Jiatianxia Lithium Battery

Lithium-sulfur (Li-S) battery is recognized as one of the promising candidates to break through the specific energy limitations of commercial lithium-ion batteries given the high theoretical specific energy, environmental friendliness, and low cost. Over the past decade, tremendous progress have been achieved in improving the electrochemical performance ...

Interfaces within batteries, such as the widely studied solid electrolyte interface (SEI), profoundly influence battery performance. Among these interfaces, the solid-solid interface between electrode materials and current collectors is crucial to battery performance but has received less discussion and attention. This review highlights the latest research advancements on the ...

This contribution affords an insightful understanding on dead lithium formation with phase field methods, which can contribute general principles on rational design of lithium metal batteries. AB - Lithium metal batteries are the most promising choices for ...

Lithium metal batteries are the most promising choices for next-generation high-energy-density batteries. However, there is little mechanism understanding on lithium dendrite growth during lithium plating and the dead lithium (the main component of inactive lithium) formation during lithium stripping.

Future perspectives. Lithium metal batteries (LMBs) are promising for high energy density batteries. The emerging concentrated electrolytes have many positive ...

Lithium-ion batteries have been widely used in electric vehicles but may cause severe internal short circuit during extreme intrusion-type accidents. A well-defined homogenized model of battery or ...

Gu et al. [21] study the charge-discharge behavior of ternary lithium batteries in a low temperature environment and find that when the ambient temperature drops from 55 o C to 0 o C and -20 ...

On the basis of the redox targeting reactions of battery materials, the redox flow lithium battery (RFLB) demonstrated in this report presents a disruptive approach to drastically enhancing the energy density of ...

The application of lithium-ion batteries (LIBs) for energy storage has attracted considerable interest due to their wide use in portable electronics and promising application for high-power ...

Lithium-ion battery aging mechanism analysis and health prognostics are of great significance for a smart battery management system to ensure safe and optimal use of the battery system. This paper ...

Meanwhile, COF-Tr-BA as the sulfur host for lithium-sulfur (Li-S) battery also exhibits a better

electrochemical property, giving an initial discharge capacity up to 1349 mA h g -1 and a substantial capacity of 627 mA h g -1 after 200 cycles at 0.5C.

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