

Contents

1 Biological Remediation of Soil: An Overview of Global Market and Available Technologies.....	1
Ajay Singh, Ramesh C. Kuhad, and Owen P. Ward	
2 Local Gain, Global Loss: The Environmental Cost of Action	21
Pascal Suer, Yvonne Andersson-Sköld, and Jenny E. Andersson	
3 Bioavailability of Contaminants in Soil	35
Joseph J. Pignatello	
4 Biosurfactants in Bioremediation	73
Jonathan D. Van Hamme and Joanna Urban	
5 The Diversity of Soluble Di-iron Monooxygenases with Bioremediation Applications	91
Andrew J. Holmes	
6 Bioremediation of Polluted Soil	103
A.K.J. Surridge, F.C. Wehner, and T.E. Cloete	
7 Soil Bioremediation Strategies Based on the Use of Fungal Enzymes	123
Christian Mougin, Hassan Boukcim, and Claude Jolival	
8 Anaerobic Metabolism and Bioremediation of Explosives-Contaminated Soil	151
Raj Boopathy	
9 Biological Remediation of Petroleum Contaminants.....	173
Ramesh Chander Kuhad and Rishi Gupta	

10	Bioremediation of Benzene-contaminated Underground Aquifers.....	189
	Kazuya Watanabe and Yoh Takahata	
11	Microbial Remediation of Metals in Soils.....	201
	K.A. Hietala1 and T.M. Roane	
12	Transformations of Toxic Metals and Metalloids by <i>Pseudomonas stutzeri</i> Strain KC and its Siderophore Pyridine-2,6-bis(thiocarboxylic acid)	221
	Anna M. Zawadzka, Andrzej J. Paszczynski, and Ronald L. Crawford	
13	Biomining Microorganisms: Molecular Aspects and Applications in Biotechnology and Bioremediation	239
	Carlos A. Jerez	
14	Advances in Phytoremediation and Rhizoremediation	257
	Tomas Macek, Ondrej Uhlik, Katerina Jecna, Martina Novakova, Petra Lovecka, Jan Rezek, Vlasta Dudkova, Petr Stursa, Blanka Vrchotova, Daniela Pavlikova, Katerina Demnerova, and Martina Mackova	
15	Phytoremediation for Oily Desert Soils.....	279
	Samir Radwan	
16	Heavy Metal Phytoremediation: Microbial Indicators of Soil Health for the Assessment of Remediation Efficiency	299
	Lur Epelde, José Ma Becerril, Itziar Alkorta, and Carlos Garbisu	
17	The Environment and the Tools in Rhizo- and Bioremediation of Contaminated Soil	315
	A.K.J. Surridge, F.C. Wehner, and T.E. Cloete	
18	Molecular Tools for Monitoring and Validating Bioremediation	339
	Ben Stenuit, Laurent Eysers, Luc Schuler, Isabelle George, and Spiros N. Agathos	
	Index.....	355



<http://www.springer.com/978-3-540-89620-3>

Advances in Applied Bioremediation
Singh, A.; Kuhad, R.C.; Ward, O.P. (Eds.)
2009, XIII, 361 p. 50 illus., Hardcover
ISBN: 978-3-540-89620-3