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Title: Vse2 zinc-ion battery energy storage wit

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It is crucial to develop green and clean energy storage devices to address increasing serious environmental issues and promote low-carbon, environmentally friendly, and sustainable ...

As a typical transition-metal dichalcogenides, vanadium diselenide (VSe₂) is a promising electrode material for aqueous zinc-ion batteries due to its metallic characteristics ...

The realizing of high-performance rechargeable aqueous zinc-ion batteries (ZIBs) with high energy density and long cycling life is ...

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1. Introduction Cost-effective and intrinsically safe battery system is an essential condition for adjusting the future energy industry structure [1]. As a promising power source, ...

The realizing of high-performance rechargeable aqueous zinc-ion batteries (ZIBs) with high energy density and long cycling life is promising but still challenging due to the lack ...

This one-stone-for-two-birds strategy would be expected to be applied to large-scale synthesis of a high-performance zinc-ion battery cathode in the future.

In this work, we studied 2D layered VSe₂ with high pseudocapacitive-mediated Zn-ion storage as a cathode for aqueous zinc-ion batteries.

This study provides an effective strategy for the rational design of electrode materials for electrochemical energy-storage devices. Keywords: VSe₂; aqueous zinc-ion ...

Herein, the excellent zinc-ion storage performance in few-layered ultrathin VSe₂ nanosheets is studied in this work.

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Aqueous zinc-ion batteries (ZIBs) are an attractive storage solution for renewable energy storage system (ESS) applications. Despite the intrinsic safety, eco-friendliness, and low cost of ...

The interaction of defects and crystal planes enhances zinc storage capacity and reduces the migration energy barrier. Moreover, abundant lamellar structure greatly increases ...

1. Introduction The growing concerns about the energy crisis and environmental pollution has prompted the development of environment friendly energy storage devices [1], ...

The interaction of defects and crystal planes enhances zinc storage capacity and reduces the migration energy barrier. Moreover, ...

Since their successful commercialization, lithium-ion batteries (LIBs) have dominated the global energy storage market due to their excellent cycle performance and high energy density [3].

Herein, we demonstrate that layered VSe₂ with a large interlayer spacing could exhibit excellent Zn storage behavior. Even with a micro-sized morphology, it exhibits a high specific reversible ...

Abstract Aqueous zinc-ion batteries (ZIBs) are attractive storage solution for renewable energy storage systems (ESS) applications. Despite intrinsic safety, eco-friendliness, and low cost of ...

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