

This article aims to present a thorough review of research activities in using nanostructures, nano-enhanced materials, nanofluids, and so on for solar direct electricity generating ...

The worldwide technical capacity of solar energy significantly surpasses the current overall primary energy requirement. This review explores the role of nanomaterials in improving solar energy ...

The energy sector benefits from nano chips through improved efficiency in solar cells, batteries and energy storage devices. Nanomaterials can enhance the performance of photovoltaic cells by ...

In this paper, we demonstrate a compact, chip-based device that allows for direct storage of solar energy as chemical energy that is released in the form of heat on demand and then ...

This article aims to explore the relevance and importance of nanotechnology in solar cells and provide an overview of why it is considered the future of solar energy.

Here, we report a combination of solution- and neat-film-based molecular solar thermal (MOST) systems, where solar energy can be stored as chemical energy and released as heat, with ...

Herein, we proposed a conceptual model capable of all-day self-generation power which harvests the energy from the sun and cold space as illustrated in Scheme 1.

The on-chip solar cells and energy harvesting systems form an on-chip power source that provides a stable, adapted working voltage to the application modules under certain lighting...

Conceptual diagram of on-chip solar cells and energy harvesting system forming an on-chip power source to power single-chip smart microsensors.

Herein, a power device to simultaneously harvest energy from the sun and cold space based on a microfabricated thermoelectric generator (TEG) integrated with a solar absorber (SA) and ...

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