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Nota di contenuto	History and Major Types of Pollutants in Electronic Waste Recycling -- Biomonitoring of Electronic Waste Polluted Environment -- New Brominated Flame Retardants in the Environment of Developing Countries -- Status of Organophosphate Esters in the Environment of Developing Countries and their Impact on Human Health -- Global Trends of E-waste Pollution and Its Impact on Environment -- E-wastes: Global Scenario, Constituents, Biological Strategies for Remediation -- Organic and Inorganic Contaminants from E-waste and their Effects on Environment -- Environmental and Health Effects: Exposure to E-waste pollution -- Health Effects of E-waste Pollution -- Effects of E-waste on Immune System of Pre-School Children -- Metagenomics Approaches to Study the Microbes in E-waste Pollution Environment -- Recycling Processes and Plastic in Electronic Waste Is an Emerging Problem for India: Implications for Future Prospect -- Techniques Used for Recycling the E-waste Worldwide -- Ecotoxicological Risk Assessment of E-waste Pollution -- Toxicity, Eco-

toxicity and Phytoremediation of E-waste -- Phytoremediation of Electronic Waste: A Mechanistic Overview and Role of Plant Secondary Metabolites -- Aspects of E-waste Management in India -- Bioremediation Approaches For E-waste Management: A Step Toward Sustainable Environment -- Biodegradation of E-waste Pollution -- Enzymatic Role in the Degradation of E-waste Pollution -- Managing Electronic Waste Pollution: Policy Options and Challenges.

Sommario/riassunto

Electronic and electric waste (e-waste), defined as end-of-life electronic products, including computers, television sets, mobile phones, transformers, capacitors, wires and cables, are a major global environmental concern. The crude recycling of e-waste releases persistent toxic substances, such as heavy metals, polybrominated diphenyl ethers (PBDEs), polychlorinated dibenzodioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs), and the environmental pollution and health risks caused by the improper disposal of e-waste has become an urgent issue. This book offers an overview of e-waste history, sources, and entry routes in soil, air, water and sediment. It also addresses e-waste transport and fate, bioavailability and biomonitoring, e-waste risk assessment, impacts on the environment and public health. In addition, it discusses the impact of e-waste on soil microbial community diversity, structure and function and reviews the treatment and management strategies, such as bioremediation and phytoremediation, as well as policies and future challenges. Given its scope, it is a valuable resource for students, researchers and scholars in the field of electronics manufacturing, environmental science and engineering, toxicology, environmental biotechnology, soil sciences and microbial ecology, as well as and plant biotechnology. .