Lithium battery patent disclosure

What is a negative current collector in a lithium ion battery?
The lithium-ion battery of claim 25,wherein the negative current collector is made of copper or a material selected from the group consisting of titanium,nickel,and aluminum. (27. The lithium-ion battery of claim 25,wherein the negative current collector comprises a material selected from the group consisting of titanium,nickel,and aluminum.)

What happens if a lithium ion battery is discharged to zero volts?
When a conventional lithium-ion battery is discharged to a point near zero volts,it may exhibit a loss of deliverable capacity and corrosion of the negative electrode current collector (copper) and possibly of the battery case. (Depending on the material used and the polarity of the case)

Does lithium titanate affect battery performance?
The use of lithium titanate in a battery is believed to reduce the likelihood of lithium platingduring charging. Lithium plating is a phenomenon that can negatively impact the performance of lithium-ion batteries.

Do lithium ion batteries have protection circuitry?
Conventional lithium-ion batteries may include protection circuitryto prevent damage in the event of a low voltage condition. These batteries may be utilized in devices that include protection circuitry,which reduces the current drain from the battery by disconnecting it when necessary.

What is the decomposition potential of a licoo 2 battery?
The decomposition potential of the LiCoO2 active material in a LiCoO2 batteryis approximately 1.35 volts. Upon subsequent discharging of the battery,the negative electrode potential follows a path designated by line 326.

Can a lithium ion battery be fully discharged?
A lithium-ion battery such as that described herein can be fully dischargedwhile the materials for both electrodes,including their corresponding current collectors,remain stable (e.g.,corrosion of the current collectors and/or the decomposition of active material may be avoided,etc.).

This disclosure provides a lithium (Li) ion battery that includes an anode, a cathode positioned opposite to the anode, a porous separator positioned between the anode ...

The present disclosure relates to a phosphorus additive that is useful for stable cycling and storage of lithium ion cells at high temperatures, an electrolyte containing the ...

The present disclosure describes various types of batteries, including lithium-ion batteries having an anode assembly comprising: an anode comprising a first porous ceramic matrix having pores; and a ceramic

separator layer affixed directly or indirectly to the anode; a cathode; an anode-side current collector contacting the anode ...

[0011] US 2014/159674 discloses a method for monitoring a Li-ion battery and monitoring device for the implementation thereof. [0012] Additives have also been added to the electrolyte to improve the formation of the SEI and therefore enhancing the anode stability.

The present disclosure describes various types of batteries, including lithium-ion batteries having an anode assembly comprising: an anode comprising a first porous ceramic ...

CROSS REFERENCE TO RELATED APPLICATIONS. This application is a Continuation-In-Part of now-abandoned U.S. patent application Ser. No. 15/941,841, filed Mar. 30, 2018 and entitled "cathode of lithium ion battery", the entirety of which is incorporated by reference herein, which claims the benefit of Taiwan Application No. 106145979, filed on Dec. ...

A lithium-ion battery includes a positive electrode including a positive current collector, a first active material, and a second active material. The battery also...

CROSS-REFERENCE TO RELATED APPLICATIONS. This application claims the priority to Chinese Patent Application No. 202010219542.3, titled "Lithium Iron Phosphate Cathode Sheet, Preparation Method thereof and Lithium-Ion Battery", filed on Mar. 25, 2020, the content of which is incorporated herein by reference in its entirety.

[0011] US 2014/159674 discloses a method for monitoring a Li-ion battery and monitoring device for the implementation thereof. [0012] Additives have also been added to ...

The present disclosure discloses a stable and high-capacity neutral aqueous redox flow lithium battery based on redox-targeting reaction and belongs to the technical field of flow lithium batteries. The present disclosure solves the technical problem that an existing flow battery can only work at low current density. The flow lithium battery of the present disclosure ...

The present disclosure provides a lithium ion battery material and a preparation method therefor and a use thereof. The structural formula of the lithium ion battery material is Li 4 ZrF 8-2X O X, wherein 0<X<=0.15.According to the present disclosure, oxygen doping is carried out on a Li 4 ZrF 8 material by means of a zirconium-containing oxide, and oxygen doping is carried out at ...

The process of making a lithium ion battery cathode comprises the step of forming a slurry of an active material, a nano-size conductive agent, a binder polymer, a solvent and a dispersant. The solvent consists essentially of one or more of a compound of Formula 1, 2, or 3, and the dispersant comprises an ethyl cellulose.

the lithium battery of this disclosure has the exhaust structure combined with the exhaust tube of the battery cell, so that when the gas produced by the battery cell and flowing along the exhaust tube is accumulated to press the bottom of the plug of the tube sleeve. After the gas is accumulated to a certain quantity, the gas will push the plug away from the tube sleeve and ...

A rechargeable lithium battery includes a compound represented by Chemical Formula 1: In Chemical Formula 1, each of k, l, and m is independently an integer of 0 to 20, n is an integer of 1 to 7, and k, l and m are selected such that the compound of Chemical Formula 1 has an asymmetrical structure. The compound of Chemical Formula 1 may be included in the positive ...

The present disclosure relates to methodologies, systems and apparatus for generating lithium ion battery materials. Starting materials are combined to form a homogeneous precursor solution...

Justia Patents Organic Component Is Active Material US Patent for Lithium-sulfur battery with high sulfur loading Patent (Patent # 10,916,803) Lithium-sulfur battery with high sulfur loading . Sep 27, 2018 - Cornerstone Research Group, Inc. A lithium-sulfur battery cathode including conductive porous carbon particles vacuum infused with sulfur and a conductive ...

Web: https://degotec.fr