Carbon fiber phase change energy storage

Capture and utilization of solar energy using phase change materials (PCMs) can effectively answer the challenge of solar intermittency. However, the flaws of low thermal ...

Abstract. Effective thermal modulation and storage are important aspects of efforts to improve energy efficiency across all sectors. Phase change materials (PCMs) can act as effective heat reservoirs due to the high ...

Her research interests mainly focus on the synthesis and applications of flexible phase change materials for thermal energy storage and conversion. Ge Wang received her Ph.D. in Chemistry from the Michigan Technological University, ...

LHS, alternatively referred to as phase change energy storage, pertains to the alteration of thermodynamic state (enthalpy) during the phase transition process of PCMs [72] ... 1D ...

In this contribution, a O 2 plasma treated activated carbon fiber felt (PACFF) with hierarchical porous structure of large (~100 um), micro (<2 nm) and mesopores (2 nm-50 nm) ...

Carbon fiber with thermal conductivity of 220 W/(moK) was added to the paraffin phase change energy storage system to blend with paraffin, ... [13]. The results show that ...

Solar energy is a high-priority clean energy alternative to fossil fuels in the current energy landscape, and the acquisition, storage, and utilization of solar energy have ...

Directional chitosan/carbon fiber powder aerogel supported phase change composites for effective solar thermal energy conversion and hot compression. ... Paraffin, as ...

Phase change materials (PCMs) are such a series of materials that exhibit excellent energy storage capacity and are able to store/release large amounts of latent heat at ...

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