

Phase change materials can be applied to various solar energy systems for prolonged heat energy storage, which is relatively sound as the solar energy is discontinuous and is ...

This paper briefly reviews recently published studies between 2016 and 2023 that utilized phase change materials as thermal energy storage in different solar energy systems by collecting ...

Utilizing phase change materials with high energy density and stable heat output effectively improves energy storage efficiency. This study integrates cascaded phase change with a...

This paper presents a review of the storage of solar thermal energy with phase-change materials to minimize the gap between thermal energy supply and demand. Various types of systems ...

TL;DR: This study develops a solar-powered hybrid energy storage system using phase change materials, integrating latent thermal energy storage with a high-temperature heat pump, and ...

In this paper, we have overviewed the research conducted to date on phase change materials (PCMs) for photothermal power collection and storage, especially their applications as ...

This article provides a comprehensive review of the application of PCMs for solar energy use and storage such as for solar power generation, water heating systems, solar cookers, and...

This article designs a high-altitude border guard post that can fully utilize the heat absorbed by solar collectors to continuously store thermal energy during the day and stably release ...

Latent thermal energy storage (LTES) and leveraging phase change materials (PCMs) offer promise but face challenges due to low thermal conductivity. This work comprehensively investigates LTES ...

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