

International patent for lithium battery separator

How a patent analysis is performed for power lithium-ion battery separator?

In order to provide appropriate decision references for the industry development, patent analysis was carried out. On the basis of Derwent Innovation Index (DII), global patents related to power lithium-ion battery separator were analyzed from aspects of global development scale and trend, technology fields, geographic distribution, top assignees.

Is power lithium-ion battery separator a fast-growth industry?

The findings show that power lithium-ion battery separator industry has entered fast-growth stage. In branch technology fields, raw materials are the priority research and development (R&D) areas of power lithium-ion battery separator. Japan has applied for a large number of patents and occupied the leading position.

Who makes lithium ion battery separators?

Competition in the lithium-ion battery separator market is fierce. Some of the largest suppliers are Asahi Kasei (24%) and Celgard (11%), Toray (21%), SK (11%), UBE (9%), Sumitomo (7%) and others (17%).

Are polymer separators suitable for lithium ion batteries?

Currently, most commercial separators for lithium-ion batteries are typically porous polyolefin films, both polyethylene and polypropylene. These polymer separators are generally not compatible with some conventional electrolytes that include solvents of high dielectric constants, such as: This is due to the low surface energies of the polyolefins.

What is a glass separator for lithium-ion batteries?

A new type of separator for lithium-ion batteries (LIBs) has been developed using ultrathin micrometer-sized sodium borosilicate glass platelets coated directly on a battery electrode with a water-based binder. The coating process is described in detail, demonstrating coating thicknesses of the glass separator of less than 50 μm.

What are the different types of lithium battery separators?

At present, the commercial lithium battery separators in the market are mainly polyethylene- (PE-) and polypropylene- (PP-) based microporous polyolefin separators [16].

The development of technologies related to power lithium-ion battery separator has been taken place in recent years. In order to provide appropriate decision references for ...

[0006] The present invention provides a separator for lithium batteries as ...

New capacity will produce enough separator material to power 1.4 million electric vehicles ENTEK has

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committed to the transformational expansion of its US lithium-ion battery separator ...

A core-shell structured polysulfonamide@polyvinylidene fluoride-co-hexafluoropropene composite nonwoven separator was exploited for lithium ion battery via ...

EP2710652A1 EP12789264.4A EP12789264A EP2710652A1 EP 2710652 A1 EP2710652 A1 ...

The properties and characteristics of a lithium-ion battery separator are vital ...

EP2710652A1 EP12789264.4A EP12789264A EP2710652A1 EP 2710652 A1 EP2710652 A1 EP 2710652A1 EP 12789264 A EP12789264 A EP 12789264A EP 2710652 A1 EP2710652 A1 ...

lithium . ENTEK designs, engineers, and manufactures separators to deliver a strong value proposition to our customers by understanding the fundamental science behind them. ... With ...

Separators for Lithium-Ion Batteries. Robert Spotnitz, Robert Spotnitz. Battery Design LLC, 2277 Delucchi Drive, Pleasanton, CA 94588, USA. ... How a Battery Separator Is ...

An insulating (nonconductive) microporous polymeric battery separator comprised of a single layer of enmeshed microfibers and nanofibers is provided. Such a ...

The mechanical integrity of two commercially available lithium-ion battery separators was investigated under uniaxial and biaxial loading conditions. Two dry-processed ...

On the basis of Derwent Innovation Index (DII), global patents related to power lithium-ion battery separator were analyzed from aspects of global development scale and ...

A battery separator for a lithium battery is disclosed. The separator has a microporous membrane and a coating thereon. The coating is made from a mixture of a gel forming polymer, a first ...

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Examples thereof include a battery separator used for a lithium ion secondary battery, a nickel-hydrogen battery, a nickel-cadmium battery, a polymer battery, and the like, a ...

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[0006] The present invention provides a separator for lithium batteries as defined in claim 1. One or more embodiments include a separator that may maintain a coating ...

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The invention relates to a separator for a lithium-ion battery, comprising an organic substrate coated with a coating layer comprising a binder and alumina particles, surface treated with a...

CROSS-REFERENCE TO RELATED APPLICATIONS. This application is a divisional application claiming priority to U.S. patent application Ser. No. 16/070,817, filed Jul. ...

Last year, Asahi Kasei Corporation responded to the booming global demand in the battery market with an investment of ~EUR238m to expand its production of lithium-ion ...

Web: <https://centrifugalslurrypump.es>