

1. Record Nr.	UNINA9910784592703321
Titolo	Arsenic in soil and groundwater environment [[electronic resource]] : biogeochemical interactions, health effects and remediation // editors, Prosun Bhattacharya ... [et al.]
Pubbl/distr/stampa	Amsterdam ; ; Boston, : Elsevier, 2007
ISBN	1-281-02152-0 9786611021528 0-08-052290-4
Edizione	[1st ed.]
Descrizione fisica	1 online resource (685 p.)
Collana	Trace metals and other contaminants in the environment ; ; 9
Altri autori (Persone)	BhattacharyaProsun
Disciplina	363.7384
Soggetti	Arsenic - Environmental aspects Arsenic compounds Soil pollution Water - Pollution
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; Arsenic in Soil and Groundwater Environment; Copyright Page; Table of Contents; Preface; About the Editors; List of Contributors; Section I: Introduction; Chapter 1. Arsenic in soil and groundwater: an overview; Abstract; 1.1 Introduction; 1.2 Occurrence, distribution, and sources of As; 1.2.1 Occurrence and distribution; 1.2.2 Sources of As in soils and groundwater; 1.2.2.1 Natural sources; 1.2.2.2 Transport and partitioning of As from natural sources; 1.2.3 Anthropogenic sources; 1.2.3.1 Industrial As transport and partitioning 1.3 Geogenic As in groundwater and soils: a brief overview 1.3.1 Distribution and chemodynamics of As in groundwater; 1.4 Accumulation and behavior of As in soils; 1.5 Bioaccumulation of As in plants and crops; 1.5.1 Arsenic in crops; 1.5.2 Phytoremediation of As-contaminated soils; 1.6 Speciation and behavior of As in contaminated sites; 1.7 Biogeochemical Controls on As mobilization; 1.8 Health risks associated with chronic exposure to As in groundwater; 1.8.1 Impact of high As ingestion; 1.8.1.1 Social problem; 1.8.2 Treatment; 1.9 Removal of As from drinking water

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2.2.1 A conceptual model of As in the aquifer 2.3 Predicting As in tube well discharge; 2.3.1 Modelling As at shallow HTWs; 2.3.2 Modelling As at DTWs; 2.4 Evidence for changing As concentration at tube wells; 2.4.1 Arsenic concentration and tube well age in Bangladesh; 2.4.2 Arsenic concentration and tube well age at village scale; 2.4.3 Time-series monitoring of As concentration; 2.4.4 Isotopic indication of vertical leakage; 2.5 Discussion; 2.6 Future directions; Acknowledgements; References; Chapter 3. Source identification for groundwater arsenic in the Verde Valley, Central Arizona, USA Abstract 3.1 Introduction; 3.2 Geology of Verde Valley; 3.2.1 Verde Formation; 3.2.2 Precambrian rocks; 3.2.3 Montezuma Well; 3.2.4 Verde Hot Springs; 3.2.5 Chemical composition of Verde Valley groundwater; 3.2.6 Local channelization of groundwater; 3.3 Experimental; 3.3.1 Cation and anion analyses; 3.3.1.1 ICP-MS analysis; 3.4 Results and discussion; 3.5 Future directions; Acknowledgments; References; Chapter 4. Natural arsenic in groundwater and alkaline lakes at the upper Paraguay basin, Pantanal, Brazil; Abstract; 4.1 Introduction; 4.2 Regional setting; 4.3 Materials and methods 4.3.1 Fieldwork

Sommario/riassunto

This volume presents the recent developments in the field of arsenic in soil and groundwater. Arranged into nine sections, the text emphasizes the global occurrences of arsenic in the environment, particularly on its source, pathways, behavior, and effects it has on soils, plants, water, animals, and humans. It also covers the diverse issues of arsenic in the mining environment, arsenic emanating from hydrothermal springs, and the geochemical modeling of arsenic adsorption to oxide surfaces. Finally, the text includes different cost effective removal mechanisms of arsenic from drinking water
