

Thermal storage is very relevant for technologies that make thermal use of solar energy, as well as energy savings in buildings. Phase change materials (PCMs) are positioned ...

Intelligent phase change materials for long-duration thermal energy storage Peng Wang,<sup>1</sup> Xuemei Diao,<sup>2</sup> and Xiao Chen<sup>2,\*</sup> Conventional phase change materials struggle with long-duration ...

Photothermal phase change energy storage materials (PTCPCEsMs), as a special type of PCM, can store energy and respond to changes in illumination, enhancing the efficiency of energy systems and ...

For instance, solar-driven phase-change heat storage materials and phase-change cool storage materials were applied to the hot/cold sides of thermoelectric systems to achieve solar-thermal ...

Phase change material (PCM)-based thermal energy storage significantly affects emerging applications, with recent advancements in enhancing heat capacity and cooling power. This perspective by Yang et al. ...

Abstract Phase-change materials (PCMs) offer tremendous potential to store thermal energy during reversible phase transitions for state-of-the-art applications. ... are ...

Phase change materials are promising for thermal energy storage yet their practical potential is challenging to assess. Here, using an analogy with batteries, Woods et al. ...

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