

1. Record Nr.	UNINA9910253906803321
Titolo	Phytoremediation : Management of Environmental Contaminants, Volume 4 // edited by Abid A. Ansari, Sarvajeet Singh Gill, Ritu Gill, Guy R. Lanza, Lee Newman
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-41811-4
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XV, 409 p. 59 illus., 31 illus. in color.)
Disciplina	572.572
Soggetti	Botanical chemistry Plant ecology Plant physiology Soil science Environmental chemistry Pollution Plant Biochemistry Plant Ecology Plant Physiology Soil Science Environmental Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Section 1. Phytoremediation of Organic Contaminants -- Phytoremediation of PCBs and PAHs by Grasses: A Critical Perspective -- Organic Soil Amendments in the Phytoremediation Process -- Phytoremediation of Crude Oil Contaminated Soil using <i>Cynodon dactylon</i> (L.) Pers -- A Study on Degradation of Heavy Metals in Crude Oil Contaminated Soil using <i>Cyperus rotundus</i> -- Polycyclic Aromatic Hydrocarbons and Heavy Metal Contaminated Sites: Phytoremediation as a Strategy for Addressing the Complexity of Pollution -- Phytoremediation of Polycyclic Aromatic Hydrocarbons (PAHs) in Urban Atmospheric Deposition Using Bio-retention Systems -- Section 2.

Wastewater Engineering and Technology -- Plant Growth Promoting Bacteria: A Good Source for Phytoremediation of Metals Contaminated Soil -- Biotechnological Approaches to Remediate Soil and Water using Plant-Microbe Interactions -- Current and Future Opportunities for Forest Land Application Systems of Wastewater -- Bio-retention Systems for Storm water Treatment and Management in Urban Systems -- Fungal Laccase Enzyme Applications in Bioremediation of Polluted Wastewater -- Section 3. Natural and Constructed Wetlands for Phytoremediation -- Phytoremediation Applications for Waste Water and Improved Water Quality -- Plants for Constructed Wetlands as an Ecological Engineering Alternative to Road Runoff Desalination -- Constructed Wetlands for Livestock Wastewater Treatment: Antibiotics Removal and Effects on CWs Performance -- Phytoremediation Potential of Selected Mangrove Plants for Trace Metal Contamination in Indian Sundarban Wetland -- Fate of Phenolic Compounds in Constructed Wetlands Treating Contaminated Water -- Removal of Pathogenic Bacteria in Constructed Wetlands: Mechanisms and Efficiency -- Section 4. Phytoremediation for Reclamation and Restoration -- Low-Tech Alternatives for the Rehabilitation of Aquatic and Riparian Environments -- Proposed Rehabilitation Method of Uncontrolled Landfills in Insular Communities Through Multi Criteria Analysis Decision Tool -- Suitability of Different Mediterranean Plants for Phytoremediation of Mine Soils Affected with Cadmium.

Sommario/riassunto

This text details the plant-assisted remediation method, "phytoremediation", which involves the interaction of plant roots and associated rhizospheric microorganisms for the remediation of soil contaminated with high levels of metals, pesticides, solvents, radionuclides, explosives, crude oil, organic compounds and various other contaminants. Each chapter highlights and compares the beneficial and economical alternatives of phytoremediation to currently practiced soil removal and burial practices.
