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Nota di contenuto	Giant Reed (Arundo donax L.): A Green Technology for Clean Environment -- The Bioavailability Processes as a key to Evaluate Phytoremediation Efficiency -- The bioavailability processes as a key to evaluate phytoremediation -- Phytoremediation and Environmental Factors -- Landscape Frameworks for the Revitalization of Urban Neighborhoods in the Context of Phytoremediation -- Phytoextraction of Metals: Modeling Root Metal Uptake and Associated Processes -- Morpho-physiological Responses, Heavy Metal Accumulation and Phytoremoval Ability in Four Willow Clones Exposed to Cadmium Under Hydroponics -- Overview and New Insights of Genetically Engineered Plants for Improving Phytoremediation -- Phytomanagement: Phytoremediation and the Production of Biomass for Economic Revenue on Contaminated Land -- Phytoremediation of Soils Contaminated with Heavy Metals: Techniques and Strategies -- Phytoremediation of Agricultural Soils: Using Plants to Clean Metal-Contaminated Arable

Land -- Biomonitoring the Genotoxicity of Heavy Metals/Metalloids Present in Soil Contaminated by Fly Ash from Coal Fired Thermal Power Plant using Tradescantia pallid -- Utilization and Supplementation of Phytoextraction potential of some Terrestrial Plants in Metal-Contaminated Soils -- Roles of Brassicaceae in phytoremediation of metals and metalloids -- PAH Contamination of Urban Soils and Phytoremediation -- Phytoremediation of Petroleum-Polluted Soils -- Phytoremediation and Biochar Application as an Amendment -- Phytoremediation of RDX -- Phytoremediation of Hydrocarbon-Contaminated Soil Using Sedge Species -- Phytoremediation of BTEX by Plants -- Phytoremediation of PAH-Contaminated Areas -- Phytoremediation of Degraded Mine Soils Using Organic Amendments and Metal-Tolerant Plants -- Salt Marsh Plants' Potential for the Remediation of Hydrocarbons-Contaminated Environments -- Phytoremediation in Thailand: A Summary of Selected Research and Case Histories.

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 and water contaminated with high levels of metals, pesticides, solvents, radionuclides, explosives, nutrients, crude oil, organic compounds and various other contaminants. Each chapter highlights and compares the beneficial and economical alternatives of phytoremediation to currently practiced soil and water removal and burial practices. This book covers state of the art approaches in phytoremediation written by leading and eminent scientists from around the globe. Phytoremediation: Management of Environmental Contaminants, Volume 1 supplies its readers with a multidisciplinary understanding in the principal and practical approaches of phytoremediation from laboratory research to field application.
