





Special Issue Reprint

State-of-the-Art and Progress in Metal-Hydrogen Systems

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Metal hydrides are a continuously expanding and diverse class of materials with a variety of properties. This reprint presents selected, original, and recent research within advanced studies and the utilisation of metal-hydrogen systems. Novel metal hydrides are presented along with nanocomposites systems, which have been investigated as solid-state hydrogen storage materials. Some metal hydrides have demonstrated fast cationic conductivity and can act as promising battery materials and as novel types of solid-state ionic conductors. A wide range of metallic hydrides have also been investigated for hydrogen purification and compression. Detailed investigations of their physical properties quickly move the research towards demonstration and industrial utilisation. This reprint supports the development of hydrogen as a clean energy solution, including stationary and portable storage, along with a variety of related technologies.





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