

Can a lithium ion battery be anode-free?

Although Li metal processing patents have been filed by CATL, employment of an 'anode-free' cell design is also a possibility. Positive electrode: NMC9 $\times$ 189; or NMC811 /conductive carbon /PVDF (96 : 2 : 2 by mass), see 'Lithium-ion Battery High-energy Cathode Innovation & Patent Review'. Design: stacked multilayer, prismatic cells.

How does the electrolyte layer prevent short circuits due to lithium dendrite formation?

The resulting electrolyte layer apparently prevents short circuits due to lithium dendrite formation by exhibiting sufficient mechanical resistance in the absence of cracks through which lithium dendrites could grow (self-healing character of supramolecular interactions).

What is a solid-state / semi-solid Li-ion battery technology decision tree?

Comprehension of solid-state / semi-solid Li-ion battery technology decision trees allows for the identification of promising product development directions that have not yet been explored.

Which electrolytes are suitable for lithium ion toxicity?

Unique capability: supramolecular ionic liquid /polymer /lithium salt electrolytes with very favorable ion conductivity (up to  $2.4 \times 10^{-3}$  S/cm) and high boiling point ( $>438$  °C), along with corresponding cells with lithium metal negative electrodes. Leap of faith: the toxicity of triphenylene-containing electrolytes will be acceptable.

Are CATL & CALB suing each other for Li-ion battery intellectual property?

In December 2022, it was reported that companies CATL and CALB have filed lawsuits with respect to each other related to Li-ion battery intellectual property (not related to solid-state batteries).

SVOLT pushes short knife products to a new level, realizing the characteristics of extreme cost, extreme safety, extreme battery life and high integration. The high integration of thermal management achieves a maximum space utilization rate of more than 76%. The low-cost iron-lithium system can meet the long battery life of more than 700km, and ...

Svolt is the world first super-fast charging lifepo4 short blade battery. This shows that lithium iron + short knife can have good adaptability in the PHEV field. Therefore, Svolt will further ...

7. A separator for a high energy rechargeable lithium battery comprises: at least one ceramic composite layer or coating, said layer including a mixture of 20-95% by weight of inorganic particles selected from the group consisting of SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, CaCO<sub>3</sub>, TiO<sub>2</sub>, SiS<sub>2</sub>, SiPO<sub>4</sub>, and mixtures thereof, and 5-80% by weight of a matrix material selected from the ...

Geely Automobile, a product of Zhineng Automobile, recently officially released the latest generation of self-developed and self-produced "blade"; lithium iron phosphate ...

Svolt has comprehensively upgraded its dagger battery; supports fast charging capabilities above 2C; is trying to use an 800V architecture in PHEV models; and achieves product scale effects by sharing batteries for passenger ...

As the largest consumer of lithium batteries among new energy vehicle manufacturers, the head of BYD has emphasized that lithium battery manufacturers should focus on enhancing their manufacturing technologies to increase both production capacity and quality, instead of annually raising lithium battery prices, which would result in increased costs for ...

We propose the significance of patent claims in the technological trajectory of lithium battery manufacturing (LBM-Tra) research. And we construct a more robust attention mechanism of claim type and claim dependency (T& D-Mechanism).

6 ???&#0183; Preview of the "Solid-state / Semi-solid Li-ion Battery Innovation & Patent Review", including sections on commercially relevant patents, benchmarking and identification of product launch risk factors.

Godshall et al. further identified the similar value of ternary compound lithium-transition metal-oxides such as the spinel  $\text{LiMn}_2\text{O}_4$ ,  $\text{Li}_2\text{MnO}_3$ ,  $\text{LiMnO}_2$ ,  $\text{LiFeO}_2$ ,  $\text{LiFe}_5\text{O}_8$ , and  $\text{LiFe}_5\text{O}_4$  (and later lithium-copper-oxide and ...

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The utility model provides a soft package lithium ion battery laser welding electrode lug cutting knife, which comprises a knife handle, a blade and a connecting rod for connecting the...

This patent application claims the benefit under 35 U.S.C. § 119(e) of U.S. Provisional Patent App. No. 62/259,161, filed Nov. 24, 2015, entitled "METHOD AND APPARATUS FOR RECYCLING LITHIUM-ION BATTERIES," and is a Continuation-in-Part (CIP) of U.S. patent application Ser. No. 13/855,994, filed Apr. 3, 2013, entitled "METHOD AND APPARATUS ...

A kind of improved lithium ion battery slitting knife rest is the utility model is related to, including:Upper rotor, lower rotor, upper frame one, upper frame two, lower support one, lower support two, cushion block one

and cushion block two, the front and rear both sides of two ...

Justia Patents Using A Battery Testing Device US Patent for Lithium-ion battery safety monitoring Patent (Patent # 10,302,703) Lithium-ion battery safety monitoring . Jul 6, 2016 - Algolion Ltd. Method and system for monitoring the safety of a rechargeable Li-ion battery (LIB). An initial electrical state of the LIB is determined and altered by application or removal of DC ...

A kind of improved lithium ion battery slitting knife rest is the utility model is related to, including:Upper rotor, lower rotor, upper frame one, upper frame two, lower support one, lower support two, cushion block one and cushion block two, the front and rear both sides of two lower end of the upper frame one and upper frame are equipped with stand bevel;The cushion ...

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