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Nota di contenuto	Front Cover; ABOUT THE EDITOR; CONTENTS; ACKNOWLEDGMENT AND HOW TO CITE; LIST OF CONTRIBUTORS; INTRODUCTION; PART I: INTRODUCTION; CHAPTER 1: HEAVY METALS IN CONTAMINATED SOILS: A REVIEW OF SOURCES, CHEMISTRY, RISKS, AND BEST AVAILABLE STRATEGIES FOR REMEDIATION; PART II: HEAVY METAL CONTAMINATION; CHAPTER 2: LEACHING BEHAVIOR OF HEAVY METALS AND TRANSFORMATION OF THEIR SPECIATION IN POLLUTED SOIL RECEIVING SIMULATED ACID RAIN; CHAPTER 3: SPATIALLY EXPLICIT ANALYSIS OF METAL TRANSFER TO BIOTA: INFLUENCE OF SOIL CONTAMINATION AND LANDSCAPE CHAPTER 4: HEAVY METAL CONTAMINATION OF SOIL AND SEDIMENT IN ZAMBIACHAPTER 5: HUMAN EXPOSURE PATHWAYS OF HEAVY METALS IN A LEAD-ZINC MINING AREA, JIANGSU PROVINCE, CHINA; PART III: ANALYSIS AND ASSESSMENT OF HEAVY METAL CONTAMINATION; CHAPTER 6: INTEGRATED ASSESSMENT OF HEAVY METAL CONTAMINATION IN SEDIMENTS FROM A COASTAL INDUSTRIAL BASIN, N. E. CHINA; CHAPTER 7: A DETERMINATION OF METALLOTHIONEIN IN LARVAE OF FRESHWATER MIDGES (Chironomusriparius) USING BRDICKA

## REACTION

CHAPTER 8: MULTIVARIATE STATISTICAL ASSESSMENT OF HEAVY METAL POLLUTION SOURCES OF GROUNDWATER AROUND A LEAD AND ZINC PLANT  
CHAPTER 9: ASSESSMENT OF HEAVY METAL CONTAMINATION OF AGRICULTURAL SOIL AROUND DHAKA EXPORT PROCESSING ZONE (DEPZ), BANGLADESH: IMPLICATION OF SEASONAL VARIATION AND INDICES; PART IV: REMEDIATION OF HEAVY METAL CONTAMINATION;  
CHAPTER 10: PHYTOREMEDIATION OF HEAVY METALS: A GREEN TECHNOLOGY; CHAPTER 11: ASSESSMENT OF THE EFFICACY OF CHELATE-ASSISTED PHYTOEXTRACTION OF LEAD BY COFFEEWEED (*Sesbania exaltata* Raf.)  
CHAPTER 12: SUSTAINABLE SOURCES OF BIOMASS FOR BIOREMEDIATION OF HEAVY METALS IN WASTE WATER DERIVED FROM COAL-FIRED POWER GENERATION  
CHAPTER 13: CHARACTERIZATION OF THE METABOLICALLY MODIFIED HEAVY METAL-RESISTANT *Cupriavidus metallidurans* STRAIN MSR33 GENERATED FOR MERCURY BIOREMEDIATION; A FERRITIN FROM *Dendrorhynchus Zhejiangensis* WITH HEAVY METALS DETOXIFICATION ACTIVITY; AUTHOR NOTES; Back Cover

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### Sommario/riassunto

Although adverse health effects of heavy metals have been known for a long time, exposure to heavy metals continues and is even increasing in some areas. Remediating heavy metal contaminated soils and water is necessary to reduce the associated health and ecological risks, make the land resource available for agricultural production, enhance food security, and scale down land tenure problems. This book discusses the causes and the environmental impact of heavy metal contamination.

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