Catalysis and energy storage materials

Ongoing research is still struggling to explore effective strategies/techniques to utilizing biomass- and waste-derived materials in catalysis, energy storage, and computational ...

Composites formed by metal-organic frameworks (MOFs) and carbonaceous materials have gained prominence as advanced functional materials due to their high surface area, high ...

Advanced Materials Interfaces, is the open access journal for research on functional interfaces and surfaces and their specific applications. ... Catalysis, Energy Storage, and Beyond. Miika ...

Lignin, a natural polymer material, has demonstrated significant potential for advancement in the field of electrochemical energy storage. The utilization of lignin-derived ...

Porous materials, with unique structural features and physicochemical properties, show significant potential for applications in heterogeneous catalysis and ...

Gao et al. [91] have shown that this combination leads to significant performance improvements in energy storage, making MOF-BC composites an effective and robust solution ...

This Special Issue, Nanomaterials for Catalysis and Energy Storage, broadly focuses on electric double-layer capacitors, hybrid capacitors, Li and sulfur batteries, and fuel cells. ... The ...

An alternative approach is to store hydrogen as a solid, and this approach emerged in the 1980s with the discovery of hydrogen storage in room-temperature hydrides such as LaNi 5 and TiFe. [] Storing hydrogen in hydride ...

In this review, we mainly summarize the recent progress in the construction of metal-chelated PDA nanomaterials for the applications in biomedicine, catalysis, and energy ...

In this review, we summarize several important BP-based nanohybrids, the majority of the reported synthetic routes, properties and performance of nanohybrids, as well as the recent ...

We intend to work on the synthesis of such materials while studying the physical properties of exfoliated TMT nanosheets, as well as their applications to catalysis and energy storage.

XXII International Symposium on Homogeneous Catalysis; Quantum Bioinorganic Chemistry (QBIC) ... The electrochemical applications of porous silicon-based ...

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To alleviate the resource and environmental crisis and solve the bottleneck problem of sustainable development, how to efficiently and greenly realize energy storage and ...

The essence here is the use of in situ and operando analysis of energy storage in 2D materials to provide suggestions for future efforts. ... His research interests concentrate ...

A round-the-clock Ag/BiO 2-x /Bi 2 O 2.75 energy storage catalyst with the unique electron-hole storage mechanism is prepared by natural photo-deposition method. Ag ...

Inorganic, organic, and hybrid two-dimensional (2D) materials are being developed for ever-expanding numbers of applications, though energy and catalysis remain the main drivers of their development. We present ...

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