Layered utilization of solar container materials

To maximize solar energy utilization, photothermal materials must focus on two core properties: the absorption spectrum should cover the visible light range and extend into the near ...

This study evaluates the proposal of a concrete storage tank as molten salt container, for concentrating solar power applications. A characterization of the thermal and mechanical ...

This paper describes a lm ffi fi composed of hybrid nano bers of a metal organic framework layered on cellulose (MC fi - lm), resulting in both high photothermal conversion and heat utilization e ciency.

Highlights on recent developments in PBLHS gleaned from closely related numerical and experimental studies, and its potential applications in the domain of solar thermal power plants ...

Developing materials for efficient solar thermal energy conversion (STEC) is currently a promising field in energy research. Traditional STEC materials such as carbon and plasmonic nanomaterials have ...

Solar still systems often include organic phase change materials (PCMs) because of their remarkable thermophysical characteristics. Numerous innovative PCMs have been developed ...

Building energy saving is directly related to resource utilization optimization and residential comfort, which is important for the environment and production. At present, building energy saving is ...

Solar energy is intermittent, resulting in a discrepancy between the solar energy supply and building energy demand. Salt hydrate phase change material (PCM) is a promising material for ...

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