

Currently, lithium-ion batteries (LIBs) have emerged as exceptional rechargeable energy storage solutions that are witnessing a swift increase in their range of ...

Here we report that a high-performance all-solid-state lithium metal battery with a sulfide electrolyte is enabled by a Ag-C composite anode with no excess Li.

The lithium-sulfur (Li-S) chemistry may promise ultrahigh theoretical energy density beyond the reach of the current lithium-ion chemistry and represent an attractive ...

In this review, we summarized the recent advances on the high-energy density lithium-ion batteries, discussed the current industry bottleneck issues that limit high-energy lithium-ion ...

Over the past few decades, lithium-ion batteries (LIBs) have emerged as the dominant high-energy chemistry due to their uniquely high energy density while maintaining high power and ...

Wu, H. & Cui, Y. Designing nanostructured Si anodes for high energy lithium ion batteries. *Nano Today* 7, 414-429 (2012). Article CAS Google Scholar Liu, N. et al. A ...

To develop high-performance lithium-ion batteries (LIBs), much effort has been focused on exploring novel electrode active materials aiming to replace the commercial LIBs used in 3C ...

Herein, we summarize various strategies for improving performances of layered lithium-rich cathode materials for next-generation high-energy-density lithium-ion batteries. ...

4 ???&#0183; Lithium-ion batteries (LIBs) are critical to energy storage solutions, especially for electric vehicles and renewable energy systems (Choi and Wang, 2018; Masias et al., 2021). ...

In order to achieve the goal of high-energy density batteries, researchers have tried various strategies, such as developing electrode materials with higher energy density, ...

The increasing development of battery-powered vehicles for exceeding 500 km endurance has stimulated the exploration of lithium batteries with high-energy-density and ...

High-energy all-solid-state lithium batteries enabled by Co-free LiNiO<sub>2</sub> cathodes with robust outside-in structures Article 05 October 2023. Ultra-high-voltage Ni-rich layered cathodes in ...

Over the past few decades, lithium-ion batteries (LIBs) have emerged as the dominant high ...

All-solid-state lithium-ion batteries (ASSLIBs) are considered the most promising option for next-generation high-energy and safe batteries. Herein, a practical all-solid-state battery, with a Li- ...

Lithium-ion batteries (LIBs) that combine the intercalation transition-metal-oxide cathodes and graphite (Gr) anodes are approaching their energy density limit 1.Li metal ...

High-energy and stable lithium-ion batteries are desired for next-generation electric devices and vehicles. To achieve their development, the formation of stable interfaces ...

Lithium (Li)-ion batteries have had a profound impact on modern society 1.Over the past 25 years, the specific energy of Li-ion batteries has steadily increased while their cost has dramatically ...

Shifting from the atomic/material level to the cell level, crosstalk between anode and cathode materials during continuous cycling and thick electrodes are required for high ...

At present, the energy density of the mainstream lithium iron phosphate battery and ternary lithium battery is between 200 and 300 Wh kg<sup>-1</sup> or even <200 Wh kg<sup>-1</sup>, which ...

Owing to high specific energy, low cost, and environmental friendliness, lithium-sulfur (Li-S) batteries hold great promise to meet the increasing demand for advanced ...

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