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Nota di contenuto	Microbial Degradation of Pyridine and Pyridine Derivatives -- Anaerobic Biodegradation of Pesticides -- DNA Stable Isotope Probing to Examine Organisms Involved in Biodegradation -- Enzymatic Bioremediation: Current Status, Challenges of Obtaining Process, and Applications -- Biotransformation of Heavy Crude Oil and Biodegradation of Oil Pollution by Arid Zone Bacterial Strains -- Catalytic Promiscuity of Aromatic Ring-Hydroxylating Dioxygenases and Their Role in the Plasticity of Xenobiotic Compound Degradation -- Aromatic Compounds and Biofilms: Regulation and Interlinking of Metabolic Pathways in Bacteria -- Polychlorinated Biphenyls (PCBs): Environmental Fate, Challenges and Bioremediation -- Bioremediation of Polycyclic Aromatic Hydrocarbons (PAHs): Current Practices and Outlook -- Microbes Are Essential Components of Arsenic Cycling in the Environment: Implications for the Use of Microbes in Arsenic Remediation -- Biodegradation of Synthetic Pyrethroid Insecticides --

Microbial Degradation of Polyethylene: Recent Progress and Challenges -- Biodegradation of Polychlorinated Biphenyls -- Role of Macrofungi in Bioremediation of Pollutants -- Microemulsions as a Novel Tool for Enhancing the Bioremediation of Xenobiotics -- An Overview of Nitro Group-Containing Compounds and Herbicides Degradation in Microorganisms -- Distillery Effluent: Pollution Profile, Eco-friendly Treatment Strategies, Challenges and Future Prospects.

Sommario/riassunto

Xenobiotic compounds including pesticides, nitrophenols, pyridine, polycyclic aromatic compounds and polychlorinated biphenyls are widely spread in environment due to anthropogenic activities. Most of them are highly toxic to living beings due to their mutagenic and carcinogenic properties. Therefore, the removal of these compounds from environment is an essential step for environmental sustainability. Microbial remediation has emerged as an effective technology for degradation of these xenobiotic compounds as microorganisms have unique ability to utilize these compounds as their sole source of carbon and energy. The primary goal of this book is to provide detailed information of microbial degradation of many xenobiotic compounds in various microorganisms.