

This study delves into the multifaceted reasons why the exploration of asteroids and other celestial bodies with low-gravity holds paramount importance. It presents a comprehensive ...

In this work, this model evaluated scenarios involving different plastic materials, device thicknesses, and pathogens (Escherichia coli bacterium, MS2 virus and Cryptosporidium parvum ...

However, in case of solar cooking, Omara et al., [19] reviewed various reports and discussed different types of PCMs and their significant effects on various designs of solar cookers. ...

**Abstract Purpose** The purpose of this study is to examine the effects of inclination angle on the thermal energy storage capability of a phase change material (PCM) within a disc ...

In this work we present first ever dynamic corrosion tests for Solar salt doped with alumina nanoparticles (1% wt.). Carbon Steel A516 and SS347, used in double-tank system, were tested.

**Abstract** Thermal energy storage is among the most efficient techniques of storing solar energy from the sun for air heating when integrated with solar air heater. Thermal storage material ...

In this study, substrates including copper, aluminum, stainless steel, brass, and zinc, machined to precise dimensions of 3 cm  $\times$  5 cm  $\times$  1 mm, were subject to coating with various ...

**Compatibility of container materials for Concentrated Solar Power with a solar salt and alumina based nanofluid: a study under dynamic conditions.** Renewable Energy ( IF 9.1 ) Pub Date : 2020-02-01, ...

This study provides an overview of the recent research and development of materials for solar photovoltaic devices. The use of renewable energy sources, such as solar power, is ...

Solar energy harvesting and storage using latent heat from phase change materials (PCMs) is economically feasible and operationally effective (See Fig. 4). The flexibility of solar ...

**Significance of the Study** By investigating these questions, the research provides practical strategies for integrating technology and natural materials in shipping container workspaces, ...

This study evaluates the effectiveness of phase change materials (PCMs) inside a storage tank of warm water for solar water heating (SWH) system through the theoretical simulation based on the ...

# The significance of studying solar container materials

Through a systematic review of peer-reviewed studies, key findings indicate that nanomaterials can enhance incident solar radiation absorption by up to nine times, leading to a 10% ...

In recent years, there has been a substantial increase in the usage of portable cold storage technologies, as the demand for flexible and mobile solutions for storing perishable goods ...

This review article underscores the importance of PCMs in low-temperature (0-120 °C) solar thermal applications such as solar desalination, solar water heaters, solar cookers, solar dryers, ...

To enhance the energy storage material thermal conductivity, a requisite detailed review is needed to be performed to make a note on advance materials i.e., nanomaterials used or ...



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