

1 INTRODUCTION. Hydrogen is a clean, high-energy density, and renewable energy source that is expected to help mankind move away from fossil energy. 1-4 At present, widely-used ...

This review provides a brief overview of hydrogen preparation, hydrogen storage, and details the development of electrochemical hydrogen storage materials. We summarize the electrochemical hydrogen storage ...

For sustainable global growth, it is essential to produce and store hydrogen on a large scale by utilizing renewable energy sources. However, hydrogen storage systems, particularly for vehicle on-board applications, face challenges in ...

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The potential of hydrogen as an environment-friendly and sustainable energy solution is studied. Exploring various hydrogen production methods, considering the advantages, disadvantages, ...

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Chemical absorption of hydrogen in solid hydrogen storage materials is a promising hydrogen storage method due to its high storage and transportation performance. Hydrogen storage density, dehydrogenation ...

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