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Nota di contenuto	Introduction to Nanomaterials for Energy Storage -- Fundamentals of Computational Design in Nanomaterials -- Computational modelling of radiative magneto Maxwell nanofluid: An application to improving the efficiency of energy conversion and storage systems -- Characterization methods for Nanomaterials in energy storage -- Synthesis Techniques for Novel Nanomaterials -- Advanced Synthesis Strategies for Enhanced Energy Storage Performance -- In-situ Characterization techniques for Energy Storage Applications -- Case Studies: Nanomaterials in Specific Energy Storage Devices -- Advanced Electrode for Energy Storage: Types and Fabrication Techniques --

Challenges and Opportunities in Nanomaterials for Energy Storage -- Future Perspectives and Emerging Trends in Nanomaterials for Energy Storage.

Sommario/riassunto

This contributed volume provides a comprehensive overview of nanomaterials tailored for energy storage applications, covering fundamental concepts such as computational design and modeling, synthesis techniques, characterization methods, and advanced strategies for enhancing energy storage performance. Through case studies, it demonstrates the practical applications of nanomaterials in specific energy storage devices, highlighting their significance. The book also explores advanced electrode types and fabrication techniques, addresses challenges and opportunities in the field, and offers insights into future perspectives and emerging trends. It serves as an essential resource for researchers, scientists, engineers, and students interested in materials science, nanotechnology, and energy storage, providing a thorough understanding of the latest advancements and potential developments in the field.
