Nanocomposite solar container

Due to the magnetic properties of the nanocomposite, it was possible to separate it after degradation experiments and hence re-usability is possible. In view of the enhanced solar radiation ...

This present work contributes to the improvement in thermal energy storage capacity of an all-glass evacuated tube solar water heater by integrating it with a phase change material (PCM) and with a ...

Even in seawater contaminated with oil, this absorber achieved a higher solar evaporation rate, making it a promising choice for solar-driven clean water production from oil-layered ...

The I-V and PL results indicate that GO@CuO nanocomposite is a gifted material for solar cell applications. Consequently, GO@Al 2 O 3 ·CuO and GO@CuO nanocomposites are very ...

The experimental setup comprised a water space heating storage that automatically stored solar thermal in a heating water storage container, with an average once a day temperature ...

The United Nations" Sustainable Development Goal number 7 aims to ensure access to clean and affordable energy for all. This has led to a global shift towards renewable energy sources ...

By integrating MOS and MXenes into nanocomposite structures, synergistic effects can be achieved, enhancing charge separation and catalytic activity and thereby improving solar energy ...

Consequently, the full potential of the hybrid nanocomposite layers in the solar cell applications will be realized only when these layers are prepared by more environmentally friendly approaches.

The increasing global demand for sustainable materials has led to the exploration of solar waste recycling as a viable solution for polymer-based composite applications. In this study, ...

These materials hold great promise for advancing the capabilities of solar technologies by enhancing energy conversion and harvesting devices. This review provides recent progress in designing, ...

In this review, we summarize systematically the effects of carbon-based nano-additives on the important thermophysical properties of nanocomposite phase change materials, referred to as ...

The rational design of the photocatalytic system consisting of solar energy material semiconductors to convert solar energy into good chemicals or renewable fuels is an attractive strategy to achieve ...

Abstract This article discusses the design and preparation of a modified MXene-based nanocomposite for

increasing the power conversion efficiency and long-term stability of perovskite solar cells. The ...