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Altri autori (Persone)	Sadiq MohamedMohamed Jaffer
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Nota di contenuto	Chapter1. Fundamentals of Nanotechnology for Environmental Engineering -- Chapter2. Fundamental Aspects of Nanocomposite Materials for Environmental Protection and Remediation -- Chapter3. Nanotechnology for Sustainable Agriculture: Current Trends and Future Prospects -- Chapter4. Nanomaterials in Soil Health Management and Crop Production -- Chapter5. Nanomaterials for Water Purification and Reclamation -- Chapter6. Role of Nanomaterials in the Treatment of Wastewater -- Chapter7. Applications of Nanomaterials for Water Treatment: Current Trends and Future Scope -- Chapter8. Engineered Nanomaterials for Water Treatment Applications -- Chapter9. Research Trends in Photocatalytic Water Purification: Current Perspectives and Future Prospects – A Review -- Chapter10. Nanotechnology for Water Splitting: A Sustainable Way to Generate Hydrogen -- Chapter11.

Carbon Nanomaterials for Wastewater Treatment -- Chapter12.  
Nanosorbents – A Nanotechnological Approach for the Treatment of Heavy Metal Contamination in Wastewater -- Chapter13. Nanofiltration Membrane Techniques for Heavy Metal Separation -- Chapter14.  
Carbon Dots as Nanoprobes for Heavy Metal Detection -- Chapter15.  
Nanotechnology for Plastic Degradation -- Chapter16. Role of Nanomodification and Nanofertilizers in Crop Production and Soil Health -- Chapter17. Microbes Induced Biofabrication of Gold Nanoparticles and its Exploitation in Biosensing of Phytopathogens -- Chapter18. Removal of Radioactive Wastes Using Nanomaterial -- Chapter19. Nanotechnology-based Photocatalytic Degradation of Pharmaceuticals -- Chapter20. Nanotechnological Interventions in the Degradation of Pharmaceutical Compounds -- Chapter21.  
Nanocomposites for Removal and Degradation of Organic Pollutants -- Chapter22. Nanotechnological Approaches against Fungal Pathogens of Economically Important Crop Plants -- Chapter23. Advanced Approaches in Micro- and Nano-sensors for Harsh Environmental Applications: A Review -- Chapter24. Cellulose Based Gels: Synthesis, Properties and Applications -- Chapter25. Artificial Photosynthesis Using Nanotechnology -- Chapter26. Artificial Photosynthesis with Gold Nanostructures Incorporation in Non-photosynthetic Bacteria.

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### Sommario/riassunto

This two-volume set provides a comprehensive overview of modern nanoscience, and encompasses advanced techniques of nanocomposite materials that make their way from the laboratory to the field for the revival of energy and environmental systems in a sustainable manner. It includes the design and the sophisticated fabrication of nanomaterials along with their potential energy and environmental applications, while looking at how nanoscience and nanotechnology can be used to promote environmentally friendly processes and strategies. The books' purpose is to promote eco-friendly methods and techniques by covering many elements of both the synthesis and uses of nanoparticles and nanofluids for energy and environmental engineering. They provide an up-to-date synthesis of nanocomposite materials for modern nanotechnology applications in the fields of environment protection, heterogeneous catalysis, wastewater treatment, fuel cells, electrochemical energy conversion, and storage applications. The set is designed for environmental scientists, nanotechnologists, chemists, engineers, and individuals seeking current research on nanotechnology and its applications in environmental engineering. Graduate students working in these fields will also find it a valuable resource. Volume 1 focuses on the fundamentals of nanotechnology, environmental protection, sustainable agriculture, bioremediation, bio-nanocomposites, and wastewater treatment.

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