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7 Hydrogen Functionalized Materials 7.1 Magnetic Heterostructures - A Playground for Hydrogen; 7.2 Optical Properties of Metal Hydrides: Switchable Mirrors; References; 8 Applications; 8.1 Fuel Cells Using Hydrogen; 8.2 Borohydride Fuel Cells; 8.3 Internal Combustion Engines; 8.4 Hydrogen in Space Applications; References; Index

Sommario/riassunto

This book fills the gap for concise but comprehensive literature on this interdisciplinary topic, involving chemical, physical, biological and engineering challenges. It provides broad coverage of the most important fields of modern hydrogen technology: hydrogen properties, production, storage, conversion to power, and applications in materials science. In so doing, the book covers all the pertinent materials classes: metal hydrides, inorganic porous solids, organic materials, and nanotubes. The authors present the entire view from fundamental research to viable devices and systems, including
