

Photothermal solar container new energy





Overview

This work provides fundamental insights into both synthetic strategies and photothermal conversion mechanisms for organic high-temperature photothermal materials, highlighting their potential for renewable energy applications. The supporting information of the manuscript. Received 27th February 2025 , Accepted 13th May 2025 In this study, CNT-BN-SA-1 composites were prepared by vacuum impregnation using stearic acid (SA) as a phase change material (PCM), multi-walled carbon nanotubes (CNT) and hexagonal boron nitride (BN) as support materials. According to the. Here we report an organic high-temperature photothermal material (BTDyA) featuring the extended donor-acceptor-donor structure through ethynyl group π -bridges connection (D--A--D). Compared to conventional D-A-D molecule (BTDA), BTDyA exhibits enhanced molar absorption coefficient and expanded. In the contemporary energy landscape, the solar container has emerged as a significant and evolving innovation, gradually shaping the future of energy supply and utilization. The current development status of the solar container is a subject of considerable interest and holds crucial insights into.



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The system utilizes daytime photothermal energy for distillation while storing condensation heat, and then the stored energy will be extracted for nighttime distillation, allowing for increased ...

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