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Nota di contenuto	Introduction to Industrial Wastes Containing Organic and Inorganic Pollutants and Bioremediation Approaches for Environmental Management -- Bioremediation: An Eco-Friendly Sustainable Technology for Environmental Management -- Application of Microbial Enzymes in Degradation and Detoxification of Organic and Inorganic Pollutants -- Persistent Organic Pollutants (POPs): Environmental Risks, Toxicological Effects, and Bioremediation for Environmental Safety and Challenges for Future Research -- Industrial Acid Mine Tailing Wastes: Eco-Toxicological and Health Effects and Bioremediation for Sustainable Development -- Bioremediation of Distillery Effluent: Present Status and Future Prospects -- Plastic Waste: Environmental Hazards, Its Biodegradation, and Challenges -- Textile Industry Wastewater: A Major Source of Environment Contamination and Bioremediation Approaches for Its Degradation and Detoxification --

Management of Petroleum Industry Waste through Biosurfactant Producing Bacteria: A Step towards Sustainable Environment -- Environmental Contamination, Toxicity Profile, and Bioremediation Approaches for Detoxification of Pulp Paper Mill Wastewater -- Recent Advances in Phytoremediation of Soil Contaminated by Industrial Waste: A Roadmap to a Safer Environment -- Toxicity of Hexavalent Chromium in Environment, Health Threats and Its Bioremediation and Detoxification from Tannery Wastewater for Environmental Safety -- Arsenic Contamination in Environment, Eco-Toxicological and Health Effects and Bioremediation Strategies for Its Detoxification -- Organophosphate Pesticides: Impact on Environment, Toxicity and their Degradation -- Constructed Wetlands: An Eco-Sustainable Phytotechnology for Degradation and Detoxification of Industrial Wastewaters -- Nano-Bioremediation: A New Age Technology for the Treatment of Dyes in Textile Effluents -- Green Synthesis of Nanoparticles and their Applications in Water and Wastewater Treatment -- Environmental Hazards and Toxicity Profile of Organic and Inorganic Pollutants of Tannery Wastewater and Bioremediation Approaches -- Bioremediation: An Ecofriendly Clean-Up Strategy for Polyaromatic Hydrocarbons from Petroleum Industry Waste.

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Sommario/riassunto

Achieving environmental sustainability with rapid industrialization is a major challenge of current scenario worldwide. As globally evident, industries are the key economic drivers, but are also the major polluters as untreated/partially treated effluents discharged from the industries is usually thrown into the aquatic resources and also dumped unattended. Industrial effluents are considered as the major sources of environmental pollution as these contains highly toxic and hazardous pollutants, which reaches far off areas due to the medium of dispersion and thus, create ecological nuisance and health hazards in living beings. Hence, there is an urgent to find ecofriendly solution to deal with industrial waste, and develop sustainable methods for treating/detoxifying wastewater before its release into the environment. Being a low cost and eco-friendly clean technology, bioremediation can be a sustainable alternative to conventional remediation technologies for treatment and management of industrial wastes to protect public health and environment. Therefore, this book (Volume I) covers the bioremediation of different industrial wastes viz. tannery wastewater, pulp and paper mill wastewater, distillery wastewater, acid mine tailing wastes, and many more; which are lacking in a comprehensive manner in previous literature at one place. A separate chapter dedicated to major industries and type of waste produced by them is also included. This book will appeal to students, researchers, scientists, industry persons and professionals in field of microbiology, biotechnology, environmental sciences, eco-toxicology, environmental remediation and waste management and other relevant areas, who aspire to work on the biodegradation and bioremediation of industrial wastes for environmental safety.

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