

Aluminum plastic film for lithium battery with energy storage

Does aluminum plastic film for lithium-ion battery increase patent applications?

Abstract: The application trend, nationality distribution, major applicants, the technical means and technical efficacy distribution and the key patent of aluminum plastic film for lithium-ion battery were investigated from the perspective of patents. The result shows that patent applications increased rapidly since 2011.

Are aluminum-laminated pouch sheets a key component of lithium-ion batteries?

Lithium-ion batteries (LIBs) are crucial components for electric vehicles (EVs), and their mechanical and structural stabilities are of paramount importance. In this study, the mechanical properties of an aluminum-laminated pouch sheet, as a key component of pouch-type LIBs, are examined.

What materials are used in a lithium battery?

Polypropylene (PP) is used as a heat-sealing material; an Al sheet is employed to protect the interior from moisture and light, and polyamide (PA) or polyethylene terephthalate (PET) provides mechanical stability and durability. The multilayered LIB pouch is a representative composite material used by battery manufacturers.

What are lithium-ion batteries?

Chanmi Moon, Junhe Lian, Myoung Gyu Lee * Research output: Contribution to journal > Article > Scientific > peer-review Lithium-ion batteries (LIBs) are crucial components for electric vehicles (EVs), and their mechanical and structural stabilities are of paramount importance.

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In this study, the mechanical properties of an aluminum-laminated pouch sheet, as a key component of pouch-type LIBs, are examined. Aluminum-laminated pouch sheets have rarely been systematically investigated in the past.

Do aluminum-laminated pouch sheets have mechanical responses?

Aluminum-laminated pouch sheets have rarely been systematically investigated in the past. Owing to the complex composite structure of pouch sheets having metallic and polymeric materials, fully understanding and describing their mechanical responses is scientifically challenging without data or knowledge of the individual materials.

Aluminum-plastic film has excellent electrolyte properties and is an important safe material for soft-pack lithium batteries. Unlike metal case batteries, pouch batteries wrapped in this film ...

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Batteries for consumer electronic products have high requirements in lightweight, differentiation, high energy density, and easy design of appearance and structure of soft-packaging. Energy SEMCORP can provide and customize thin ...

The expanding market of new energy vehicles has raised an urgent demand for battery safety. As a crucial component of pouch batteries, the performance of aluminum-plastic film directly ...

Download Citation | On May 1, 2024, Jie Qu and others published Mechanical performance study and simulation of aluminum-plastic film in pouch Lithium-ion battery based on ductile fracture ...

Identification of elastic and plastic properties of aluminum-polymer laminated pouch film for lithium-ion batteries : A hybrid experimental-numerical scheme. / Moon, Chanmi; Lian, Junhe; ...

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