Record Nr. UNINA9910784624703321 Concepts and applications in environmental geochemistry [[electronic **Titolo** resource] /] / edited by Dibyendu Sarkar, Rupali Datta, Robyn Hannigan Amsterdam;; Boston,: Elsevier, 2007 Pubbl/distr/stampa **ISBN** 1-281-01870-8 9786611018702 0-08-054973-X Edizione [1st ed.] Descrizione fisica 1 online resource (779 p.) Collana Developments in environmental science; ; 5 Altri autori (Persone) SarkarDibyendu **DattaRupali** HanniganRobyn Disciplina 577.27 Soggetti Environmental geochemistry Geochemistry Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Front cover: Concepts and Applications in Environmental Geochemistry: Copyright page; Contents; List of Contributors; Introduction to the Book Series; Chapter 1. What goes around comes around: Today's environmental geochemistry; 1.1. Introduction; References; Section I: Today's Environmental Geochemistry-A Review of New Concepts and Innovative Practices; Chapter 2. Modification of Goldschmidt's geochemical classification of the elements to include arsenic, mercury, and lead as biophile elements; 2.1. Introduction 2.2. Environmental geochemistry and anthropogenic dispersion of arsenic, lead, and mercury 2.3. Conclusion; Acknowledgements: References: Chapter 3. Metal ions speciation in the environment:

Distribution, toxicities and analyses; 3.1. Introduction; 3.2.

Chapter 4. International practice in high-level nuclear waste

Distribution; 3.3. Toxicities; 3.4. Analyses; 3.5. Conclusion; References;

management; 4.1. Introduction; 4.2. Definition and classification; 4.3. Scope of the problem; 4.4. Management of high-level nuclear waste; 4.5. HLW disposal in various countries; 4.6. Summary and conclusions Acknowledgments References; Chapter 5. Phytoremediation of some

heavy metals by agronomic crops; 5.1. Introduction; 5.2. Phytoextraction; 5.3. Rhizofiltration; 5.4. Phytostabilization; 5.5. Phytovolatilization; 5.6. Phytomining; 5.7. Conclusion; References; Chapter 6. Environmental geochemistry of trace metal pollution in urban watersheds; 6.1. Introduction and Background; 6.2. Sources and sinks of trace metals in the urban environment; 6.3. Methodological considerations; 6.4. Hydrological and geochemical processes; 6.5. Summary of metal pollution trends; 6.6. Concluding statement; References

Section II: Geochemistry in Surface- and Groundwater Research Chapter 7. Geochemical cycling of trace and rare earth elements in Lake Tanganyika and its major tributaries; 7.1. Introduction; 7.2. Hydrogeological setting; 7.3. Materials and methods; 7.4. Results; 7.5. Discussion; 7.6. Conclusions; Acknowledgements; References; Chapter 8. Baseline water chemistry, nitrate concentrations, and aquifer sensitivity of glacial sequences in LaGrange County, Indiana; 8.1. Background; 5.2. Aquifers; 8.3. Site selection; 8.4. Groundwater chemistry: 8.5. Conclusions and recommendations; Acknowledgments References Chapter 9. Agriculture-induced contamination of surface water and groundwater in Portugal; 9.1. Agriculture, water quality and ecodevelopment; 9.2. Nitrate pollution; 9.3. Pesticides contamination and pollution; 9.4. Phenolic compounds in two dams of Alentejo region (south Portugal); 9.5. Good agricultural practice for the protection of water resources; References; Chapter 10. Provenance and geochemistry of sediments in arsenic-affected areas of gangetic West Bengal, India; 10.1. Introduction; 10.2. Regional setting of the study area; 10.3. Materials and methods

Sommario/riassunto

This volume is for environmental researchers and government policy makers who are required to monitor environmental quality for their environmental investigators and remediation plans. It uses concepts and applications to aid in the exchange of scientific information across all the environmental science disciplines ranging from geochemistry to hydrogeology and ecology to biotechnology. Focusing on issues such as metals, organics and nutrient contamination of water and soils, and interactions between soil-water-plants-chemicals, the book synthesizes the latest findings in this rapidly-develop

10.4. Results and discussion