

Solid-state hydrogen storage technology has emerged as a disruptive solution to the "last mile" challenge in large-scale hydrogen energy applications, garnering significant ...

Various solid-state materials have been fabricated for hydrogen energy storage; however, carbon-based nanocomposites have gained more attention because of its high surface area, low processing cost, and light ...

Solid-state hydrogen storage technology achieves hydrogen energy storage by storing hydrogen in solid materials, relying on physical and chemical adsorption processes. Specifically, this technology depends on ...

This book provides a comprehensive and contemporary overview of advances in energy and energy storage technologies. Although the coverage is varied and diverse, the book also ...

Solid-state hydrogen storage is a significant branch in the field of hydrogen storage [[28], [29], [30]].Solid-state hydrogen storage materials demonstrate excellent hydrogen storage capacity, ...

Solid-state hydrogen storage technology has emerged as a disruptive solution to the "last mile" challenge in large-scale hydrogen energy applications, garnering significant global research ...

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Humanity is confronted with one of the most significant challenges in its history. The excessive use of fossil fuel energy sources is causing extreme climate change, which threatens our way of life and poses ...

Shanghai Re-Fire Energy Technology Co., Ltd., Shanghai 201812, China * ... The solid-state hydrogen storage device and fuel cell in the cooling circuit in the series structure shown in Figure 2a may lead to a ...

This review provides a comprehensive understanding of catalysts that could alleviate rate-limiting steps by summarizing current knowledge on the kinetics of hydrogen uptake/release in potential solid-state hydrogen materials.

Hydrogen, the ninth most abundant element on Earth's crust (1.4 g/kg) and the second most abundant element in Earth's sea (109 g/L) [3] has been widely accepted ...

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