Electrochemical energy storage and photocatalysis

Throughout, we detail some of the salient optical characteristics that underpin recent results and form the basis for light-matter interactions that span electrochemical energy ...

In this review, we describe how photoelectrochemical storage materials and coupled solar batteries can be designed to promote the ...

As a noted graphene-like transition metal dichalcogenide, 2D molybdenum disulfide (MoS2) is considered as attractive candidate for applications in electrochemical energy ...

Bridging this gap between laboratory innovation and industrial scalability will be critical for realizing the full potential of photocatalysis in sustainable energy production, ...

The efficiency of many energy storage technologies, such as rechargeable metal-air batteries and hydrogen production from water splitting, is limited by the slow OER kinetics on the transition ...

Dive into the research topics of "2D and 3D photonic crystal materials for photocatalysis and electrochemical energy storage and conversion". Together they form a unique fingerprint.

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2D and 3D photonic crystal materials for photocatalysis and electrochemical energy storage and conversion September 2016 Science ...

This review highlights biomass and biofuel traits, exploring photocatalysis and electrocatalysis mechanisms

and their synergistic technologies in biofuel production. It ...

In this review, we describe how photoelectrochemical storage materials and coupled solar batteries can be designed to promote the coupling between photogenerated ...

The electrochemical energy storage properties of CP- 1, CuO NPs and composite were investigated using cyclic voltammetry (CV) and galvanostatic charge-discharge (GCD) ...

Throughout, we detail some of the salient optical characteristics that underpin recent results and form the basis for light-matter interactions that span electrochemical energy conversion ...

Photoirradiation-enhanced capacity behavior of Co3O4/g-C3N4 p-n junction type all-solid-state supercapacitors is reported. The enhanced capacity and energy density under ...

Additionally, the application of bio-based metal and metal oxide catalysts is highlighted for various key energy and environmental technologies, including photocatalysis, ...

Among various new energy storage technologies, the electrochemical energy storage and conversion (EESC) systems have gained particular attention since they effectively ...

One of the major roadblocks to large-scale usage of solar power is the storage of energy during periods of little to no sunlight. One possible ...

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