

The paper emphasizes the integration of phase change materials (PCMs) for thermal energy storage, also buttressing the use of encapsulated PCM for thermal storage and efficiency, and the use of hybrid PCM to enhance overall ...

Over the last few decades, there has been increasing interest in the design and construction of integrated energy conversion and storage systems (IECSSs) that can simultaneously capture ...

We also describe the subsequent applications of all-in-one energy storage devices, with an energy harvester or sensor systems enabling real-time noninvasive monitoring ...

A promising approach to overcome this limitation is the integration of energy conversion and storage devices, thereby enabling semi-permanent usage of portable ...

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In this work, a glass ceramics (GC) containing  $\text{KTb}_2\text{F}_7$  nanocrystals was fabricated by controlled crystallization of an fluorosilicate glass via heat-treatment. The ...

Rare earth tri-doped precursor glasses (PGs) were prepared by traditional high-temperature melting method, and  $\text{NaSr}_2\text{Nb}_5\text{O}_{15}$  transparent glass-ceramic (GC) was ...

By optimizing the glass composition, controlling the crystallization temperature and microstructure, the multifunctional RE doped niobate transparent GCs with good optical ...

To improve the energy utilization, this work presents the design of a multilayer glass with a GaAs layer doped by nanoparticles and an IST ( $\text{In}_3\text{SbTe}_2$ ) phase change layer. ...

The integrated photoelectric battery serves as a compact and energy-efficient form for direct conversion and storage of solar energy compared to the traditional isolated PV-battery systems.

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Achieving superior energy storage properties and ultrafast discharge speed in environment-friendly niobate-based glass ceramics Preparation, structure and temperature ...

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To improve the energy utilization, this work presents the design of a multilayer glass with a GaAs layer doped by nanoparticles and an IST ( $\text{In}_3\text{SbTe}_2$ ) phase change layer.

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