Contents

| Andrea Scozzari and Elissavet Dotsika |
|---|
| Protection of Groundwater Resources: Worldwide Regulations and Scientific Approaches 12 |
| Marco Doveri, Matia Menichini, and Andrea Scozzari |
| Threats to the Quality of Water Resources by Geological CO ₂ Storage: Hydrogeochemical and Other Methods of Investigation: A Review |
| Groundwater Contamination: Environmental Issues and Case Studies in Sardinia (Italy) |
| Geological Sources of As in the Environment of Greece: A Review |
| Groundwater Contamination Studies by Environmental Isotopes: A review |
| Daivala Misi, Diunena Raco, and Enssavet Dotsika |
| The Importance of Reduced-Scale Experiments for the Characterization of Porous Media |
| Mathematical Models as Tools for Prevention and Risk Estimates of Groundwater Pollution: Contributions and Challenges |

xiv Contents

| Groundwater Monitoring and Control by Using Electromagnetic | |
|---|-----|
| M. Bavusi, V. Lapenna, A. Loperte, E. Gueguen, G. De Martino, | 193 |
| I. Adurno, I. Catapano, and F. Soldovieri | |
| Pollution Detection by Electromagnetic Induction and Electrical | |
| Resistivity Methods: An Introductory Note with Case Studies | 225 |
| Yuri Manstein and Andrea Scozzari | |
| The Combination of Geoelectrical Measurements and | |
| Hydro-Geochemical Studies for the Evaluation of Groundwater | |
| Pollution in Mining Tailings Areas | 239 |
| Svetlana Bortnikova, Nataliya Yurkevich, Elisaveta Bessonova, | |
| Yury Karin, and Olga Saeva | |
| Microfluidic Optical Methods: A Review | 257 |
| Genni Testa, Gianluca Persichetti, and Romeo Bernini | |
| Non-conventional Electrochemical and Optical Sensor Systems | 279 |
| Corrado Di Natale, Francesca Dini, and Andrea Scozzari | |
| Index | 313 |
| | |