

Abstract Green and sustainable chemistry is pivotal in tackling the growing global demand for clean energy and environmental sustainability. This review focuses on carbon-based ...

Based on the research progress and achievements of photothermal conversion materials and devices in the fields of seawater desalination and photothermal electric energy generation in recent years, the ...

Phase change materials (PCMs) have gained increasing popularity to capture and store thermal energy for short or long-term to be used at a later time in advance energy generation ...

Among various photothermal materials, carbon-based materials have emerged as one of the most promising candidates due to their broad-spectrum light absorption (>95 % photothermal conversion ...

Accepted: 18 June 2023 Abstract As one of the most versatile elements, carbon materials occupy the most plentiful allotropies composed of pure or mixed hybridization orbitals of ...

Unfolding carbon nanofibers (CNTs) introduction in perovskite solar cells (PSCs) paved the way for great performance and massive application of these next-generation devices The latest ...

In this review, a comprehensive summary is given to introduce synthetic methods and improvement strategies of carbon-based material/semiconductor composite photoelectrocatalysts, as ...

The effective utilization of solar energy is feasible by matching the energy supply to demand with selective solar collectors and energy storage. Solar thermal systems with thermal ...

Besides, the carbon-based skeletons with different scales are discussed in detail, which are first classified into carbon nanotube-based, graphene-based, graphite-based and amorphous ...

New Carbon Materials publishes original research papers devoted to the physics, chemistry and technology of the organic substances that are precursors for producing aromatically or tetrahedrally ...

As water scarcity escalates globally, recycling and reusing water resources is crucial for ensuring sustainable access to clean water. Photothermal technology for seawater desalination and ...

Carbon-based materials (CBMs), in all their versatility, have shown the potentials to be applied in these areas and more, and so far, the results are promising. CBMs possess excellent ...

As it can be seen in Table 1, most of the works reported in literature are focused on the compatibility of different purity grade (analytical, refined or industrial) solar salt with common ...

Carbon materials secure to progress a plenty of real-world technologies. In particular, they are emerging materials in numerous electrochemical applications, including electrochemical ...

This review assesses the state-of-the-art, material design strategies, and performance of carbon-based PSCs, and outlines future directions toward high-efficiency, stable, and ...



# Carbon-based materials    new    solar    container

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