1. Record Nr. UNINA9910890185103321

Titolo	Cadmium Toxicity : Challenges and Solutions / / edited by Nitish Kumar
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2024
ISBN	9783031656118 3031656113
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (395 pages)
Disciplina	615.925662
Soggetti	Environmental chemistry Environmental monitoring Environmental health Environmental Chemistry Environmental Monitoring Environmental Health
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 Cadmium Toxicity in the Environment -- 2 Sources and Spatial Distribution of Cadmium in the Environment -- 3 Dynamics of Changes in Cadmium Levels in the Environment -- 4 Cadmium Contamination -- 5 Role of Biotechnology in Remediation of Cadmium from Contaminated Site -- 6 Nanocomposites -- 7 Discovering Sustainable Bio-sorbents for Efficient Cadmium Remediation -- 8 Phytoremediation of Cadmium Toxicity in Water and Soil -- 9 Microbial Interventions in Bioremediation of Cadmium from Contaminated Site -- 10 Biochar-based Adsorptive Materials for the Efficient Immobilisation of Cadmium in Contaminated Soils -- 11 Potential Biological Approaches of Cadmium Removal -- 12 Environmental Cadmium Toxicity and its Bioremediation -- 13 Microbial Transformations of Cadmium -- 14 Toxicity of Rhizospheric Cadmium Contaminated Soil and its Remediation -- 15 Genetic Engineering for Cadmium Removal from Wastewater.
Sommario/riassunto	This book offers a comprehensive collection of review and case chapters that cover cadmium toxicity and remediation. It covers

sources of cadmium contamination, its impact on human health, and prospective remediation strategies, taking a multi-disciplinary approach a focus on application of recent advanced biological technology. The chapters here bring together a diverse group of environmental science, sustainability and health researchers to address the challenges caused by cadmium contamination, explaining the routes of exposure to environmental cadmium, how cadmium is transported in ecosystems, and the health risks linked to cadmium exposure in food and the environment. This book contains two sections. The first section describes the different sources and distribution of cadmium in soil and plant ecosystems. The second section addresses sustainable cadmium toxicity mitigation strategies and potential applications of recent biological technology. This book is a valuable resource to students, academics, researchers, and environmental professionals studying cadmium contamination throughout the world.