SOLARTECH

WHERE SOLAR MEETS ART & TECHNOLOGY

European Solar Energy Storage

Anthracite new energy storage

Overview

High-value materialized clean utilization of coal-based anode materials for sodium-ion batteries (SIBs) with large reversible capacity and rapid kinetics are the direction of green and low-carbon economic develo.

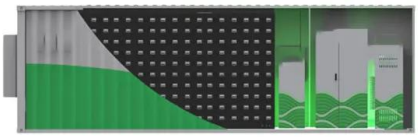
Anthracite new energy storage

Realizing Improved Sodium-Ion Storage for Anthracite-Derived ...

The anthracite hard carbon anode prepared by activation-surface modification strategy is believed to show good application prospects in the field of sodium-ion energy storage.

?????????????,??2025?????????? ...

?????(University of Michigan,??U-M)??????(Department of Energy,??DOE)????,????????????????????



Creating rich closed nanopores in anthracite-derived soft carbon

Herein, we introduce flash Joule heating (FJH) technology to treat anthracite with rapid heating and quenching, obtaining metastable soft carbon (anthracite-FJH) containing a large number of short-range ordered graphitic microdomains and their assembled closed nanopores.

Molecular level modulation of anthracite-based hard carbon

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In this study, we propose a molecular level modulation strategy to enhance the ICE and sodium storage capacity of anthracite-based hard carbon through the chemical crosslinking of pre-oxidized anthracite with starch.

Pyrolyzed Hydrogenated Anthracite as Anode Materials for ...

Abstract Anthracite has a great application potential in energy storage because of its low cost, but the reversible capacity of raw anthracite as an anode material for the sodium-ion battery is rather low. In this paper, anthracite was pyrolyzed at different temperatures.

????????Nature??,UCLA??????

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Boron quantum dot powered anthracite-derived ...

To enhance the reaction kinetics and boost the sodium storage capability of anthracite-derived carbon (AC), boron quantum dots (BQDs) were fabricated and incorporated into the AC framework through simple freeze ...

Anthracite new energy storage

In this study, impurities were removed from anthracite coal by a combination of concentrated alkali high temperature pretreatment and concentrated acid treatment, followed by high temperature calcination to

Anthracite-based expanded graphite as anode materials for ...

Herein, anthracite-based expanded graphite (AEG) was prepared via a liquid-phase oxidation intercalation-rapid thermal reduction method by employing homemade anthracite-based graphite (AG) as anode materials for SIBs.

Boron quantum dot powered anthracite-derived carbon anode ...

To enhance the reaction kinetics and boost the sodium storage capability of anthracite-derived carbon (AC), boron quantum dots (BQDs) were fabricated and incorporated into the AC framework through simple freeze-drying of the

mixtures with BQDs and AC and an annealing process.

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