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Collana	Smart Nanomaterials Technology, , 3004-8281
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Soggetti	Nanotechnology Chemistry Nanoparticles Nanochemistry Nanoparticle Synthesis
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Nota di contenuto	Green synthesis of silver and silver oxide nanoparticles from plants and their characterization -- Plant-mediated synthesis and characterization of zinc and zinc oxide nanoparticles -- Biogenic synthesis, characterization and applications of Au-ZnO nanocomposites -- Green synthesis of iron oxide nanoparticles and their multifaceted applications -- Green synthesis and characterization of copper nanocomposite -- Antimicrobial applications of zinc oxide nanoparticles in the food packaging industry -- Role of Zinc nanoparticles for the management of postharvest diseases -- Application of Zinc and zinc oxide non-fertilizer in enhancing crop production -- Nanomaterials as animal feed additive -- Recent updates on use of smart nanostructures for food packaging applications -- Potential of silver and zinc nanoparticles in mediating abiotic stress in crop plants -- Assessing the impact silver and zinc on soil microbial structure and functionality -- Role of gold nanoparticles in Plant protection against pathogen -- Recent trends in the use of smart nanoparticles in food safety -- Use of smart silver nanoparticles in drug delivery system -- Role of green synthesized Fe ₃ O ₄ nanoparticles

in targeted anticancer drug delivery system -- Role of Gold nanoparticles for targeted drug delivery -- Recent updates in Chitosan-based nanoparticles for drug delivery -- Challenges and opportunities of functionalization of nanoparticles for biomedical applications -- Use of green synthesized Platinum nanoparticles for biomedical applications -- Role of zinc oxide nanomaterials for photocatalytic degradation of environmental pollutants -- Application of silver-doped nanomaterials for wastewater treatment -- Risks and benefits of zinc nanoparticles in aquatic ecosystems -- Current status of use of nanoparticles for oil production applications.

Sommario/riassunto

The book in hand, namely "Metal and Metal-Oxide Based Nanomaterials (Synthesis, Agricultural, Biomedical and Environmental Interventions)", focuses on the synthesis methods, characterization techniques, and diverse interventions utilizing these nanomaterials in the fields of agriculture, biomedicine, and environmental remediation. The specific applications discussed include food packaging, post-harvest disease management, crop production, drug delivery systems, other biomedical applications, photocatalytic degradation of environmental pollutants, and wastewater treatment. Additionally, it also addresses the potential risks associated with zinc nanoparticles in aquatic ecosystems and emphasizes the importance of further research and regulation in this field. Overall, the book provides valuable insights and serves as a comprehensive resource for researchers and scientists across various interdisciplinary subjects. It serves as a valuable resource for scientists, researchers, and students in nanotechnology, nanomedicine, environmental science, plant science, agriculture, chemistry, biotechnology, pharmacognosy, pharmaceuticals, industrial chemistry, and other interdisciplinary subjects. Moreover, this also inspires further research, innovation, and the development of sustainable solutions for a better future.
