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| Nota di contenuto       | Chapter1: Phycoremediation Technology: A Global prospective -- Chapter2: The diatoms: from eutrophic indicators to mitigators -- Chapter3: A review on micropollutants removal by microalgae -- Chapter4: Developing designer microalgae consortia: A suitable approach to sustainable wastewater treatment -- Chapter5: Outdoor Microalgae Cultivation for Wastewater Treatment -- Chapter6: Current state of knowledge on algae mediated remediation of Endocrine Disrupting Chemicals (EDCs) from wastewater -- Chapter7: Bioremediation of municipal sewage using potential microalgae -- Chapter8: Phycoremediation of Petroleum Hydrocarbons Polluted Sites: Application, Challenges and Future Prospects -- Chapter9: Genetic Technologies and Enhancement of Algal Utilization in Wastewater Treatment and Bioremediation -- Chapter10: Potential and Feasibility |

of the Microalgal system in removal of pharmaceutical compounds from wastewater -- Chapter11: Phycoremediation of persistent organic pollutants from wastewater: Retrospect and prospects -- Chapter12: Feasibility of microalgal technologies in pathogens removal from wastewater -- Chapter13: Remediation of domestic wastewater using algal-bacterial biotechnology -- Chapter14: Phycoremediation of textile waste water: Possibilities and Constraints -- chapter15: Potential and application of Diatoms for industry-specific wastewater treatment -- Chapter16: Feasibility of using bacterial-microalgal consortium for the bioremediation of organic pesticides: Application constraints and future prospects -- Chapter17: Potential of blue-green algae in wastewater treatment -- Chapter18: Photobioreactors for Wastewater Treatment -- Chapter19: Design considerations of algal systems for wastewater treatment -- Chapter20: Phycoremediation of heavy metals from water and wastewater.

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#### Sommario/riassunto

This two-volume work presents comprehensive, accurate information on the present status and contemporary development in phycoremediation of various types of domestic and industrial wastewaters. The volume covers a mechanistic understanding of microalgae based treatment of wastewaters, including current challenges in the treatment of various organic and inorganic pollutants, and future opportunities of bioremediation of wastewater and industrial effluents on an algal platform. The editors compile the work of authors from around the globe, providing insight on key issues and state-of-the-art developments in algal bioremediation that is missing from the currently available body of literature. The volume hopes to serve as a much needed resource for professors, researchers and scientists interested in microalgae applications for wastewater treatment. Volume 1 focuses on the different aspects of domestic and industrial wastewater treatment by microalgae. The case studies include examples such as genetic technologies as well as the development and efficient use of designer consortia for enhanced utilization of microalgae. This volume provides thorough and comprehensive information on removal of persistent and highly toxic contaminants such as heavy metals, organic pesticides, polycyclic aromatic hydrocarbons, endocrine disruptors, pharmaceutical compounds, and dyes from wastewater by microalgae, diatoms, and blue-green algae. Design considerations for algal ponds and efficient use of photobioreactors and HRAPs for wastewater treatment are some other highlights. This volume addresses the applications, potentials, and future opportunities for these various considerations in water pollution mitigation using algal technologies.

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