the black solid to obtain a finished product. The graphene-ruthenium oxide composite material preparation method is simple in process and has the advantages of environment friendliness, energy saving and the like. The obtained product is high in combined performance, low in cost and suitable for industrial application.

Publication: CN 104616915 A 20150513

Applicant: UNIV CENTRAL SOUTH
Inventor: HE HANWEI; LENG XIAN; XIONG XIANG; ZOU JIANPENG
Prio:
Appl.No: CN201510078704
IPC: H01G 11/86

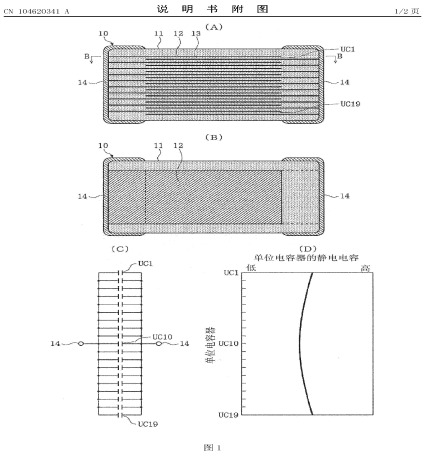


Laminated ceramic capacitor

[Problem] To provide a laminated ceramic capacitor with an insulation resistance unsusceptible to degradation. [Solution] A laminated ceramic capacitor (10) is composed of a total of 19 unit capacitors (UC1 to UC19) arranged in the lamination direction, each of which has an electrostatic capacitance distributed so that the electrostatic capacitance at the center in the lamination direction is smaller than the electrostatic capacitance on both sides in the lamination direction, when a unit capacitor is defined as a section constituted by two internal electrode layers (12) adjacent to each other in the lamination direction and a single dielectric layer (13) interposed between the two internal electrode layers (12).

Publication: CN 104620341 A 20150513

Applicant: TAIYO YUDEN KK
Inventor: SAITO KENJI
Prio: JP 20121024 2012077458, JP 20120619 2012137898
Appl.No: CN201280074116
IPC: H01G 4/12



Method for manufacturing electrode for aluminum electrolytic capacitor

A porous aluminum electrode (10) has a porous layer (30) formed by sintering aluminum powder on the surface of an aluminum core (20). The porous aluminum electrode (10), when subjected to a chemical conversion to a voltage of 200V or more, is boiled and then subjected to a first chemical conversion process in which chemical conversion is performed in an aqueous solution of ammonium adipate at a temperature of 80 DEG C or below and a second chemical conversion process in which chemical conversion is performed in a boric acid aqueous solution. When heat depolarization is first carried out, washing with water is performed for five minutes or more before heat depolarization; therefore, the porous layer (30) is not destroyed.

Publication: CN 104620342 A 20150513

Applicant: NIPPON LIGHT METAL CO; TOYO ALUMINIUM KK

Inventor: KATANO MASAHIKO; MEHATA MASASHI; SHIMIZU YUTA; SHIRAI ASAMI; TAGUCHI YOSHIHIRO; TAIRA TOSHIFUMI; YOSHIDA YUYA

Prio: JP 20120913 2012201991, JP 20130723 2013069950

Appl.No: CN201380047487

IPC: H01G 9/04

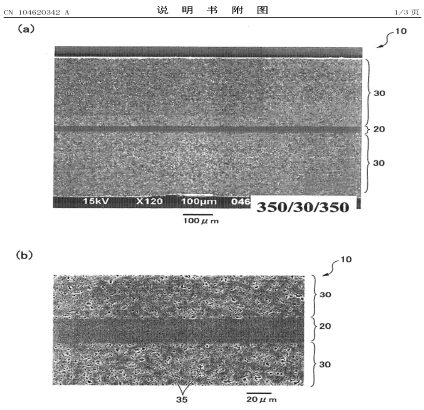


图 1

14

Lithium ion capacitor

Provided is a lithium ion capacitor that is safe and has a high energy density and a high output. Specifically provided is a lithium ion capacitor comprising, accommodated within an outer casing: an electrode stack obtained by stacking a negative electrode in which a negative-electrode active material layer including a carbon material as the negative-electrode active material is disposed on a negative-electrode collector, a separator comprising a polyethylene-containing polyolefin resin, and a positive electrode in which a positive-electrode active material layer including a positive-electrode active material layer comprising a carbon material or a carbonaceous material is disposed on a positive-electrode collector; and a non-aqueous electrolyte solution including a lithium ion-containing electrolyte. The lithium ion capacitor is characterized in that the thermal contraction/expansion rate of the separator falls within a prescribed range, the surface area of the separator is greater than the surface area of the positive-electrode active material layer of the positive electrode or the surface area of the negative-electrode active material layer of the negative electrode, and the length of a section where the electrode surface and the separator do not overlap has a prescribed relationship to the size of the separator.

Publication: CN 104620343 A 20150513

Applicant: ASAHI CHEMICAL IND

Inventor: NIIMURA KENSUKE; OKADA NOBUHIRO; SAITO OSAMU

Prio: JP 20120920 2012207509, JP 20120920 2012207518, JP 20130918 2013075159

Appl.No: CN201380047862

IPC: H01G 11/52

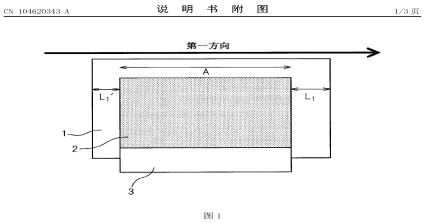


图 1

37

Electrochemical device

[Problem] To provide an electrochemical device which can quickly and reliably eliminate the phenomenon of electrolyte loss in the part of a separator sheet held between two electrode sheets sheet even if said phenomenon has occurred repeatedly. [Solution] This electrochemical device (100) is provided with a power storage element (13) configured from a first electrode sheet (13a), a second electrode sheet (13b), and a separator sheet (131c) interposed between the two electrode sheets (13a and 13b), wherein said separator sheet (131c) includes a first part (high liquid absorption unit) (13c1) held between the two electrode sheets (13a and 13b), a second part (low liquid absorption unit) (13c2) flaring outwards from the two electrode sheets (13a and 13b), and a third part (contact unit) (13c3) contacting the edge surface of the second electrode sheet (13b).

Publication: CN 104620344 A 20150513

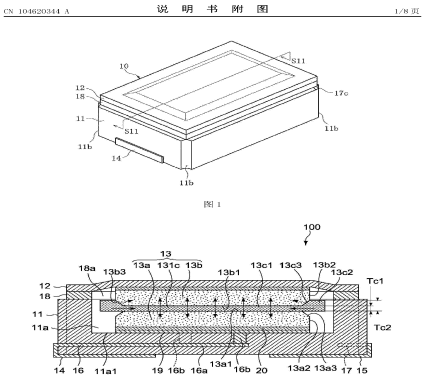
Applicant: TAIYO YUDEN KK

Inventor: HAGIWARA NAOTO; MANO KYOTARO

Prio: JP 20120921 2012074148, JP 20120913 2012201150

Appl.No: CN201280075802

IPC: H01G 11/52



Water cooling heat dissipation capacitor

The invention discloses a heat dissipation capacitor which comprises a body, a top cover and an inner cavity. A metal layer is fixedly arranged outside the body; the metal layer is in sealing connection with the body; a water accommodating cavity is formed between the metal layer and the body; a heat conduction resistance separator is arranged in the water accommodating cavity; the heat conduction resistance separator separates the water accommodating cavity into an inner layer cavity and an outer layer cavity; the heat conduction resistance separator is fixed on the body by a joint pin; both the upper ends and the lower ends of the inner layer cavity and the outer layer cavity are communicated; moreover, a plurality of heat dissipation grooves are uniformly distributed on the periphery of the metal layer. The heat dissipation capacitor has a simple structure; by arranging the heat conduction resistance separator between the body and the metal layer, self-circulation of cooling water can be realized between the inner layer cavity and the outer layer cavity so as to effectively carry out heat dissipation; the heat dissipation capacitor does not need to be driven by an external power, so that cost resources are greatly saved; meanwhile, the formed heat dissipation grooves improve a cooling rate of the metal layer, so that a heat dissipation rate is further improved.

Publication: CN 104637671 A 20150520

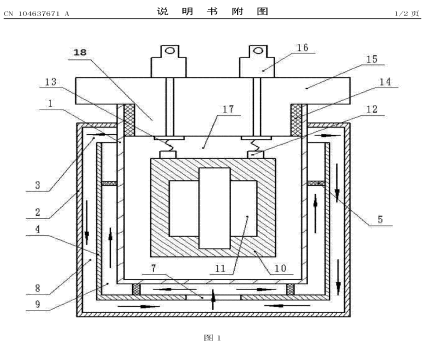
Applicant: JIANGSU ELECTRIC POWER CO; STATE GRID CORP CHINA; XUZHOU POWER SUPPLY CO OF JIANGSU ELECTRIC POWER CO

Inventor: CAO QI; SHI YONG; XU HAO; YANG DONGFANG; ZHANG YANG; ZHENG LIN

Prio:

Appl.No: CN201410834282

IPC: H01G 2/08



Single-casing double-body three-terminal capacitor and power circuit

The invention provides a single-casing double-body three-terminal capacitor and a power circuit. The single-casing double-body three-terminal capacitor comprises a metal casing, and a first capacitor and a second capacitor, which are accommodated in the metal casing, wherein the cathode of the first capacitor is led out of the metal casing to serve as the cathode terminal of the three-terminal capacitor through a wire; the anode of the second capacitor is led out of the metal casing to serve as the anode terminal of the three-terminal capacitor through a wire; the anode of the first capacitor is led out of the metal casing to serve as the grounding terminal of the three-terminal capacitor though a wire after being connected with the cathode of the second capacitor. According to the single-casing double-body three-terminal capacitor and the power circuit, the metal casing is arranged to realize a waveguide tube shielding function in the capacitor, reduce the interference of external radio frequency to positive and negative powers and improve the purity of the power, so that the quality of digital audios and videos is improved.

Publication: CN 104637672 A 20150520

Applicant: CHEN JIANSHENG
Inventor: CHEN JIANSHENG
Prio:
Appl.No: CN201510114783
IPC: H01G 2/22

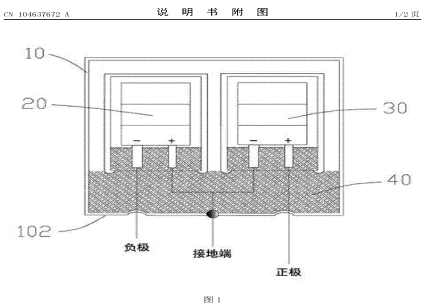


图 1

Large value capacitor manufacturing method and capacitor battery, battery pack

The invention provides a large value capacitor manufacturing method and a capacitor battery, a battery pack, wherein the method includes: processing the metal salt or metallic oxide by the sol, gel, aging, solvent exchanging and drying to obtain the metal oxide aerogel; heating the metal oxide aerogel without oxygen and jetting and reducing materials to obtain metal nanoparticles; depositing and compacting the metal nanoparticles on the metal base, heating to the preset temperature to obtain a default specific surface area of a metal cluster plate, and the preset temperature is lower than the melting point of metal; cutting the metal cluster plate to get two capacitor plates; filling and compacting insulating materials between the two capacitor plates and installing the electrode encapsulation to obtain the large value capacitor. On the basis of the large value capacitor, combining with the discharge control device added on-demand to prepare the high-capacity capacitor battery, and the purpose of discharging on-demand is achieved.

Publication: CN 104637673 A 20150520

Applicant: LI GUANGWU
Inventor: LI GUANGWU
Prio:
Appl.No: CN201510102183
IPC: H01G 4/005

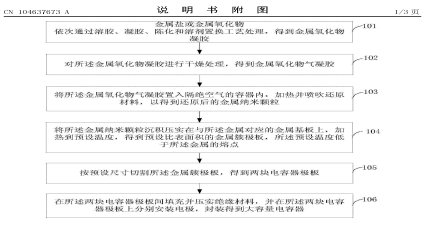


图 1

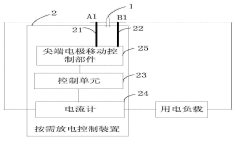


图 2

Low temperature co-fired ceramic substrate with embedded capacitors

The present invention relates to a low temperature co-fired ceramic substrate with embedded capacitors. According to an embodiment of the present invention, the low temperature co-fired ceramic substrate with embedded capacitors is able to prevent diffusion, peeling or loss of electrodes after low temperature firing by controlling composition ratio of various metals included in the substrate, resulting in good adhesion between the ceramic substrate and the capacitor.

Publication: CN 104637674 A 20150520

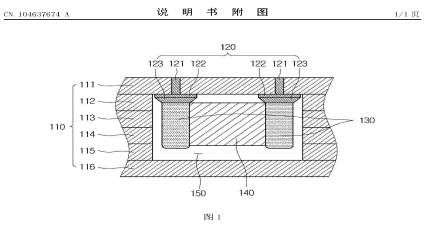
Applicant: SAMSUNG ELECTRO MECH

Inventor: BEOM-JOON CHO; HO-SUNG CHOO; JI SUNG NA; JI-HWAN SHIN; JUNG-GOO CHOI; KWANG-JAE OH; YUN-HWI PARK

Prio: KR 20131107 20130135056

Appl.No: CN201410337839

IPC: H01G 4/008



9

Dielectric composition, dielectric film, and electronic component

The invention provides to a dielectric composition which can maintain a high relative permittivity and show a good temperature characteristic. The dielectric composition containing a crystalline phase represented by a general formula of Bi12SiO20 and a crystalline phase represented by a general formula of Bi2SiO5 as the main components. The dielectric composition contains preferably 5 mass% to 99 mass% of the Bi2SiO5 crystalline phase, and more preferably 30 mass% to 99 mass%.

Publication: CN 104637675 A 20150520

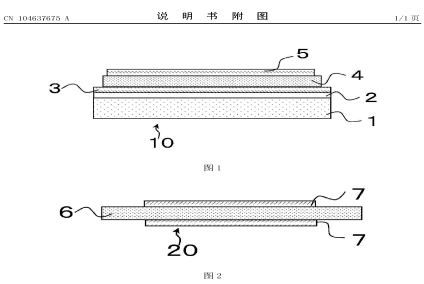
Applicant: TDK CORP

Inventor: SAORI TAKEDA; TOSHIHIKO KANEKO; YUJI SEZAI; YUKI YAMASHITA

Prio: JP 20131107 2013231182, JP 20140829 2014175731

Appl.No: CN201410612861

IPC: H01G 4/12



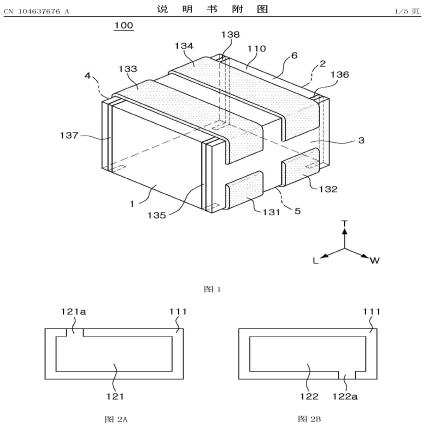
12

Multilayer ceramic capacitor and board having the same mounted thereon

The invention provides a multilayer ceramic capacitor and a board having the same mounted thereon. A multilayer ceramic capacitor may include: a ceramic body including a plurality of dielectric layers and having first and second main surfaces, first and second side surfaces, and first and second end surfaces; a capacitor part formed in the ceramic body and including first and second internal electrodes, the first internal electrode having a first lead exposed to the second main surface and the second internal electrode having a second lead exposed to the first main surface; resistor parts including first and second internal connection conductors formed on the same dielectric layers among the plurality of dielectric layers in the ceramic body; and first to fourth external electrodes, first and third connection terminals, and second and fourth connection terminals. The capacitor part and the resistor parts may be connected in series to one another.

Publication: CN 104637676 A 20150520

Applicant: SAMSUNG ELECTRO MECH
Inventor: PARK MIN-CHEOL; PARK SANG-SOO
Prio: KR 20131108 20130135261
Appl.No: CN201410157904
IPC: H01G 4/232

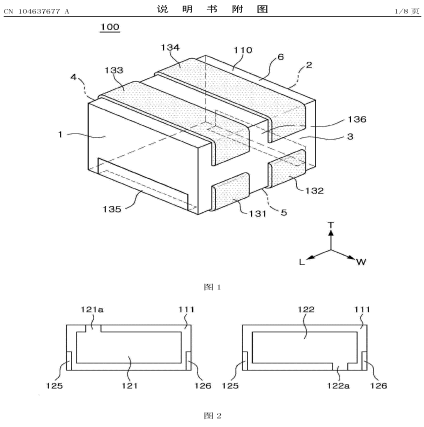


Multilayer ceramic capacitor and board having the same mounted thereon

The invention provides a multilayer ceramic capacitor and a board having the same mounted thereon. The multilayer ceramic capacitor may include: a ceramic body including dielectric layers, first and second main surfaces opposing each other, first and second side surfaces opposing each other, and first and second end surfaces opposing each other; a capacitor part including first internal electrodes and second internal electrodes; a resistor part including first internal connection conductors and second internal connection conductors; first dummy electrodes and second dummy electrodes; first to fourth external electrodes electrically connected to the first and second internal electrodes and the first and second internal connection conductors; and a first connection terminal and a second connection terminal. The capacitor part and the resistor part are connected in series to each other.

Publication: CN 104637677 A 20150520

Applicant: SAMSUNG ELECTRO MECH
Inventor: PARK MIN-CHEOL; PARK SANG-SOO
Prio: KR 20131108 20130135274
Appl.No: CN201410171793
IPC: H01G 4/232

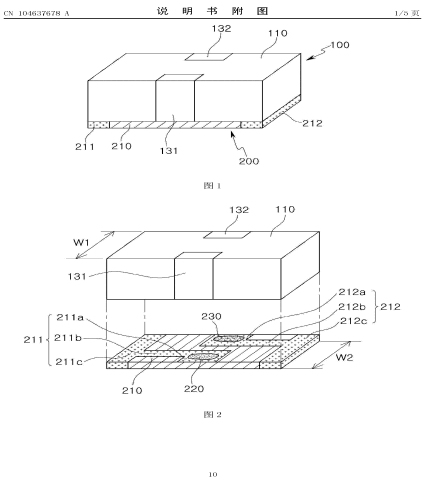


Multilayer ceramic electronic component and board having the same mounted thereon

The invention provides a multilayer ceramic electronic component and a board having the same mounted thereon. The multilayer ceramic electronic component may include: a multilayer ceramic capacitor including a ceramic body, a plurality of first and second internal electrodes formed to be alternately exposed to both side surfaces of the ceramic body, having a dielectric layer therebetween, and first and second external electrodes connected to the first and second internal electrodes, respectively; and an interposer board including an insulation board coupled to the mounting surface of the multilayer ceramic capacitor and first and second connection terminals formed on the insulation board and connected to the first and second external electrodes, respectively.

Publication: CN 104637678 A 20150520

Applicant: SAMSUNG ELECTRO MECH
Inventor: PARK MIN CHEOL; PARK SANG SOO
Prio: KR 20131114 20130138631
Appl.No: CN201410100434
IPC: H01G 4/30

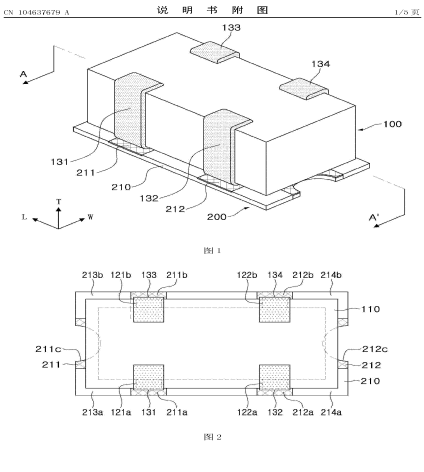


Multilayer ceramic electronic component and board having the same mounted thereon

The invention provides a multilayer ceramic electronic component and a board having the same mounted thereon. The multilayer ceramic electronic component may include: a multilayer ceramic capacitor including a ceramic body in which a plurality of dielectric layers are stacked, a pair of first external electrodes and a pair of second external electrodes formed on both side surfaces of the ceramic body and extended to portions of a mounting surface of the ceramic body, and first and second internal electrodes alternately stacked, having the dielectric layer therebetween, exposed through at least one side surface of the ceramic body, and connected to the first and second external electrodes, respectively; and an interposer substrate including an insulation substrate bonded to the mounting surface of the multilayer ceramic capacitor, and first and second connection terminals formed on the insulation substrate and connected to the first and second external electrodes, respectively.

Publication: CN 104637679 A 20150520

Applicant: SAMSUNG ELECTRO MECH
Inventor: PARK MIN-CHEOL; PARK SANG-SOO
Prio: KR 20131114 20130138632
Appl.No: CN201410172135
IPC: H01G 4/30



Multilayer ceramic capacitor

The invention discloses a multilayer ceramic capacitor. The multilayer ceramic capacitor may have low equivalent series inductance (ESL), in which via electrodes are opposed to each other diagonally and be off-centered from positions corresponding to center points of external electrodes, so that a distance between the via electrodes is significantly reduced and a current path is reduced.

Publication: CN 104637680 A 20150520

Applicant: SAMSUNG ELECTRO MECH
Inventor: CHAE EUN HYUK; PARK MIN CHEOL
Prio: KR 20131106 20130133966
Appl.No: CN201410178679
IPC: H01G 4/30

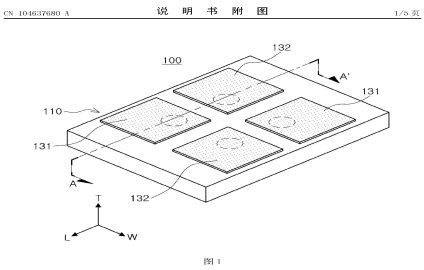


图 1

12

Multilayer ceramic electronic component and board having the same

Disclosed are a multilayer ceramic electronic component and a board having the same. The multilayer ceramic electronic component includes: a ceramic body having a plurality of dielectric layers stacked therein; active layers including a plurality of first and second internal electrodes formed to be alternately exposed to both end surfaces of the ceramic body with the dielectric layers interposed therebetween; and first and second external electrodes formed on the both end surfaces of the ceramic body and electrically connected to the first and second internal electrodes, respectively. The active layers may include a first active layer including a ferroelectric layer and a second active layer including a paraelectric layer, the first and second active layers being alternately stacked.

Publication: CN 104637681 A 20150520

Applicant: SAMSUNG ELECTRO MECH
Inventor: AHN YOUNG GHYU; KIM DOO YOUNG; PARK HEUNG KIL
Prio: KR 20131106 20130133963
Appl.No: CN201410191088
IPC: H01G 4/30

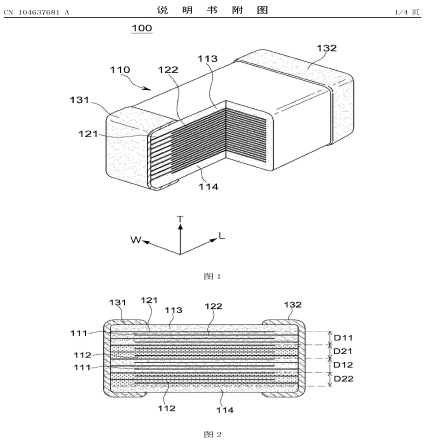


图 1

图 2

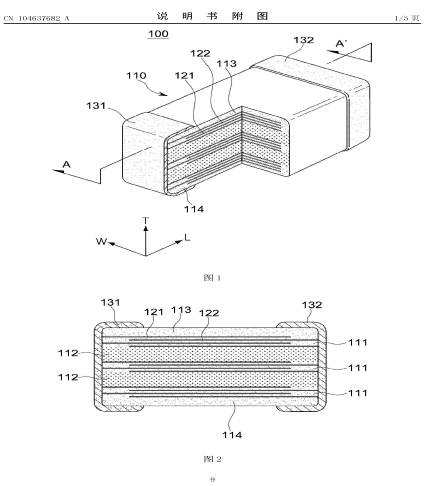
9

Multilayer ceramic electronic component and board having the same

The invention discloses a multilayer ceramic electronic component and a board having the same. The multilayer ceramic electronic component may include a ceramic body having a plurality of dielectric layers stacked in the ceramic body; a plurality of active layers including first and second internal electrodes disposed to be alternately exposed to the end surfaces of the ceramic body with the dielectric layers interposed between the first and second internal electrodes; and dummy layers disposed between the active layers.

Publication: CN 104637682 A 20150520

Applicant: SAMSUNG ELECTRO MECH
Inventor: AHN YOUNG GHYU; KIM DOO YOUNG; PARK HEUNG KIL
Prio: KR 20131108 20130135332
Appl.No: CN201410191536
IPC: H01G 4/30

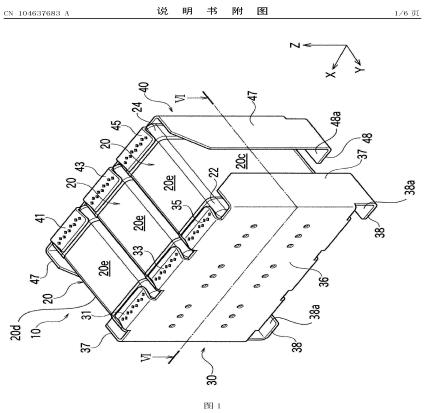


Ceramic electronic component

The present invention is a ceramic electronic component with metal terminals comprising a chip component of approximately parallelepiped shape having a pair of terminal electrodes (22, 24), and a pair of metal terminal parts (30, 40) provided in accordance with said terminal electrodes. The terminal electrode is formed by wrapping around a part of side faces (20c-20f) from an end face (20a, 20b) of the chip component. The metal terminal part comprises a connecting part (36, 46) connecting to the terminal electrode and including a connecting face (36a, 46a) extending approximately parallel to the end face, plurality of joint parts (37, 47) connecting to the connecting part and including a joint face (37a, 47a) extending in a different direction of the connecting face, and plurality of mounting parts (38, 48) connecting to the joint parts and including a mounting part upper face (38a, 48a) extending approximately parallel to any one of the side faces which is different direction of the joint face by taking predetermined spaces.

Publication: CN 104637683 A 20150520

Applicant: TDK CORP
Inventor: KOBAYASHI KATSUMI; MASUDA SUNAO; YOSHII AKITOSHI
Prio: JP 20131108 2013232463
Appl.No: CN201410638740
IPC: H01G 4/38

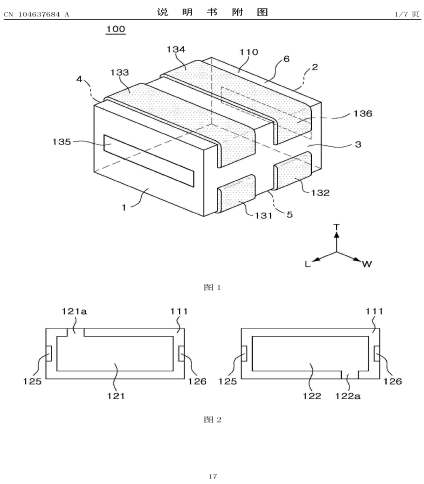


Multi-layered ceramic capacitor and board for mounting the same

Provided are a multi-layered ceramic capacitor and a board for mounting the same. The multilayer ceramic capacitor includes: a ceramic body including a plurality of dielectric layers; a capacitor part including first and second internal electrodes formed in the ceramic body; a resistor part including a first internal connection conductor, a third internal connection conductor formed on one dielectric layer in the ceramic body and a second internal connection conductor, a fourth internal connection conductor formed on another dielectric layer in the ceramic body; first to fourth external electrodes formed on first and second main surfaces of the ceramic body; and a first connection terminal formed on first end surface of the ceramic body and a second connection terminal formed on second end surface of the ceramic body, wherein the capacitor part and the resistor part are connected to each other in series.

Publication: CN 104637684 A 20150520

Applicant: SAMSUNG ELECTRO MECH
Inventor: PARK MIN-CHEOL; PARK SANG-SOO
Prio: KR 20131108 20130135233
Appl.No: CN201410051814
IPC: H01G 4/40



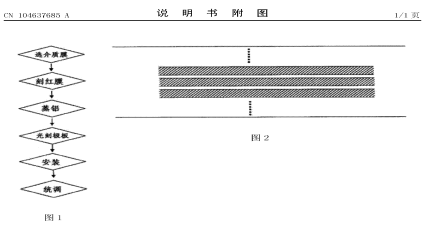
17

Method for preparing dielectric film for vacuum capacitive transducer

The invention discloses a method for preparing a dielectric film for a vacuum capacitive transducer. The vacuum capacitive transducer is an important component of a magnetic tape unit for a graphic transmitter and prone to damages of the dielectric film. A damaged old film can be replaced by a new film made by steps of selection of the dielectric film, etching of a red film, evaporation of aluminum, photoetching of pole plates, mounting, adjustment and the like. The method for preparing the dielectric film for the vacuum capacitive transducer is simple and low in cost, only about ten yuan is taken for preparing the dielectric film, and the new film is excellent in abrasion resistance and convenient to mount.

Publication: CN 104637685 A 20150520

Applicant: DALIAN KANGSAIPU TECHNOLOGY DEV CO LTD
Inventor: JU HONGJIAN
Prio:
Appl.No: CN201310567788
IPC: H01G 5/01



6

Voltage resistant breakdown-prevented electrolytic capacitor

The invention discloses a voltage resistant breakdown-prevented electrolytic capacitor comprising a barrel. The barrel is provided with electrolytic medium and electrolytic medium elements immersed in the electrolytic medium; the top of the barrel is provided with a sealing layer made of epoxy resin material; the elements comprise anode foils, cathode foils and multiple electrolytic paper arranged between the anode foils and the cathode foils; the anode foils are connected to a positive electrode guide pin, the cathode foils are connected to a negative electrode guide pin, and the positive electrode guide pin and the negative electrode guide pin penetrate the sealing layer. The capacitor is reasonable in design, has high temperature resistance, high voltage resistance and long service life and is adaptive to an unknown-polarity circuit or large ripple polarity circuit, the conducting path is wide, the current point impact is small, and the negative electrode is not prone to breakdown correspondingly.

Publication: CN 104637686 A 20150520

Applicant: CHEN XI
Inventor: CHEN XI
Prio:
Appl.No: CN201310552976
IPC: H01G 9/00

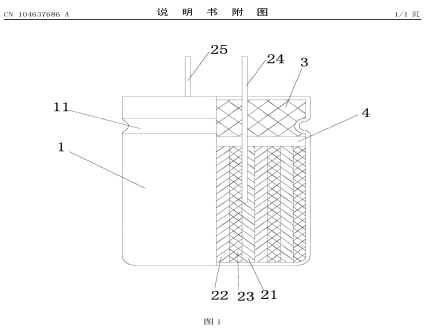


图 1

Manufacturing method for high-voltage solid electrolyte aluminum electrolytic capacitor

The invention discloses a manufacturing method for a high-voltage solid electrolyte aluminum electrolytic capacitor. The manufacturing method comprises the following steps: firstly, welding a core cladding on an iron bar, applying voltage for formation, and then performing cleaning and drying; secondly, immersing the dried core cladding in a dispersoid A for 1-30 minutes; thirdly, moving the core cladding out of the dispersoid A, vacuumizing the core cladding and then immersing the core cladding into the dispersoid A for 1-10 minutes; fourthly, retaining the core cladding in the dispersoid A, breaking vacuum and then pressurizing, and maintaining the immersion time for 1-10 minutes; fifthly, retaining the core cladding into the dispersoid A, deflating to normal voltage and maintaining the immersion time for 1-10 minutes; sixthly, taking out the core cladding, placing the core cladding at the temperature 65-100DEG C and drying for 20-60 minutes, placing the core cladding at the temperature of 135-165DEG C and drying for 20-60 minutes; seventhly, at least repeating the third step to the sixth step once; eighthly, placing the treated substance in a casing, sealing and performing ageing treatment, wherein the dispersoid A is a dispersoid containing conducting polymer. According to the manufacturing method, a solid-state capacitor with a lower ESR (Equivalent Series Resistance) value and a higher voltage resisting value can be obtained; meanwhile, lower leak current is obtained.

Publication: CN 104637687 A 20150520

Applicant: ZHAOQING BERYL ELECTRONIC TECHNOLOGY CO LTD
Inventor: LI HUIFENG; LIAO QIONG; LIU YONGPENG; LUO WEI; MA YANBIN; WU DIRONG; WU WEIQIAO; YUAN YONG; ZHENG PING
Prio:
Appl.No: CN201510064074
IPC: H01G 9/00

Solid electrolytic capacitor packaging structure and manufacturing method thereof, and conductive unit

The invention discloses a solid electrolytic capacitor packaging structure and a manufacturing method thereof, and a conductive unit. The solid electrolytic capacitor packaging structure comprises a capacitor unit, a packaging unit, and a conductive unit. The packaging unit comprises a packaging body used for coating the capacitor unit. The conductive unit comprises a first conductive terminal and a second conductive terminal. The first conductive terminal comprises a first core layer and a first coating layer. The first core layer has a first exposed upper surface exposed from the first coating layer, and the first exposed upper surface has a first upper covered area covered by the packaging body. The second conductive terminal comprises a second core layer and a second coating layer. The second core layer has a second exposed upper surface exposed from the second coating layer, and the second exposed upper surface has a second upper covered area covered by the packaging body. Thus, the air tightness between the contact surfaces of the conductive terminals and the packaging body can be improved.

Publication: CN 104637688 A 20150520

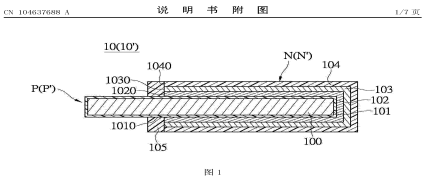
Applicant: YUBANG ELECTRONIC WUXI CO LTD

Inventor: CHEN MINGZONG; QIU JIHAO; ZHANG KUNHUANG

Prio:

Appl.No: CN201310548630

IPC: H01G 9/012



16

Electrolyte, preparation method thereof, composition for forming electrolyte and capacitor comprising electrolyte

The invention relates to an electrolyte, a preparation method thereof, a composition for forming the electrolyte and a capacitor comprising the electrolyte. According to an embodiment of the invention, the electrolyte comprises a conductive macromolecule, an iron ion, an auxiliary metal ion and a pair of toluenesulfonic acid negative ions, wherein the auxiliary metal ion is a cobalt ion, a nickel ion, a copper ion, a zinc ion, a calcium ion, a manganese ion or a combination of the cobalt ion, the nickel ion, the copper ion, the zinc ion, the calcium ion and the manganese ion; and the conductive macromolecule is polymerized by monomer with the structure is expressed by a formula (I): (img file=' DDA00004118477500000011.TIF' wi=' 575' he='456' /), X1 and X2 are O or S independently, Y is (img file=' DDA00004118477500000012.TIF' wi=' 320' he=' 120' /) or (img file=' DDA00004118477500000013.TIF' wi=' 464' he=' 144' /), and each R is hydrogen or C1-6 alkyl independently. By the electrolyte, the degree of polymerization of the obtained conductive macromolecule is increased; and when the electrolyte is used for the solid electrolysis capacitor, the capacitance value can be increased, and the energy consumption coefficient and the equivalent series resistance can be reduced.

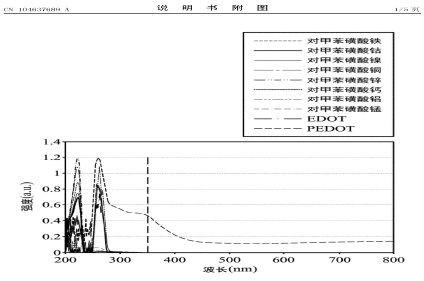
Publication: CN 104637689 A 20150520

Applicant: IND TECH RES INST; SYNMAX BIOCHEMICAL CO LTD

Inventor: LI FENGCUN; WEI JIAXIANG; YE GUOLIANG; ZHANG XUEMING

Prio:

Appl.No: CN201310556296



20

IPC: H01G 9/025

Solid electrolyte aluminum electrolytic capacitor and manufacturing method thereof

The invention discloses a solid electrolyte aluminum electrolytic capacitor which comprises an aluminum casing and a core cladding arranged in the aluminum casing, wherein the core cladding comprises an anode formed aluminum foil, a cathode foil, electrolytic paper between the anode formed aluminum foil and the cathode foil as well as solid electrolyte, wherein the solid electrolyte is formed by heating and polymerizing a monomer, an oxidant and a conducting material; a compound carbon material with higher conducting performance is led in the polymer, so that excellent ESR (Equivalent Series Resistance) of the solid electrolyte aluminum electrolytic capacitor can be obtained. The invention also discloses a manufacturing method for the solid electrolyte aluminum electrolytic capacitor. According to the manufacturing method, a lower ESR value can be obtained.

Publication: CN 104637690 A 20150520

Applicant: ZHAOQING BERYL ELECTRONIC TECHNOLOGY CO LTD

Inventor: LI HUIFENG; LIAO QIONG; LIU YONGPENG; LUO WEI; MA YANBIN; WU DIRONG; WU WEIQIAO; YUAN YONG; ZHENG PING

Prio:

Appl.No: CN201510062457

IPC: H01G 9/025

Solid electrolyte aluminum electrolytic capacitor and manufacturing method thereof

The invention discloses a solid electrolyte aluminum electrolytic capacitor which comprises an aluminum casing and a core cladding arranged in the aluminum casing, wherein the core cladding comprises an anode formed aluminum foil, a cathode foil, electrolytic paper between the anode formed aluminum foil and the cathode foil as well as solid electrolyte, wherein the solid electrolyte comprises a conducting polymer and a conducting carbon material; the solid electrolyte aluminum electrolytic capacitor has excellent ESR (Equivalent Series Resistance) performance; the solid electrolyte of the solid electrolyte aluminum electrolytic capacitor comprises the conducting polymer and the conducting carbon material, so the problems that the resistance of the conducting polymer at high temperature is remarkably increased, the performance of the conducting polymer is low and the like can be solved. The invention also discloses a manufacturing method for the solid electrolyte aluminum electrolytic capacitor. According to the manufacturing method, a solid capacitor with lower ESR value and a high voltage resisting value can be obtained; meanwhile, lower leakage current can be obtained, and better batch consistency is also obtained.

Publication: CN 104637691 A 20150520

Applicant: ZHAOQING BERYL ELECTRONIC TECHNOLOGY CO LTD

Inventor: LI HUIFENG; LIAO QIONG; LIU YONGPENG; LUO WEI; MA YANBIN; WU DIRONG; WU WEIQIAO; YUAN YONG; ZHENG PING

Prio:

Appl.No: CN201510064073

IPC: H01G 9/025

Method of using spraying method to manufacture dye-sensitized solar cell photo-anodes

The invention belongs to the research field of dye-sensitized solar cell photo-anodes and particularly relates to a method of using a spraying method to manufacture the dye-sensitized solar cell photo-anodes. Slurry for spraying is firstly manufactured, the multi-hole layer and scattering layer slurry is manufactured and sprayed on an FTO conducting glass substrate, and drying under a room temperature and heat treatment are conducted. The slurry raw materials for the photo-anode spraying are easy to obtain, low in cost, simple in manufacturing method and good in dispersity and stability, the thin film manufactured by spraying is good in evenness, the combining force between the thin film and the FTO glass substrate is good, the thickness is good in controllability, and the method is good for industrialized development of dye-sensitized solar cells.

Publication: CN 104637692 A 20150520

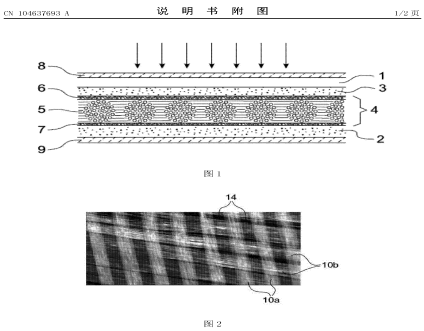
Applicant: UNIV TAIYUAN TECHNOLOGY
Inventor: MA JING; NAN XI; TANG BIN; ZHAO JING
Prio:
Appl.No: CN201510032091
IPC: H01G 9/20

A dye-sensitized solar cell including a composite substrate

The present invention relates to a dye-sensitized solar cell including a working electrode (1), a first conducting layer(3) for extracting photo-generated electrons from the working electrode, a porous insulation substrate (4) made of a microfibers, wherein the first conducting layer is a porous conducting layer formed on one side of the porous insulation substrate, a counter electrode including a second conducting layer (2) arranged on the opposite side of the porous substrate, and electrolyte for transferring electrons from the counter electrode to the working electrode. The porous insulation substrate comprises a layer (5) of woven microfibers and a layer (6) of non-woven microfibers disposed on the layer of woven. The present invention also relates to a method for producing a dye-sensitized solar cell.

Publication: CN 104637693 A 20150520

Applicant: EXEGER SWEDEN AB
Inventor: FILI GIOVANNI; LINDSTROM HENRIK
Prio: SE 20121228 1200791, SE 20120404 1230033
Appl.No: CN201510083212
IPC: H01G 9/20

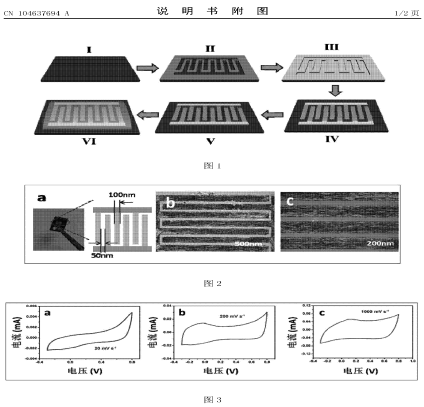


Micro super capacitor nano-device based on porous graphene-supported polyaniline heterostructure and manufacturing method thereof

The invention relates to a micro super capacitor nano-device based on a porous-graphene-supported polyaniline heterostructure and a manufacturing method thereof. A symmetrical fork electrode structure is formed on a substrate material; forks are 100-200 nanometers in widths; the distances among the forks are 50-100 nanometers; electrolyte is added dropwise; in the fork electrode structure, gold serving as a current collector is taken as the first layer of an electrode material; porous graphene is attached to the gold and is taken as the second layer of the electrode material; polyaniline is coated on the porous graphene and is taken as the surface layer of the electrode material; the gold is 10-20 nanometers in thickness; the porous graphene is 20-40 nanometers in thickness; the polyaniline is 20-40 nanometers in thickness; the electrode material is 50-100 nanometers in total thickness. The micro super capacitor nano-device has the beneficial effects that a micro energy storing device can store more energy on the premise of ensuring high electronic conduction, so that the capacity and energy density of a super capacitor are further increased.

Publication: CN 104637694 A 20150520

Applicant: UNIV WUHAN TECH
Inventor: MAI LIQIANG; TIAN XIAOCONG; XIAO BEI; XU XU; YAN MENGYU
Prio:
Appl.No: CN201510055719
IPC: H01G 11/26



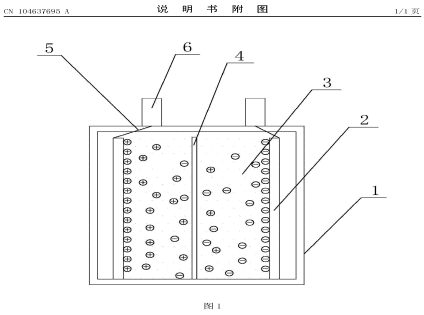
10

Super capacitor with graphene electrodes

The invention discloses a super capacitor with graphene electrodes. The super capacitor comprises a shell, and two graphene electrodes parallel to the side wall of the shell are arranged inside the shell. Electrolyte fills the gap between the two graphene electrodes. A diaphragm is arranged between the two graphene electrodes. The end part of each graphene electrode is provided with a lead, and the leads are threaded out of the shell to be connected with pins arranged on the shell. The super capacitor has the advantages of high energy density and higher power density than a rechargeable battery, can be charged and discharged quickly, has a long service life, has very wide ranges of voltage and working temperature, and is a novel, efficient and practical energy storage device.

Publication: CN 104637695 A 20150520

Applicant: XI AN ZHONGKEMAITE ELECTRONIC TECHNOLOGY EQUIPMENT
Inventor: MA SHUBO
Prio:
Appl.No: CN201310548140
IPC: H01G 11/32



5

Production method of carbon nano-tube and nickel oxide combined electrode material

The invention belongs to the field of production of electrode material and provides a production method of carbon nano-tube and nickel oxide combined electrode material high in specific capacitance. According to the production method, carbon nano-tubes are used as base material, the surface of each carbon nano-tube is modified via nitric acid reflow, nickel hydroxide is deposited on the carbon nano-tubes subjected to nitric acid reflow treatment by means of the sol-gel method, and thermal treatment is performed to obtain the carbon nano-tube and nickel oxide combined electrode material. A combined electrode produced by the production method has specific capacitance up to 160 F/g.

Publication: CN 104637696 A 20150520

Applicant: LI JIAWEI
Inventor: LI JIAWEI
Prio:
Appl.No: CN201410752502
IPC: H01G 11/36

Preparation method of metal oxide/carbon nano tube composite electrode material

The invention relates to a preparation method of a metal oxide/carbon nano tube composite electrode material. According to the method, the force of Van der Waals can be generated or pi-pi conjugation can be formed between a non-covalent modified carbon nano tube surface and an imidazole metal chloride salt imidazole ring, so that a metal oxide is uniformly loaded to the carbon nano tube surface by a metal cation -pi bond, and the metal oxide/carbon nano tube composite electrode material is formed. The load capacity of the metal oxide on the surface of a carbon material can be effectively increased, the surface energy of the carbon materials is reduced while a carbon atom hybrid structure on the surface of the carbon material is not damaged, and the metal oxide is uniformly loaded to the surface of the carbon material. The prepared metal oxide/carbon nano tube composite electrode material has a large specific surface area and relatively high metal oxide loading capacity and is widely applied in each field.

Publication: CN 104637697 A 20150520

Applicant: XINJIANG TECH INST PHYSICS CAS
Inventor: CHEN YITONG; GAO BO
Prio:
Appl.No: CN201510071560
IPC: H01G 11/36

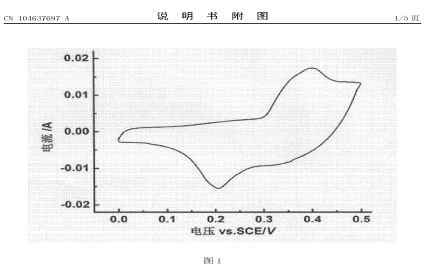


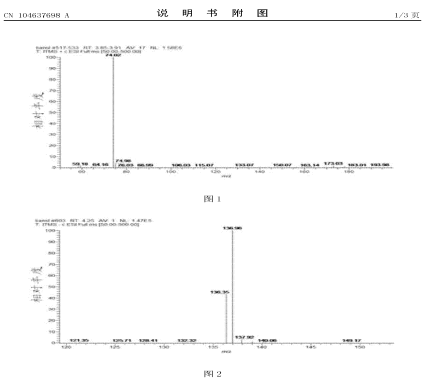
图 1

Organic electrolyte and symmetric super capacitor

The invention provides an organic electrolyte, which comprises an electrolyte and an organic solvent, and is characterized in that the electrolyte is tetramethyl ammonium oxalyldifluoroborate; the organic solvent is a mixer of propylene carbonate and ethylene carbonate; and the volume percentage content of ethylene carbonate is 0 to 80%. The organic electrolyte, an activated carbon positive electrode, an activated carbon negative electrode, and a diaphragm between the activated carbon positive electrode and the activated carbon negative electrode together form a symmetric super capacitor. As the tetramethyl ammonium oxalyldifluoroborate is high in solubility and strong in ionizing power, and in match with ethylene carbonate, the electrical conductivity of the organic electrolyte system can be improved. The symmetric super capacitor formed by the organic electrolyte has better rate capability. The experiment result shows that the symmetric super capacitor of the invention has higher power density and energy density than the existing symmetric super capacitor under the same current density.

Publication: CN 104637698 A 20150520

Applicant: CHANGCHUN APPLIED CHEMISTRY
Inventor: QI LI; TIAN SHENGFENG; WANG HONGYU
Prio:
Appl.No: CN201310547255
IPC: H01G 11/60



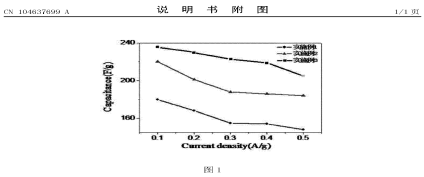
9

Method for preparing super capacitor on basis of three-dimensional porous graphene composite material

The invention relates to a method for preparing a super capacitor on the basis of a three-dimensional porous graphene composite material. The method comprises the following steps of grinding and mixing the three-dimensional porous graphene composite material, acetylene black and a polytetrafluoroethylene emulsion with the mass fraction of 15 percent in the weight part ratio of (76-84):(12-18): (5-8) into electrode slurry, and uniformly dispersing the electrode slurry into a small amount of anhydrous alcohol to form paste liquid, and coating the paste liquid onto the surface of foam nickel to form a thin sheet to obtain an electrode plate; taking a polypropylene porous film as a septum, soaking the septum in electrolyte aqueous solution, placing the soaked septum between two electrode plates, and packaging to prepare the super capacitor of the two electrode plates. The method is based on the three-dimensional porous graphene composite material; when the packaging current density is 0.1 A/g, the specific capacity can be between 236 and 160f/g.

Publication: CN 104637699 A 20150520

Applicant: UNIV FUJIAN
Inventor: CHEN HONG; LING QIDAN; XIAO HOUWEN; ZHANG WENGONG
Prio:
Appl.No: CN201510074080
IPC: H01G 11/84



9

Method for preparing electrode material of supercapacitor

The invention belongs to the field of preparation of electrode materials, provides a method for preparing an electrode material of a supercapacitor, and aims to acquire the electrode material low in cyclic capacitance attenuation and high in specific capacitance. The method includes that a CoAl layered double hydroxide is made of Co(NO3)2.6H2O and Al(NO3)3.7H2O according to a coprecipitation method to serve as the electrode material of the supercapacitor. An electrode made of the electrode material is 400F/g in single-electrode specific capacitance and pretty low in capacitance attenuation after 500 cycles.

Publication: CN 104637700 A 20150520

Applicant: XU DAREN
Inventor: XU DAREN
Prio:
Appl.No: CN201410758155
IPC: H01G 11/86

Method for preparing graphene-based vanadium pentoxide nanowire super capacitor electrode material

The invention belongs to the fields of material science and electrochemistry, and particularly relates to a method for preparing a graphene-based vanadium pentoxide nanowire super capacitor electrode material. The method comprises the following steps: performing a hydrothermal reaction for 1-2 days at the temperature 100-160 DEG C by taking metavanadate and graphene oxide as main raw materials; reducing and washing to obtain the graphene-based vanadium pentoxide nanowire composite materials. The preparation method is short in reaction time, is low in temperature, is simple in process, and is low in cost. The prepared graphene-based vanadium pentoxide nanowire super capacitor electrode material has the advantages of high electric conductivity of graphene, large specific surface area, high power characteristic and high graphene-based vanadium pentoxide nanowire energy density, and can be taken as a novel super capacitor electrode material hopefully.

Publication: CN 104637701 A 20150520

Applicant: UNIV LUDONG
Inventor: CHENG YUANSHUN; JIANG WEI; QIU QIUYUE; TANG QINGHUA; XU XICHAO; YANG YINGXIA; YANG ZHENGLONG; ZHAO SHUPING; ZHU CHENXUE
Prio:
Appl.No: CN201510044146
IPC: H01G 11/86

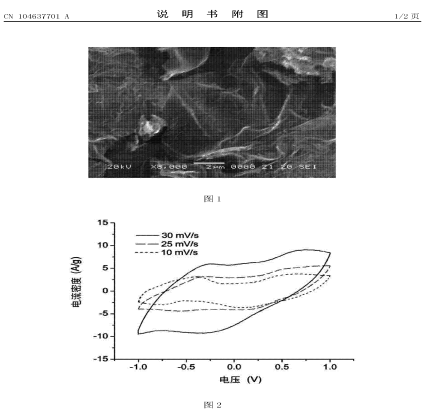


图 1

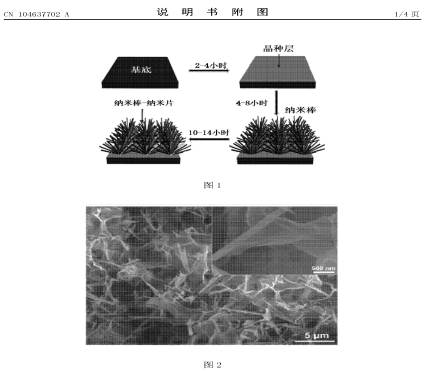
图 2

Li2Co2(MoO4)3 material with mutual connection of nanorods and nanosheets and preparation method and application thereof

The invention relates to an Li2Co2(MoO4)3 material with mutual connection of nanorods and nanosheets and a preparation method thereof. The Li2Co2(MoO4)3 material can be used as supercapacitor active material, and the Li2Co2(MoO4)3 nanorods grown on a substrate are used as a skeleton, and are mutually connected by the Li2Co2(MoO4)3 nanosheets to form a three-dimensional structure. The Li2Co2(MoO4)3 material has the beneficial effects that (1) the cyclic reversibility is good; the one-dimensional structure of the nanorods has good axial electron transmitting property, and the high-power electric charging and discharging can be favorably realized; by utilizing the nanosheets for connecting the nanorods, the contact area of an electrode and an electrolyte is increased, and multiple reaction sites are provided; (2) a simple hydrothermal and heat treatment combining method is adopted, and the prepared material has higher purity and excellent uniformity; (3) the technology is simple.

Publication: CN 104637702 A 20150520

Applicant: UNIV WUHAN TECH
Inventor: DU CHUNHUI; KALELE MULONDA HERCULE; MAI LIQIANG; WEI QIULONG; YAN MENGYU
Prio:
Appl.No: CN201510052384
IPC: H01G 11/86



Explosion-proof seal-welding process of capacitors

The invention relates to an explosion-proof seal-welding process of capacitors. According to the process, an impregnating hole of an end cover is seal-welded when a capacitor is kept at high temperature, and cooling is performed after seal-welding; when the capacitor runs at high temperature and is fully sealed, with rising of the temperature, impregnating agent which is liquid inside and residue air inside both can expand; expansion pressure of the impregnating agent forces an explosion-proof device of the capacitor to run, and the capacitor quits running due to circuit opening when the capacitor is still in effect; before seal-welding the impregnating hole, the temperature of the capacitor is kept high, the impregnating hole is seal-welded at such temperature, and cooling is performed after seal-welding.

Publication: CN 104637703 A 20150520

Applicant: WANG ZIHUA
Inventor: WANG ZIHUA
Prio:
Appl.No: CN201310565916
IPC: H01G 13/00

Carbonaceous material for negative electrodes of lithium ion capacitors and method for producing same

The objective of the present invention is to provide: a method for producing a carbonaceous material for negative electrodes of lithium ion capacitors, said carbonaceous material using a plant-derived char as a starting material and having a small average particle diameter, while having potassium element and iron element sufficiently removed therefrom by decalcification; and a carbonaceous material for negative electrodes of lithium ion capacitors. The above-mentioned objective can be achieved by a method for producing a carbonaceous material for negative electrodes of lithium ion capacitors having an average particle diameter of 3-30 mum, which comprises: (1) a gas-phase decalcification step wherein a plant-derived char having an average particle diameter of 100-10,000 mum is subjected to a heat treatment at 500-1,250 DEG C in an inert gas atmosphere containing a halogen compound; (2) a step wherein a carbonaceous precursor obtained by gas-phase decalcification is pulverized; and (3) a step wherein the pulverized carbonaceous precursor is fired at a temperature less than 1,100 DEG C in a non-oxidizing gas atmosphere.

Publication: CN 104641435 A 20150520

Applicant: KURARAY CHEMICAL KK; KURARAY CO; KUREHA CORP

Inventor: ARIMA JUNICHI; CHO JUN-SANG; IWASAKI HIDEHARU; KOMATSU HAJIME; KOYAKUMARU KENICHI; MASUKO JIRO; OGAWA AKIMI; OTSUKA KIYOTO; SONOBE NAOHIRO; TADA YASUHIRO

Prio: JP 20120830 2012190708, JP 20130830 2013073350

Appl.No: CN201380044862

IPC: H01G 11/34

Multilayer Ceramic Electronic Component And Board Having The Same Mounted Thereon

A multilayer ceramic electronic component is provided including a ceramic body having dielectric layers and a plurality of internal electrodes disposed in the ceramic body. The internal electrodes have exposed portions exposed to the exterior of the ceramic body. An electrode layer is disposed on an outer surface of the ceramic body electrically connected to the exposed portions of the internal electrodes A conductive resin layer is disposed on the electrode layer. The electrode layer has an uneven surface.

Publication: CN 104658756 A 20150527

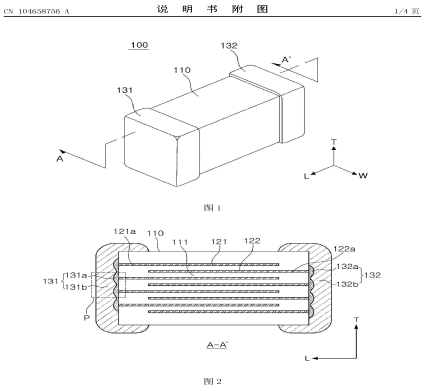
Applicant: SAMSUNG ELECTRO MECH

Inventor: JEON BYUNG JUN; KIM BYONG GYUN; KIM CHANG HOON; LEE KYOUNG NO; PARK EUN ME

Prio: KR 20131115 20130139219

Appl.No: CN201410218692

IPC: H01G 4/30



Method for dispersing complex conducting agent in electrode slurry for lithium ion capacitor

The invention discloses a method for dispersing a complex conducting agent in an electrode slurry for a lithium ion capacitor. The method comprises the following steps: (1) material weighing: weighing 0.5-14.5% of graphene, 5.5-14.5% of a carbon nano tube and the balance of conducting carbon black, weighing N-methylpyrrolidone which is 4-9 times of the mass of the complex conducting agent, and weighing a surfactant which accounts for 5-15% of the mass of the complex conducting agent, wherein the grapheme, the carbon nano tube and the conducting carbon black constitute the complex conducting agent, and all the materials are weighed for standby application; (2) step-by-step material adding for dispersion: mixing the complex conducting agent with N-methyl-pyrrolidone and the surfactant for ultrasonic dispersion firstly, adding the carbon nano tube for first high-speed dispersion secondly, and adding the grapheme for second high-speed dispersion finally. The method is simple in process sequence, high in operability, and suitable for industrialized production, and has the advantages that the complex conducting agent can uniformly disperse to form a three-dimensional conducting network structure, and the power performance can be obviously improved when the relatively high energy density of capacitance is retained.

Publication: CN 104658757 A 20150527

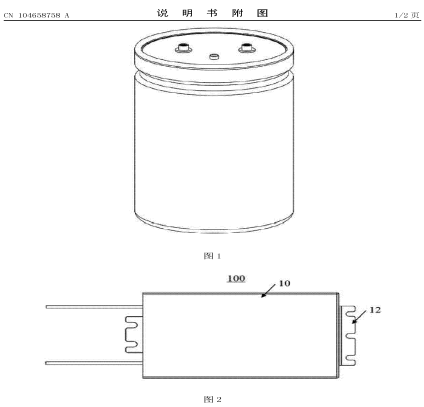
Applicant: NINGBO CSR NEW ENERGY TECHNOLOGY CO LTD
Inventor: FU GUANSHENG; HUANG YI; RUAN DIANBO
Prio:
Appl.No: CN201410779889
IPC: H01G 9/042

Flat aluminum electrolytic capacitor and manufacturing method thereof

The invention discloses a flat aluminum electrolytic capacitor and a manufacturing method thereof. The flat aluminum electrolytic capacitor comprises a core cladding, a package metal shell for wrapping the core cladding, and a metal package cover plate for sealing the package metal shell, wherein the core cladding is flat and comprises two pieces of electrolysis paper, a negative electrode electronic aluminum foil overlapped layer and a positive electrode electronic foil overlapped layer; the electrolysis paper layers are respectively arranged on the innermost layer of the core cladding and between the negative electrode electronic aluminum foil overlapped layer and the positive electrode electronic foil layer; after the electrolysis paper and a negative electrode electronic aluminum foil overlapped layer are coiled to be flat in a certain thickness, the positive electrode foil is added and is continuously coiled to be flat till the quantitative opening length of the positive electrode foil is completely wrapped in the electrolysis paper and a negative composite layer, and the certain thickness is just the sum of the bending diameter of the material after being compositely coiled and the wall thickness of the package metal shell. By adopting the flat aluminum electrolytic capacitor disclosed by the invention, the design of a light, thin, short and flat container is achieved, and convenience is brought to the trend of light and thin design of electronic products.

Publication: CN 104658758 A 20150527

Applicant: SHENZHEN JIANGHAO ELECTRON CO LTD
Inventor: LI LIANG; QIN MEIYUN; TANG XIAOYAN; WAN XIAOQI; YIN CHAO; YIN ZHIHUA
Prio:
Appl.No: CN201510060722
IPC: H01G 9/145



Method for preparing large-panel dye-sensitized solar cell

The invention relates to the technical field of semiconductor material preparation, in particular to a method for preparing a large-panel dye-sensitized solar cell. The method comprises the following steps: 1, preparing a photo anode; 2, preparing counter electrodes; 3, assembling the cell. The parallel structure DSSC (dye-sensitized solar battery) with the size of 100x75mm<2> is prepared by a screen printing method, and the filling factor of the cell can be up to 0.63. By the adoption of the parallel design structure, current is conducted by a silver gate electrode, so that the ohm loss of the current at a conductive substrate can be effectively reduced, and the DSSC filling factor is increased.

Publication: CN 104658759 A 20150527

Applicant: XU YULEI
Inventor: XU YULEI
Prio:
Appl.No: CN201410756005
IPC: H01G 9/20

Preparation method for dye sensitization solar battery

The invention relates to the technical field of battery industrial manufacturing, in particular to a preparation method for a dye sensitization solar battery. The preparation method comprises the following steps: weighing and adding TiO2 powder; grinding the powder clockwise; adding deionized water; grinding the deionized water clockwise; adding alcohol; transferring the powder, the deionized water and the alcohol to a beaker after grinding; diluting the alcohol; adding 6 g of terpilenol and 1 g of ethyl cellulose; transferring colloid to a mortar after ultrasonography and stirring; conducting grinding to obtain TiO2 colloid; printing the TiO2 colloid on FTO electro-conductive glass; drying the colloid; conducting baking; placing the FTO electro-conductive glass in dye for soaking; rinsing the electro-conductive glass with alcohol to obtain a photo anode; packaging the photo anode and the FTO electro-conductive glass coated with Pt in counter electrode; injecting electrolyte from the small hole of the counter electrode to obtain the dye sensitization solar battery. The preparation method explores the photoelectric properties of TiO2 photo anodes with different thickness through silk screen printing layer quantity; when the thickness is 11 Mum, DSSC has supreme photoelectric conversion efficiency.

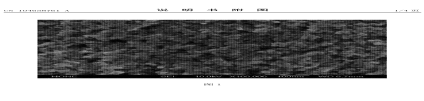
Publication: CN 104658760 A 20150527

Applicant: HE YUAN
Inventor: HE YUAN
Prio:
Appl.No: CN201410756570
IPC: H01G 9/20

Method for preparing dye-sensitized solar cell nano-TiO2 membrane photo-anode with membrane reaction method

The invention provides a method for preparing a dye-sensitized solar cell nano-TiO2 membrane photo-anode on the basis of a membrane reaction method. The method comprises steps as follows: a titanium salt solution with certain concentration is prepared through mixing of titanium salt and a stabilizer and evenly stirred at the room temperature, the pH of the solution is adjusted to be below 2 with an acid solution, the solution is transferred into a membrane reactor with the membrane medium molecular weight cut-off ranging from 500 to 20,000 for a hydrolysis reaction, and uniform and transparent TiO2 sol is obtained; the TiO2 sol is aged, TiO2 hydrated gel is obtained, dialysis is performed continuously until the gel is approximately neutral, obtained gel is concentrated, applied, dried, calcined and sensitized after collected, and the TiO2 membrane photo-anode is obtained. With the adoption of the method, reaction processes of materials can be effectively controlled, and the gel synthesis quality can be improved. The preparation method is simple, efficient and beneficial to industrial application.

Publication: CN 104658761 A 20150527



Applicant: UNIV JIANGHAN
Inventor: CHEN CHUNHUA; LI HANG; WAN KUN; YANG ZHIHUA

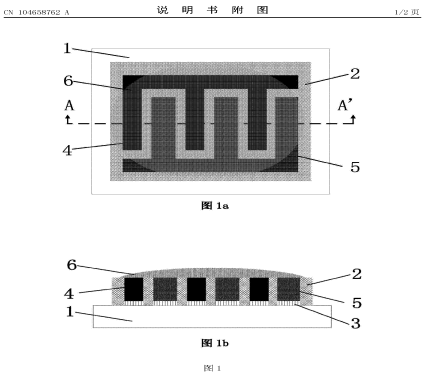
Prio:
Appl.No: CN201510088442
IPC: H01G 9/20

Asymmetric micro lithium ion capacitor and manufacturing method thereof

The invention discloses an asymmetric micro lithium ion capacitor and a manufacturing method thereof, and belongs to the field of micro energy and micromachining. The asymmetric micro lithium ion capacitor adopts the structure that a positive composite layer and a negative composite layer are arranged above the substrate of the device in sequence and are arranged at intervals in the horizontal direction; a photoresist membrane is formed between the positive composite layer and the negative composite layer. Each of the composite layer adopts the structure that a metal current collecting layer, an extraction layer and an electrode are mounted on the substrate of the device in sequence; a positive electrode and a negative electrode are of an interdigitated electrode structure which is formed by a positive composite electrode material and a negative composite electrode material respectively. The manufacturing method for the asymmetric micro lithium ion capacitor is characterized in that the two electrodes of the device are made of electrode materials based on different mechanisms, specifically, the anode is made of a double-electrode-layer material, and the cathode is made of a lithium ion battery material; a membrane structure is adopted to implement separate filling molding of different materials; moreover, the negative battery electrode of the device is subjected to pre-lithiation. The asymmetric micro lithium ion capacitor manufactured by the method is high in energy density, and has an excellent power output capability.

Publication: CN 104658762 A 20150527

Applicant: UNIV TSINGHUA
Inventor: LI SIWEI; WANG XIAOHONG
Prio:
Appl.No: CN201510058696
IPC: H01G 11/06

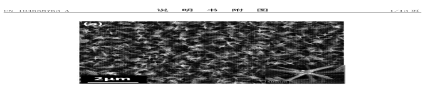


Manganese dioxide dendritic nano array electrode material and preparation method

The invention provides a manganese dioxide dendritic nano array electrode material and a preparation method. Four columns of monocrystal manganese dioxide square nano tube branches grow on four side ridges of a monocrystal manganese dioxide square nano tube trunk of each dendritic manganese dioxide array unit; an included angle between the axial direction of each branch and the axial direction of the trunk ranges from 57 degrees to 62 degrees. The electrode material is synthesized by a two-step hydrothermal method; in the first hydrothermal method process, a single-polished silicon slice is used as a substrate for growing a nano array preliminarily; in the second hydrothermal method process, a single-polished silicon slice with the monocrystal manganese dioxide square nano tube trunk is used as a substrate for growing the nano array secondarily; during secondary growth, the polished surface of the single-polished silicon slice with the monocrystal manganese dioxide square nano tube trunk is placed downwards; during secondary growth, three single-polished silicon slices with the monocrystal manganese dioxide square nano tube trunks are provided; the concentration of raw materials in the secondary growth is lower than that of the raw materials in the preliminary growth.

Publication: CN 104658763 A 20150527

Applicant: UNIV NORTHWESTERN
Inventor: FAN HAIMING; REN ZHAOYU; YU BAOZHI
Prio:



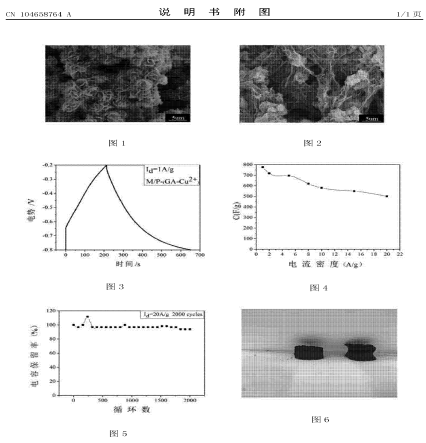
Appl.No: CN201510030906
IPC: H01G 11/24

Graphene aerogel three-component compound electrode material of supercapacitor as well as preparation and application

The invention discloses a graphene aerogel three-component compound electrode material of a supercapacitor as well as preparation and an application. The electrode material comprises graphene, molybdenum disulfide and polyaniline, wherein graphene serves as aerogel and achieves a frame effect, so that molybdenum disulfide and polyaniline are uniformly dispersed on a graphene aerogel sheet layer. In an electrochemical characterization test, for the specific capacitance value, the maximum specific capacitance value can reach 776 F/g under 1 A/g; for the rate performance, the current intensity is increased to 20 A/g and the specific capacitance value is reserved by more than 60%; for the cyclic stability, the specific capacitance value can be reserved by more than 93% through 2,000-time constant-current cyclic charge and discharge. With cationic pretreatment and freeze-drying methods, the molybdenum disulfide-polyaniline-graphene aerogel compound material is obtained. The prepared molybdenum disulfide-polyaniline-graphene aerogel compound material is excellent in electrochemical performance, thereby having a good application prospect in the field of energy resources.

Publication: CN 104658764 A 20150527

Applicant: UNIV ZHEJIANG
Inventor: LYU BIN; SHA CHUHAN; YE ZHIZHEN
Prio:
Appl.No: CN201510066222
IPC: H01G 11/24

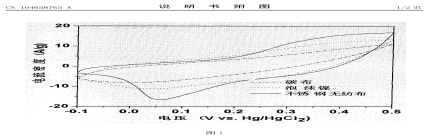


Stainless non-woven fabric based super-capacitor electrode material as well as preparation method and application

The invention discloses a stainless non-woven fabric based super-capacitor electrode material as well as a preparation method and application. A stainless non-woven fabric is adopted as a substrate material, and a nano structure made of one of a metal oxide, a double-metal oxide, a double-metal sulfide, a metal hydroxide and a conductive polymer is grown on the substrate material in situ, so that the stainless non-woven fabric based super-capacitor electrode material of an in-situ grown nano structure can be obtained. When the substrate material is selected, compared with a carbon fabric and foamed nickel, the stainless non-woven fabric has the characteristics of light weight, high strength, rich active substances loaded in a unit area, and the like as the substrate material, both the mass ratio capacity and the area ratio capacitor of the electrode material prepared from the substrate material are greater than those of an electrode material prepared from the other two substrate materials. When the stainless non-woven fabric is adopted to prepare the super-capacitor electrode material, the integral area surrounded by a cyclic voltammetry curve is greater than those on the carbon fabric and the foamed nickel, and the capacitance of the electrode material based on the stainless steel non-woven fabric substrate is relatively high.

Publication: CN 104658765 A 20150527

Applicant: HARBIN INST OF TECH WEIHAI
Inventor: DING CHUNYAN; WEN GUANGWU; ZHOU WEIWEI
Prio:
Appl.No: CN201510056357



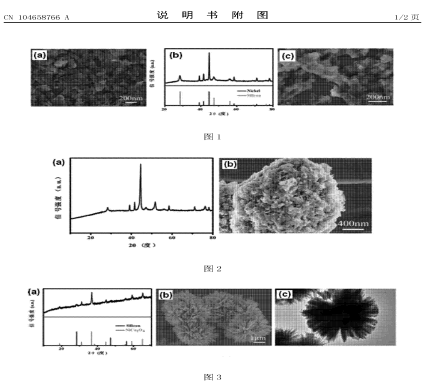
IPC: H01G 11/30

Nickel cobaltate doped with silicon nanosheet and preparation method of nickel cobaltate

The invention discloses a nickel cobaltate doped with a silicon nanosheet and a preparation method of the nickel cobaltate. The synthesis method comprises steps as follows: firstly, synthesizing a compound of the silicon nanosheet coated with simple nickel; taking the simple nickel coating the silicon nanosheet as a nickel source, adding the nickel to a deionized water solution of cobalt chloride, and preparing a nickel-cobalt hydroxide doped with the silicon nanosheet through a hydrothermal reaction; washing the product with ethanol and deionized water respectively after cooling the nickel-cobalt hydroxide to the room temperature, and after centrifugal separation, heating and annealing a precipitation precursor obtained through drying in the air to obtain sea-urchin-shaped nickel cobaltate doped with the silicon nanosheet. The nickel cobaltate composite material doped with the silicon nanosheet has excellent supercapacitor performance and cycle stability, and the preparation method is simple and environment-friendly; besides, the synthesized nickel cobaltate doped with the silicon nanosheet is used as an electrode material of supercapacitors and is superior to existing transition metal oxide electrode materials in cost.

Publication: CN 104658766 A 20150527

Applicant: UNIV NANJING TECH
Inventor: DONG XIAOCHEN; HUANG WEI; MA MINGZE; YANG JUN
Prio:
Appl.No: CN201510077002
IPC: H01G 11/30



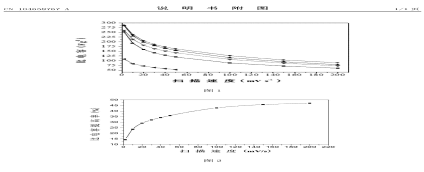
7

Non-carbon supercapacitor electrode modification material with pseudocapacitance characteristic and method for modifying supercapacitor electrode

The invention discloses a non-carbon supercapacitor electrode modification material with a pseudocapacitance characteristic and a method for modifying a supercapacitor electrode, relates to a novel application of (La(1-x) Srx) (1-y)MnO(3-delta) and a method of (La(1-x)Srx)(1-y)MnO(3-delta) for modifying the supercapacitor electrode, aims to solve the technical problem of low electronic conductivity of MnO2, and belongs to the field of a novel application of (La(1-x)Srx)(1-y)MnO(3-delta) and the supercapacitor electrode modification material adopting (La(1-x)Srx)(1-y)MnO(3-delta). (La(1-x)Srx)(1-y)MnO(3-delta) is taken as the modification material to modify the electrode. The method comprises the following steps: preparing an electrode powder suspension; dipping and drying an electrode current collector to obtain the electrode. The electronic conductivity of the electrode modification material is higher than that of MnO2 by six orders of magnitude, the electronic conductivity of the electrode modification material at the room temperature is 45 S/cm, when the MnO2 electrode is modified with the material, and the specific capacitance of the electrode during high-rate/high-current discharge can be increased by about 50%.

Publication: CN 104658767 A 20150527

Applicant: HARBIN INST OF TECHNOLOGY
Inventor: HUANG XIQIANG; LYU JINGBO; LYU ZHE; WANG ZHIHONG; WEI BO; ZHANG YAOHUI; ZHU XINGBAO



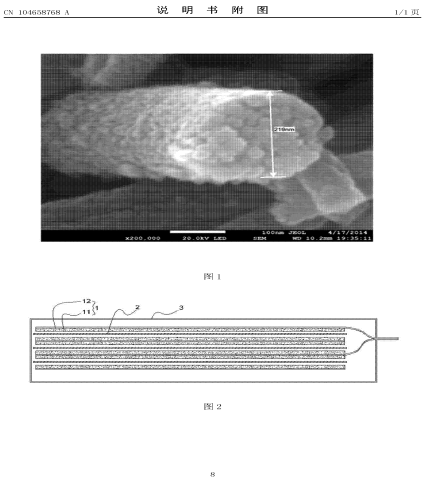
Prio:
Appl.No: CN201510084777
IPC: H01G 11/30

Preparation method of titanic oxide and supercapacitor of titanic oxide

The invention provides a preparation method of titanic oxide. The method comprises the following steps: firstly, preparing nanoscale TiO2 material through an electrostatic spinning method; secondly, ensuring that an alkaline aqueous solution or an alkaline organic solution reacts with the nanoscale TiO2 material obtained in the first step; thirdly, filtering, and drying to obtain conductive titanic oxide. The invention further provides a supercapacitor prepared by the titanic oxide. The titanic oxide is prepared through an electrostatic spinning method and is subjected to chemical treatment, the conductivity of the titanic oxide is greatly improved, and the titanic oxide is converted into a semiconductor with good conductivity from a nonconducting insulator, and is applied to the electrode material of the supercapacitor. The titanic oxide electrode material of the supercapacitor greatly increases the specific capacitance, the power density and the energy density value of the supercapacitor, and has excellent characteristics of low cost, environmental protection, high use ratio, stable performance, high practicability and the like.

Publication: CN 104658768 A 20150527

Applicant: NANJING YIFANG JUREN NEW ENERGY TECHNOLOGY CO LTD; UNIV HUBEI
Inventor: SHI DAWEI; WANG RUILONG; YANG CHANGPING; YAO JIANING; ZHANG GUOLIANG
Prio:
Appl.No: CN201410754089
IPC: H01G 11/46



Preparation method of button-type double electric layer capacitor

The invention relates to the technical field of material chemical preparation, in particular to a preparation method of a button-type double electric layer capacitor. The preparation method of the button-type double electric layer capacitor comprises the following steps: compounding a mixed liquor of a concentrated sulfuric acid and a concentrated nitric acid, pouring the mixed liquor into a beaker containing natural flake graphite, and standing the mixture of the mixed liquor and the natural flake graphite for 24 hours; filtering out the graphite, washing with water until a pH value is greater than 5, and drying; performing quick expansion for 1 minute, mixing activated carbon powder with the expanded graphite, dropwise adding anhydrous alcohol to the mixture of the activated carbon powder and the expanded graphite while stirring, and soaking, performing ultrasonic oscillation and vacuum drying so as to obtain an expanded graphite/activated carbon (EP/AC) composite material; mixing the expanded graphite/activated carbon (EP/AC) composite material with conductive carbon black and polytetrafluoroethylene as a binder, dropwise adding anhydrous alcohol to the mixture until the mixture is pulpous, drying, and pressing the dried solid mixture and foam nickel so as to obtain electrode pieces; placing the electrode pieces face to face, using a KOH aqueous solution as an electrolyte, and assembling the electrode pieces to form the button-type capacitor. The preparation method disclosed by the invention can maintain higher specific capacitance under the condition of heavy current discharge, the decrease rate of the specific capacitance is smaller than 7%, and the button-type double electric layer capacitor prepared by the preparation method has good properties.

Publication: CN 104658769 A 20150527

Applicant: BAI XIAODONG
Inventor: BAI XIAODONG
Prio:

Appl.No: CN201410756756
IPC: H01G 11/84

Preparation method of methyl green-modified reduced graphene oxide and application of methyl green-modified reduced graphene oxide as supercapacitor electrode material

The invention discloses a preparation method of methyl green-modified reduced graphene oxide. The preparation method comprises the following steps: ultrasonically dispersing graphite oxide in water to form graphite oxide dispersion liquid and dissolving methyl green in water to form methyl green solution; adding the graphite oxide dispersion liquid into the methyl green solution to stir uniformly, adding hydrazine hydrate as a reducing agent to react at 80-90 DEG C for 8-12 h, cooling the product to the room temperature, carrying out thermal treatment at 200-300 DEG C for 2-4 h after filtration, washing and drying so as to obtain the final product. Electrochemical performance tests indicate that the prepared methyl green-modified reduced graphene oxide shows relatively high electrochemical capacitance behavior, excellent double capacitance rate and favorable cycling stability, so that the methyl green-modified reduced graphene oxide is a relatively good supercapacitor electrode material. Moreover, the composite material provided by the invention is simple in preparation process, stable in process, easy to operate, reliable in quality, low in cost and beneficial for popularization and application.

Publication: CN 104658770 A 20150527

Applicant: UNIV NORTHWEST NORMAL
Inventor: AN NING; CHEN CHANJUAN; HU HAIXIONG; HU ZHONGAI; LI LI; LI ZHIMIN; QIANG RUIBIN; REN XIAOYING; WU HONGYING; YANG YUYING
Prio:
Appl.No: CN201410812469
IPC: H01G 11/86

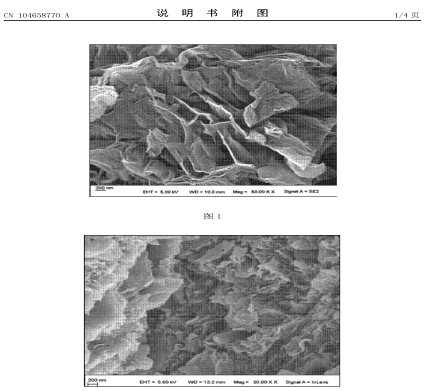


图 1

图 2

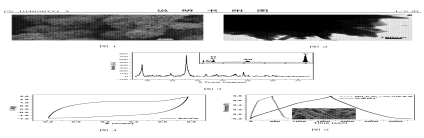
8

Method for preparing urchin-like vanadium base nanometer electrode material and application of the material

The invention discloses a method for preparing an urchin-like vanadium base nanometer electrode material and application of the material. The method comprises the steps of adding vanadium pentoxide into aqueous hydrogen peroxide, and performing electromagnetic stirring in water bath to prepare a vanadium precursor solution; taking the vanadium precursor solution, ethylene glycol and deionized water and adding ammonium sulfate, controlling the solution within Ph2.0-3.0, performing electromagnetic stirring to mix the solution, and transferring the solution to a hydrothermal reaction kettle to perform hydrothermal reaction for 5-48h at 160-200 DEG C; centrifuging, washing and drying to prepare the electrode material. The invention further discloses a method for preparing an electrode plate, and the method is characterized in that the urchin-like vanadium base nanometer electrode material is mixed with a binder and a conductive agent according to the weight proportion of (70-80) to (0-10) to 10 and a current collector is coated with the mixture. According to the method, V205 with the relatively low price is regarded as a vanadium source without any surface active agent; the preparation process is simple, efficient, steady and economic, the morphology change of the material is slightly affected by heat treatment, and the prepared urchin-like vanadium base nanometer electrode material has high specific capacity and long cycling life in water electrolyte and organic electrolyte.

Publication: CN 104658771 A 20150527

Applicant: UNIV CHONGQING



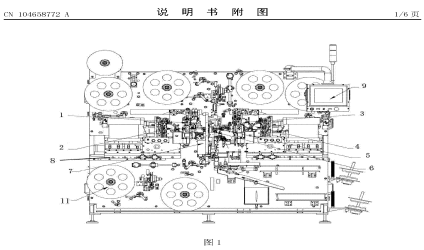
Inventor: LI HONGYI; LI XINLU; WANG LIANG; WANG YU; WEI CHUANG; XIE BING
Prio:
Appl.No: CN201510106448
IPC: H01G 11/86

Full-automatic nail joint winding machine and element manufacturing method thereof

The invention discloses a full-automatic nail joint winding machine and an element manufacturing method thereof, and particularly relates to the field of mechanical manufacturing for full-automatic manufacture of elements. The full-automatic nail joint winding machine comprises a winding mechanism, a positive nail machine mould mechanism, a positive nail joint mechanism, a negative nail machine mould mechanism, a negative nail joint mechanism, an element winding tape adhesion mechanism and an element returning mechanism, wherein the positive nail machine mould mechanism and the positive nail joint mechanism are arranged on one side of the winding mechanism in sequence; the negative nail machine mould mechanism and the negative nail joint mechanism are arranged on the other side of the winding mechanism in sequence; the element winding tape adhesion mechanism and the element returning mechanism are arranged at the lower end of the winding mechanism in parallel; the positive nail joint mechanism and the negative nail joint mechanism are respectively connected with an eccentric guide pin automatic direction choosing mechanism; all the mechanisms are connected with a control panel circuit. According to the full-automatic nail joint winding machine and the element manufacturing method, the element production efficiency is greatly improved, the rejection rate is reduced and the overlapping degree of aluminum foils with different requirements can be satisfied.

Publication: CN 104658772 A 20150527

Applicant: DONGGUAN TSH MACHINERY CO LTD
Inventor: WU QINGQUAN
Prio:
Appl.No: CN201510025063
IPC: H01G 13/02



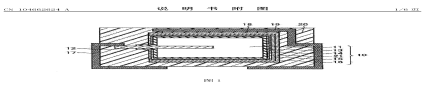
10

Solid electrolytic capacitor manufacturing method and solid electrolytic capacitor

In the present invention, a method for manufacturing a solid electrolytic capacitor, which is provided with a capacitor element having an anode body with a dielectric film formed on the surface thereof and a solid electrolyte layer formed on top of the anode body, includes the following: a step for forming the dielectric film on the surface of the anode body; a step for forming the solid electrolyte layer on top of the dielectric film; a step for raising the temperature of and melting an ionic compound; a step for impregnating the anode body, on which is formed the solid state electrolyte layer, with the melted ionic compound; and a step for cooling and condensing the ionic compound that after the same has been impregnated.

Publication: CN 104662624 A 20150527

Applicant: SANYO ELECTRIC CO
Inventor: KOSUGE KEIKO; UEDA MASAHIRO
Prio: JP 20120926 2012212781, JP 20120926 2012212782, JP 20130924 2013005626
Appl.No: CN201380050356



...

IPC: H01G 9/028

Optoelectronic devices with organometal perovskites with mixed anions

The invention provides an optoelectronic device comprising a mixed-anion perovskite, wherein the mixed-anion perovskite comprises two or more different anions selected from halide anions and chalcogenide anions. The invention further provides a mixed-halide perovskite of the formula (I) [A][B][X]3 wherein: [A] is at least one organic cation; [B] is at least one divalent metal cation; and [X] is said two or more different halide anions. In another aspect, the invention provides the use of a mixed-anion perovskite as a sensitizer in an optoelectronic device, wherein the mixed-anion perovskite comprises two or more different anions selected from halide anions and chalcogenide anions. The invention also provides a photosensitizing material for an optoelectronic device comprising a mixed-anion perovskite wherein the mixed-anion perovskite comprises two or more different anions selected from halide anions and chalcogenide anions.

Publication: CN 104662625 A 20150527

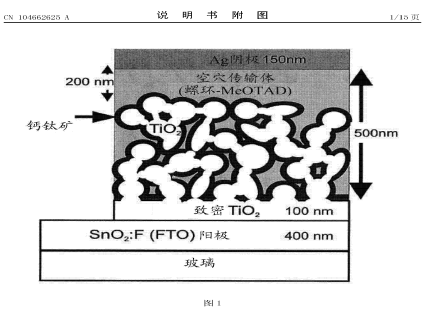
Applicant: ISIS INNOVATION

Inventor: LEE MICHAEL; MURAKAMI TAKURO; SNAITH HENRY

Prio: GB 20130520 2013051306, GB 20120518 201208793

Appl.No: CN201380037625

IPC: H01G 9/20



46

Antipole for dye-sensitization solar cell, and dye-sensitization solar cell

An antipole (20) for a dye-sensitization solar cell, the antipole being provided with a conductive layer (21), and a contact-preventing layer (23) formed of an insulating substance, the contact-preventing layer being formed on one surface of the conductive layer (21).

Publication: CN 104662626 A 20150527

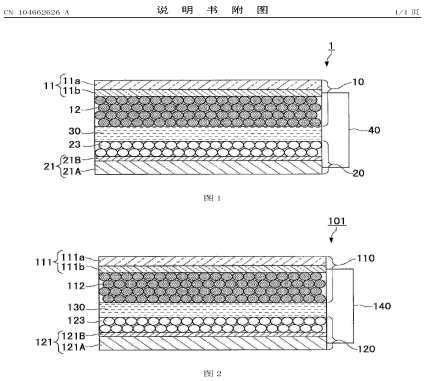
Applicant: TOPPAN PRINTING CO LTD; UNIV TOKYO SCI EDUC FOUND

Inventor: ARAKAWA HIRONORI; KUDO TOMOHIRO; MUROYA SYOUGO; NOZAWA KOUYA; OZAWA HIRONOBU; SHIBAYAMA NAOYUKI; WATANABE NAOYA

Prio: JP 20120918 2012204696, JP 20130125 2013012408, JP 20130918 2013075129, JP 20130822 2013172711

Appl.No: CN201380047986

IPC: H01G 9/20



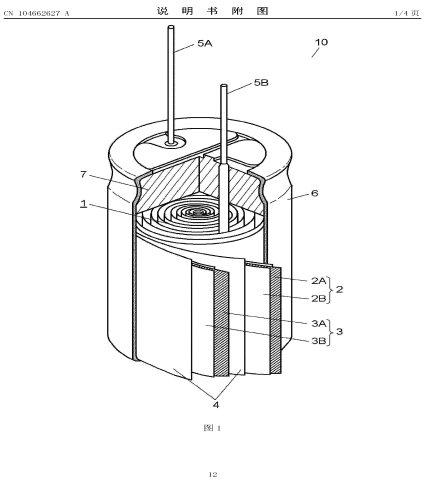
30

Electrode for capacitor and capacitor using same

This electrode for a capacitor has a current collector and an electrode layer that is positioned so as to contact the current collector and is capable of occluding and discharging cations. The electrode layer contains: first carbon-material particles capable of occluding and discharging cations; and second carbon-material particles that are capable of occluding and discharging cations and have a smaller average primary-particle diameter than that of the first carbon-material particles. The amount of second carbon-material particles contained in the electrode layer is less than the amount of first carbon-material particles contained therein.

Publication: CN 104662627 A 20150527

Applicant: PANASONIC CORP
Inventor: ISII KIYOHIRO
Prio: JP 20120928 2012215883, JP 20130911 2013005376
Appl.No: CN201380049971
IPC: H01G 11/24

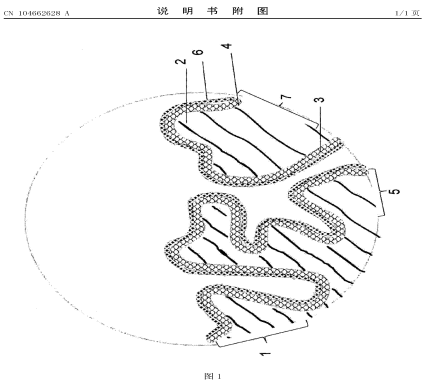


Use of mixtures of self-doped and foreign-doped conductive polymers in a capacitor

The present invention relates to a process for the production of a capacitor, comprising the process steps: a) the provision of an electrode body (1) of an electrode material (2), wherein a dielectric (3) covers one surface (4) of this electrode material (2) at least partly under formation of an anode body (5); b) the introduction of a dispersion comprising a dispersing agent, a foreign- doped conductive polymer and counter-ions which are not covalently bonded to the foreign-doped conductive polymer into at least a part of the anode body (5); c) the at least partial removal of the dispersing agent under obtaining a solid electrolyte (6) in a capacitor body; wherein a self-doped conductive polymer is additionally introduced into at least a part of the anode body (5). The present invention also relates to the capacitor obtainable by this process, a capacitor, electronic circuits, the use of a capacitor and a dispersion.

Publication: CN 104662628 A 20150527

Applicant: HERAEUS PRECIOUS METALS GMBH
Inventor: ASTEMAN KATRIN; INTELMANN MATTHIAS; MERKER UDO; REUTER KNUD; SAUTTER ARMIN
Prio: DE 20120927 102012018976, EP 20130925 2013002871, US 20121009 201261711369
Appl.No: CN201380049328
IPC: H01G 11/48

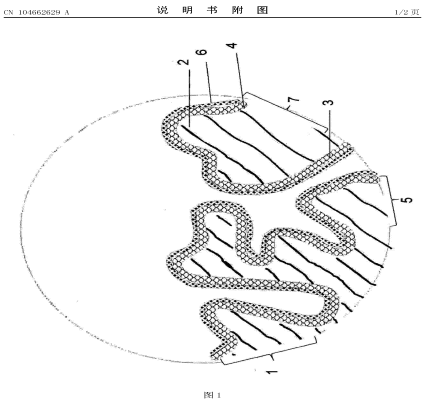


Use of PEDOT/PSS dispersions of high PEDOT content for the production of capacitors and solar cells

The present invention relates to a process for the production of a capacitor, comprising the process steps: a) the provision of an electrode body (1) of an electrode material (2), wherein a dielectric (3) covers one surface (4) of this electrode material (2) at least partly to form an anode body (5); b) the introduction of a dispersion comprising a dispersing agent and complexes of polythiophenes and polyanions, wherein the weight ratio of polythiophenes : polyanions in the dispersion is greater than 0.5, into at least a part of the anode body (5); c) the at least partial removal of the dispersing agent to obtain a solid electrolyte (6) in a capacitor body. The invention also relates to the capacitor obtainable by this process, a capacitor, electronic circuits, the use of a capacitor, a process for the preparation of a dispersion, the dispersion obtainable by this process, a process for the production of an organic solar cell, the organic solar cell obtainable by this process and the use of a dispersion for the production of an organic solar cell.

Publication: CN 104662629 A 20150527

Applicant: HERAEUS PRECIOUS METALS GMBH
Inventor: ASTEMAN KATRIN; ELSCHNER ANDREAS; INTELMANN MATTHIAS; SCHEEL ARNULF
Prio: DE 20120927 102012018978, EP 20130925 2013002870, US 20121009 201261711408
Appl.No: CN201380049352
IPC: H01G 11/48

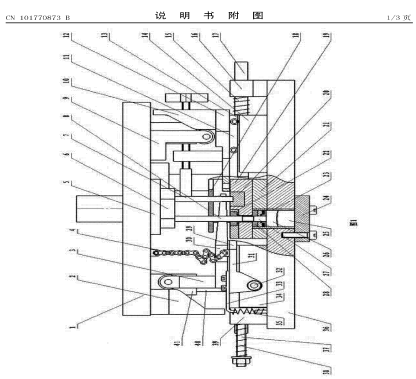


21

Explosion proof aluminous shell stamping forming die of capacitor

Publication: CN 101770873 B 20150527

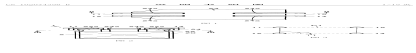
Applicant: LIANG HUIXIN; ZENG TIEGANG
Inventor: LIANG HUIXIN
Prio:
Appl.No: CN201010118596
IPC: H01G 13/00



6

Method for manufacturing electrolytic capacitor

Publication: CN 102074356 B 20150520

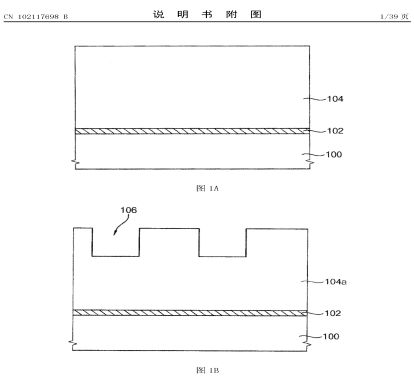


Applicant: SAGA SANYO IND CO LTD; SANYO ELECTRIC CO
Inventor: KAWAKUBO TETSUYA; NAKAO HIRONOBU
Prio: JP 20091124 2009266447
Appl.No: CN201010277160
IPC: H01G 9/00

Methods of forming capacitors and DRAMs

Publication: CN 102117698 B 20150506

Applicant: SAMSUNG ELECTRONICS CO LTD
Inventor: CHA JI-HOON; KANG DAE-HYUK; KIM YOUNG-HOO; LEE HYO-SAN; LEE KUN-TACK; OH JUNG-MIN; PARK IM-SOO; SHIM WOO-GWAN; YOON BO-UN
Prio: KR 20091224 20090130973, KR 20100112 20100002838
Appl.No: CN201010605685
IPC: H01G 4/00

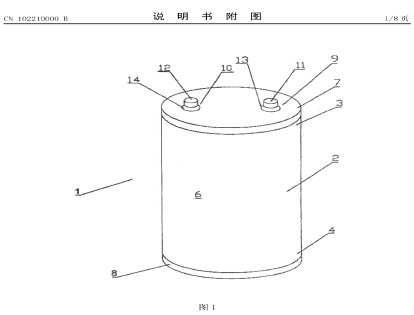


22

A charge storage device

Publication: CN 102210000 B 20150506

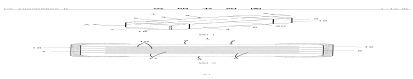
Applicant: CAP XX LTD
Inventor: AITCHISON PHILLIP BRETT; BILYK ALEXANDER; KING WARREN; NGUYEN JOHN CHI HUNG
Prio: AU 20080909 2008904683, AU 20090909 2009001189
Appl.No: CN200980144547
IPC: H01G 11/24



23

Method for manufacturing ceramic electronic component, apparatus and method for position determination, and apparatus and method for marker formation

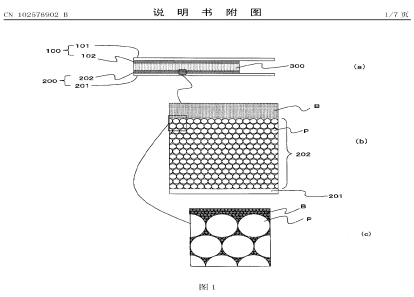
Publication: CN 102568825 B 20150520



Applicant: MURATA MANUFACTURING CO
Inventor: TAKASHIMA KANNA; YOKOTA KOREO
Prio: JP 20101102 2010246275, JP 20101119 2010258453, JP 20110929 2011215095
Appl.No: CN201110329276
IPC: H01G 4/30

Electrochemical device using solid polymer electrolyte using fine polymer composite particles

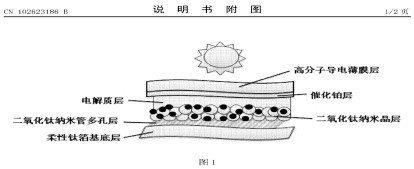
Publication: CN 102576902 B 20150527
Applicant: INST NAT COLLEGES TECH JAPAN; NAT UNIV CORP KYOTO UNIV
Inventor: FUKUDA TAKESHI; MORINAGA TAKASHI; OONO KOUJI; SATO TAKAYA; TSUJII YOSHINOBU
Prio: JP 20091021 2009242879, JP 20101020 2010068454, JP 20100604 2010129364
Appl.No: CN201080047253
IPC: H01G 11/24



28

Titanium-foil-based flexible dye-sensitized solar cell and preparation method thereof

Publication: CN 102623186 B 20150513
Applicant: UNIV DONGHUA
Inventor: LI YAOGANG; WANG HONGZHI; WANG YAQI; ZHANG QINGHONG
Prio:
Appl.No: CN201210094267
IPC: H01G 9/04



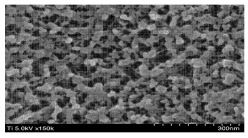


图 2

7

Full-automatic electrolyte pressurizing impregnation device and method for aluminum electrolytic capacitor

Publication: CN 102693848 B 20150513

Applicant: NANTONG SUNION ELECTRONIC CO LTD
Inventor: HUANG JUAN; JIANG JINWEI; MIAO WEIWEI; TAO HUIJUAN; WU LIANGCHENG; WU ZHENGMING
Prio:
Appl.No: CN201210208559
IPC: H01G 13/04

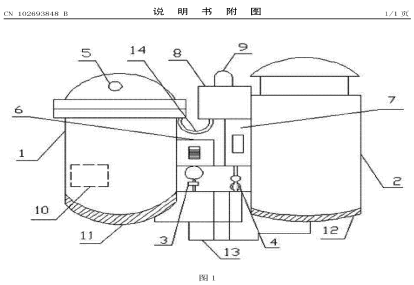


图 1

Power capacitor

Publication: CN 102696084 B 20150520

Applicant: BOSCH GMBH ROBERT
Inventor: SPARKA HARTMUT
Prio: DE 20091229 102009055376, EP 20101105 2010066874
Appl.No: CN201080059785
IPC: H01G 4/228

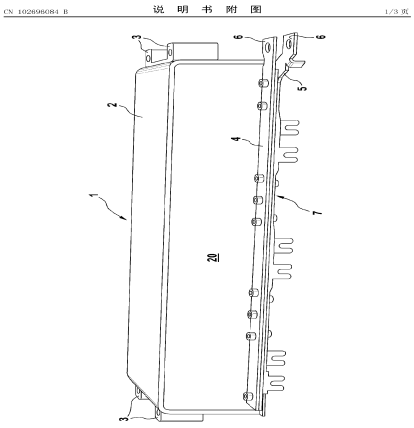
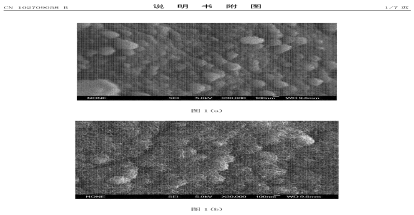


图 1

Method for preparing manganese dioxide-nickel hydroxide composite electrode materials of super capacitors

Publication: CN 102709058 B 20150513

Applicant: UNIV JILIN
Inventor: WANG XIN; YAN BAOYU; ZHAO YUNXIAO; ZHENG WEITAO
Prio:
Appl.No: CN201210223152

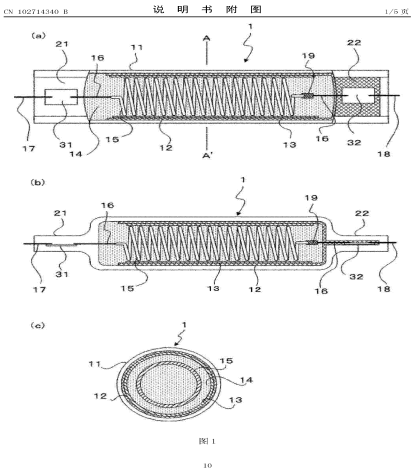


IPC: H01G 9/042

Dye-sensitized solar cell

Publication: CN 102714340 B 20150513

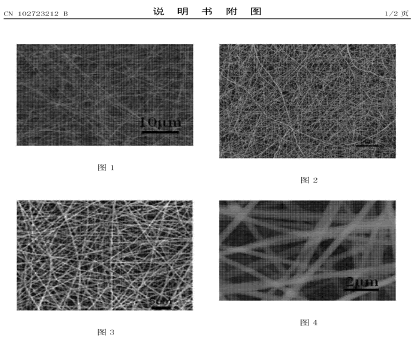
Applicant: USHIO ELECTRIC INC
Inventor: NAKAMURA MASAKI
Prio: JP 20091202 2009274254, JP 20101124 2010070866
Appl.No: CN201080050404
IPC: H01G 9/20



ITO (indium tin oxid) nanofiber/cadmium sulfide (CdS) quantum dot solar cell and preparing method thereof

Publication: CN 102723212 B 20150506

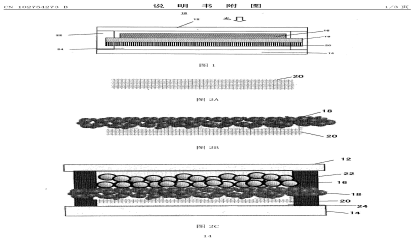
Applicant: UNIV TIANJIN
Inventor: DU XIWEN; JIN MINGJUN; LING TAO
Prio:
Appl.No: CN201210173586
IPC: H01G 9/20



Dye-sensitized solar cell and method for manufacturing the same

Publication: CN 102754273 B 20150506

Applicant: NAT UNIVERSITY CORP KYUSYU INST OF TECHNOLOGY; NIPPON STEEL & SUMIKIN CHEM CO
Inventor: HAYASE SHUZI; KOHNO MITSURU; YAMAGUCHI YOSHIHIRO



Prio: JP 20100203 2010022148, JP 20110104 2011000001
Appl.No: CN201180007497
IPC: H01G 9/20

Electrolyte for flame-retardant wide-temperature high-voltage aluminum electrolytic capacitor and preparation method thereof

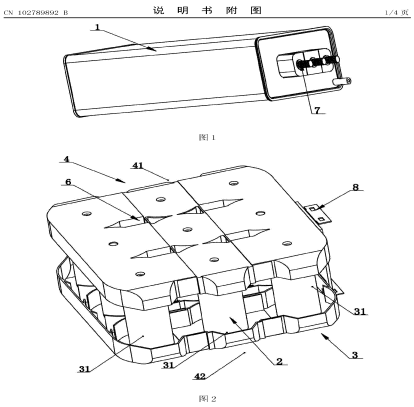
Publication: CN 102779644 B 20150527

Applicant: SHENZHEN ZHONGYUAN ELECTRONICS CO LTD
Inventor: LUO ZHIGANG; NING KUN; WANG DEQUAN
Prio:
Appl.No: CN201210164156
IPC: H01G 9/035

Power capacitor

Publication: CN 102789892 B 20150513

Applicant: ZHEJIANG WEIDEKANG ELECTRIC CO LTD
Inventor: CAI FUQIANG; JIN LING
Prio:
Appl.No: CN201210319951
IPC: H01G 4/002

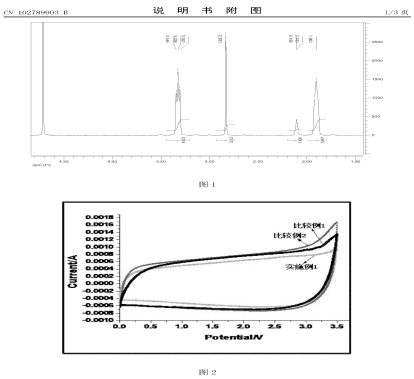


6

Preparation process, electrolyte and electrochemical element of electrolytic salt

Publication: CN 102789903 B 20150520

Applicant: UNIV EAST CHINA SCIENCE & TECH
Inventor: GUAN SHIYOU; LIN FANGQIN; WANG LIXIA; ZHANG HUICHEN; ZHAO ZHEN
Prio:
Appl.No: CN201210002903
IPC: H01G 11/84



22

Formation processing method for reducing leaking current of low-voltage formation foil

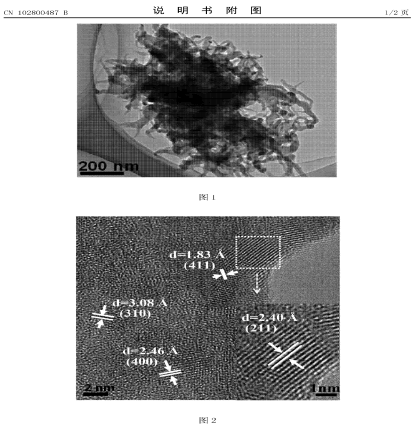
Publication: CN 102800483 B 20150520

Applicant: NANTONG HAISTAR ELECTRONIC CO LTD
Inventor: JIN ZHIGANG; WANG JIANZHONG; YAN JIXIN
Prio:
Appl.No: CN201210282473
IPC: H01G 9/04

Electrode material with 3D nanometer structure for super capacitor and application thereof

Publication: CN 102800487 B 20150520

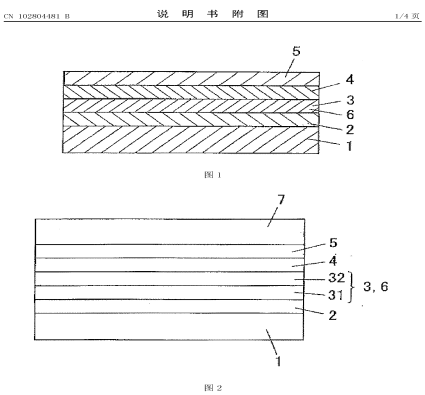
Applicant: CHINESE ACAD TECH INST PHYSICS
Inventor: BAI XIAOXIA; CHEN PING; HU XIUJIE; SUN CHENGHUA; XIAO SHIZHUO; YAN JUN; ZHOU SHUYUN
Prio:
Appl.No: CN201210280586
IPC: H01G 9/042



Photoelectric Element

Publication: CN 102804481 B 20150520

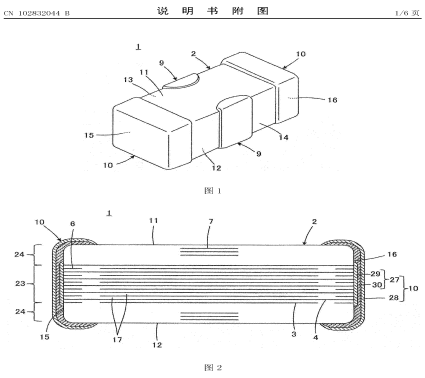
Applicant: PANASONIC CORP; UNIV WASEDA
Inventor: KAMBE SHING; KATO FUMIAKI; NISHIDE HIROYUKI; OYAIZU KENICHI; SEKIGUCHI TAKASHI; SUZUKA MICHIO; YAGUCHI MITSUO; YAMAKI TAKEYUKI
Prio: JP 20090619 2009147070, JP 20090731 2009180174, JP 20091027 2009246797, JP 20100205 2010024413, JP 20100616 2010060245
Appl.No: CN201080027326
IPC: H01G 9/20



Monolithic ceramic electronic component

Publication: CN 102832044 B 20150520

Applicant: MURATA MANUFACTURING CO
Inventor: SAKURATANI MASAHIRO
Prio: JP 20110616 2011133884, JP 20120330 2012079712
Appl.No: CN201210191015
IPC: H01G 4/228

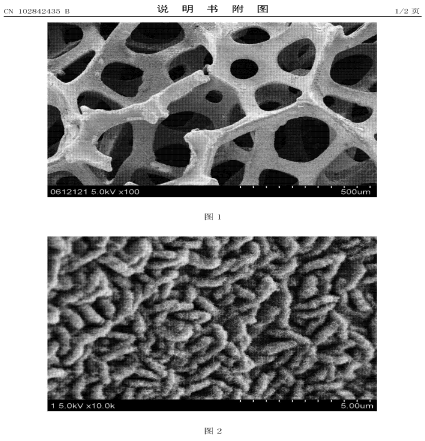


16

Preparation of three-dimensional NiO-MnOOH core-shell hybrid hierarchical structure material

Publication: CN 102842435 B 20150513

Applicant: NAT UNIV DONG HWA
Inventor: HU JUNQING; LI GAO; LI WENYAO; LIU QIAN; SUN JIANQING; ZHAO WEIWEI
Prio:
Appl.No: CN201210342175
IPC: H01G 9/042

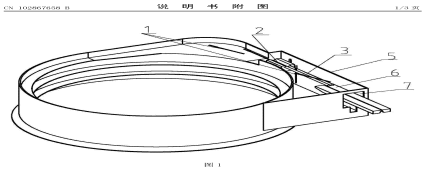


8

Rod-like track of guide pin feeding and sorting device

Publication: CN 102867658 B 20150520

Applicant: HUNAN AIHUA GROUP CO LTD
Inventor: AI LIHUA; CHEN TAIPING
Prio:
Appl.No: CN201210403768



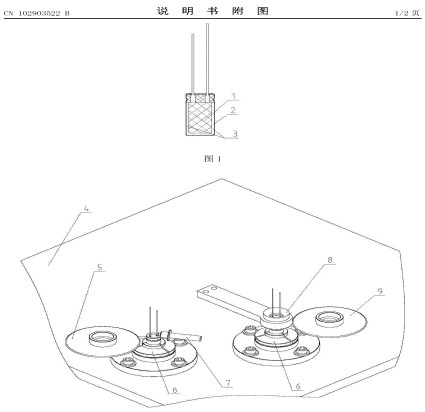
6

IPC: H01G 13/00

Production method of aluminum electrolytic capacitor and full-automatic assembling machine

Publication: CN 102903522 B 20150520

Applicant: HUNAN AIHUA GROUP CO LTD
Inventor: AI LIHUA; CHEN TAIPING
Prio:
Appl.No: CN201210403725
IPC: H01G 9/00

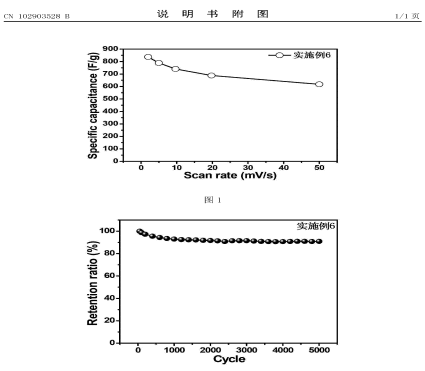


6

Method for rapidly preparing conducting carbon and ruthenium oxide combination electrode material

Publication: CN 102903528 B 20150527

Applicant: UNIV HARBIN ENG
Inventor: FAN ZHUANGJUN; WANG QIAN; WEI TONG; YAN JUN
Prio: CN 20120425 201210124375
Appl.No: CN201210321459
IPC: H01G 9/042

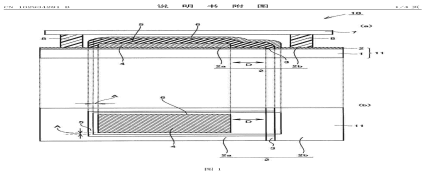


6

Wet-type solar cell and wet-type solar cell module

Publication: CN 102934281 B 20150506

Applicant: SHARP KK
Inventor: FUKUI ATSUSHI; KOMIYA RYOICHI; YAMANAKA RYOHSUKE



Prio: JP 20100609 2010132247, JP 20110606 2011062936
Appl.No: CN201180028531
IPC: H01G 9/20

Preparation of cobalt-bismuth composite oxide and application of cobalt-bismuth composite oxide in preparation of super capacitor electrode

Publication: CN 102969164 B 20150513

Applicant: UNIV NORTHWEST NORMAL
Inventor: HU ZHONGAI; JIA PENGFEI; LI XIAOTING; LI ZHIMIN; WU HONGYING; YANG YUYING
Prio:
Appl.No: CN201210537887
IPC: H01G 9/042

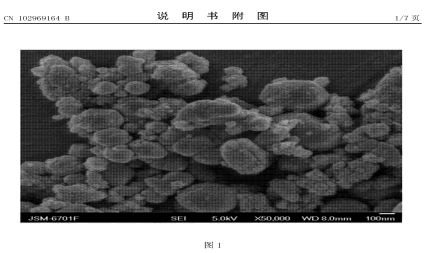


图 1

9

Self-adaption temperature compensating capacitor

Publication: CN 102983001 B 20150513

Applicant: SUZHOU FURUI MUTUAL INDUCTOR CO LTD
Inventor: LI DONGHONG; LUO CHENGMU; WANG QIANG; ZHANG DONGBO; ZHANG GUIXIN
Prio:
Appl.No: CN201210504599
IPC: H01G 4/002

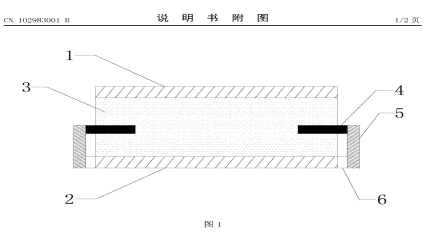


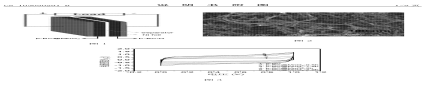
图 1

6

Asymmetric electrochemical capacitor and preparation method of asymmetric electrochemical capacitor

Publication: CN 103050291 B 20150527

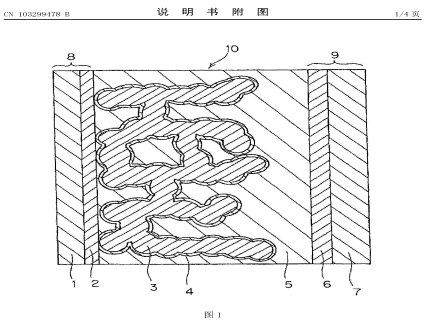
Applicant: USTC UNIV SCIENCE TECH CN



Inventor: CHEN LIFENG; HUANG ZHIHONG; YU SHUHONG
Prio:
Appl.No: CN201210584441
IPC: H01G 11/30

Photoelectric conversion element

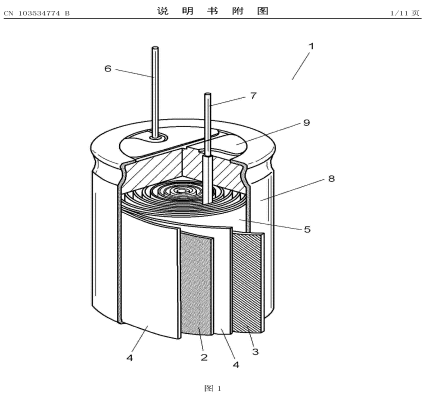
Publication: CN 103299478 B 20150520
Applicant: DAI ICHI KOGYO SEIYAKU CO LTD
Inventor: SAITO YASUTERU
Prio: JP 20110113 2011004940, JP 20110622 2011138488, JP 20120111 2012000125
Appl.No: CN201280004961
IPC: H01G 9/20



20

Electrode foil,method for manufacturing electrode foil, and capacitor

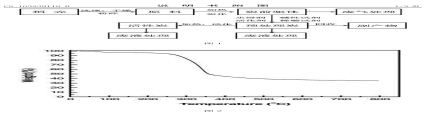
Publication: CN 103534774 B 20150527
Applicant: PANASONIC CORP
Inventor: HIROKI KAMIGUCHI; HITOSHI ISHIMOTO; MASASHI SHOJI
Prio: JP 20110516 2011109039, JP 20120514 2012003123
Appl.No: CN201280023561
IPC: H01G 9/04



12

Preparation method of activated carbon for electrochemical energy storage device

Publication: CN 103539119 B 20150506
Applicant: CHINA FIRST AUTOMOBILE WORKS



Inventor: CHEN SHULI; HAN JINLEI; RONG CHANGRU; WEI XIAOCHUAN; ZHANG KEJIN
Prio:
Appl.No: CN201310521542
IPC: H01G 11/34

Preparation method of graphene composite electrode material

Publication: CN 103745829 B 20150520

Applicant: SHENZHEN CHINA STAR OPTOELECT
Inventor: WANG YEWEN
Prio:
Appl.No: CN201310746256
IPC: H01G 9/042

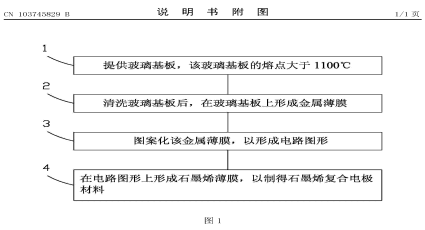


图 1