Record Nr. UNINA9910788566803321 The global arsenic problem : challenges for safe water production / / **Titolo** editors, Nalan Kabay. [et al.] Pubbl/distr/stampa Leiden:,: CRC Press/Balkema,, 2010 **ISBN** 0-429-20621-6 1-138-11233-X 1-136-91252-5 0-203-84339-8 Descrizione fisica 1 online resource (248 p.) Collana Arsenic in the environment, , 1876-6218; ; volume 2 Altri autori (Persone) KabayNalan Disciplina 628.1/62 Soggetti Water - Purification - Aresnic removal Drinking water - Arsenic content Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali A Balkema book. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Front Cover; About the book series; Editorial board; Dedications; Table of contents; Foreword; Editors' preface; List of contributors; Acknowledgements; Section I. Overview of global arsenic crisis and human toxicity; Chapter 1. The global arsenic crisis-a short introduction; Chapter 2. Arsenic contamination in groundwaters in Bangladesh and options of sustainable drinking water supplies: Chapter 3. Toxic effects of arsenic on human erythrocytes; Section II. Arsenic removal: Mechanisms, current practices and experiences; Chapter 4. Mechanisms of arsenic removal from water Chapter 5. Granular iron hydroxide as an adsorbent for arsenic in waterChapter 6. Arsenic removal from water using magnetites; Chapter 7. Study of the long term stability of ferric iron-arsenic precipitates: Chapter 8. Arsenic and boron in geothermal water and their removal; Chapter 9. Arsenic removal from potable water: Point-of-use, point-ofentry and municipal experiences; Section III. Membrane processes and applications in arsenic removal; Chapter 10. Review of membrane processes for arsenic removal from drinking water; Chapter 11. Arsenic

removal by small-scale reverse osmosis units

Chapter 12. Potential application to remove arsenic by functional

polymers in conjunction with membranes and electrooxidation processesSection IV. Innovations in arsenic removal techniques for safe water production; Chapter 13. Testing of a new selective arsenic adsorbent and overview of field test data; Chapter 14. Chitosan dispersed with Fe(III) oxide particles: A sorbent used for selective removal of arsenic from contaminated waters; Chapter 15. Field experiences with ArsenXnp, a very effective and efficient hybrid media for arsenic removal Chapter 16. Low-cost solar technologies for arsenic removal in

drinking waterBack Cover

## Sommario/riassunto

A prevalent and increasingly important issue, arsenic removal continues to be one of the most important areas of water treatment. Conventional treatment plants may employ several methods for removing arsenic from water. Commonly used processes include oxidation, sedimentation, coagulation and filtration, lime treatment, adsorption onto sorptive media, ion exchange, and membrane filtration. However, in the most affected regions, large conventional treatment plants may not be appropriate and factors such as cost and acceptability as well as performance must be considered. This book, published in