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Nanotherapeutic strategy in Ayurvedic treatment -- Chapter 9. Biosynthesis of Iron Oxide Nanoparticles (IONPs): Toxicity Evaluation and Applications for Magnetic Resonance Imaging and Magnetic Hyperthermia -- Chapter 10. Effect of annealing temperature on structural, morphological and optical properties of CdZnTe thin films -- Chapter 11. Two-dimensional Molybdenum Disulfide Nanosheets based Optoelectronic Devices -- Chapter 12. Photocatalytic Hydrogen Production of Perovskite Based Nanocomposites by Green Laser Irradiation Techniques -- Chapter 13. Tuning the physical properties of perovskite multiferroic nanoparticles for green energy applications.

Sommario/riassunto

This book is a comprehensive and modern guide on emerging nanoparticles and their diverse applications in engineering, medicine, food safety, transportation, energy, agriculture, and environmental sustainability. Written by leading researchers from all over the world, it is designed to cover the full range of nanoparticles as well as provide in-depth detail regarding their development, characterization, processing, and synthesis. The book is divided into two sections: the first covers the development of advanced nanoparticles and the second is dedicated to their variety of cutting-edge applications. The authors also cover the unique properties and green synthesis of nanoparticles as well as their use as nanobiosensors, nanopesticide, nanofertilizer, and as energy storage and conversion devices, just to name a few. This book provides readers with insight onto the broad scope of computational, theoretical, and experimental research on novel nanoparticles and their applications. It is ideal for both young and experienced researchers and industry professionals in the field of nanotechnology.