



ISBN: 9 7 8 0 3 2 3 9 0 4 5 2 0

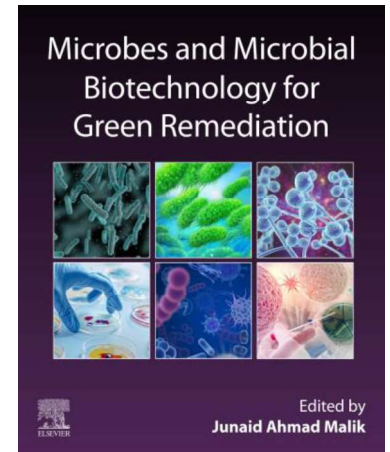
Elsevier Link: [Click here](#)

World Biologica Link: [Click here](#)

Table of Contents

Preface

About the Editor



Part I. Microbial Bioremediation: An Introduction

1. Microbial Biotechnology: An Introduction

Junaid Ahmad Malik, Md Mahfujur Rahman, Nadeem Rais*

2. Bioremediation of Soil: An Overview

Mehjabeen, Anoop Kumar Devedee, Monalisa Sahoo, Kartikeya Choudhary, Mahendra Singh, Ghanshyam*

3. Microbial Interaction With Metals And Metalloids

*R. Raganiyanthri, Ananthi Jeyaraman**

4. Emerging Issues and Challenges for Microbe Assisted Remediation

*Sonika Phian, Shilpi Nagar, Jasleen Kaur, Charu Dogra Rawat**

Part II. Microbes for Sustainable Agriculture and Green Remediation

5. Microbe-Mediated Biotic and Abiotic Stress Tolerance in Crop Plants

Trisha Sinha, Kousik Nandi, Rajeswari Das, Satya Narayan Prasad, Madhusmita Pradhan, Shivam Maurya, Abhijit Nandi*

6. Promoting Crop Growth with Symbiotic Microbes in Agro-Ecosystems – I

Mahima Dey, Soumi Chatterjee, Bikram Dhara, Ishita Roy, Arup Kumar Mitra*

7. Promoting Crop Growth with Symbiotic Microbes in Agro-Ecosystems – II

Mohd Zishan, Uzma Manzoor*

8. Plant Growth Promoting Rhizobacteria: An Alternative for NPK Fertilizers

Swarnika Roy, Suchandrima Bhowmik, Ankita Dutta Chowdhury, Bikram Dhara, Arup Kumar Mitra*

9. Biochar and its Potential Use for Bioremediation of Contaminated Soils

*Shahnawaz Hassan, Bhat Sabreena, Muzaffar Zaman, Aarif Yaseen, Bashir Ah Ganai**

10. Bioremediation with Biochar and its Microbial Aspects

Mohineeta Pandey, Astha Turkey, Ankesh Tiwari, Sudhir Kumar Pandey, Mohammed Latif Khan*



38. Arsenic Toxicity and its Clinical Manifestations in Murshidabad District with Some Potential Remedial Measures

*Debjani Mandal, Sayan Biswas, Souradip Seal, Rudrajit Mandal, Sayan Das, Abhishek Basu**

39. Application of *Deinococcus radiodurans* for Bioremediation of Radioactive Wastes

Parameswaran Kiruthika Lakshmi, Sitharanjithan Abirami, Selvaraj Meenakshi, Chockaiyan Usha, Pandi Sakthieaswari, Kannan Aarthy, Subbaraju Sree Gayathri, Sathaiyah Baby*

40. Microbial Bioremediation and Biodegradation of Radioactive Waste Contaminated Sites

Ruby Patel, Jaison Mugunthan, Puja Singh, Siddhartha Mukherjee, Ramyakrishna Koka*

Part IV. Recent Trends and Tools

41. New Insights of Cellulosic Ethanol Production from Lignocellulosic Feedstocks

M. Subhosh Chandra, M. Srinivasulu, P. Suresh Yadav, Bellamkonda Ramesh, Srinivasan Kameswaran, A. Madhavi*

42. Mycorrhizal Product Glomalin: A Proficient Agent of Nutrient Sequestration And Soil Fertility Restoration under Jeopardized Agroecosystem

Puja Singh, Jaison Mugunthan, Ruby Patel, Siddhartha Mukherjee*

43. Microbial Quorum Sensing Systems: New and Emerging Trends of Biotechnology in Bioremediation

Raina Saha, Gnansing Jesumaharaja L, Anamika Debnath, Kapudeep Karmakar, Ayon Roy, Prateek Madhab Bhattacharya, Apurba Kumar Chowdhury*

44. Metagenomics – A Genomic Tool For Monitoring Microbial Communities During Bioremediation

Reshma Soman, Kavitha MH, Hitha Shaji*

45. Nanobioremediation: A Novel Application of Green-Nanotechnology in Environmental Clean-Up

Mir Zahoor Gul, Karuna Rupula, B. Sashidhar Rao*

46. Nanotechnology and Green Nano-Synthesis for Nano-Bioremediation

Mohammed Al-Jawasim, Alaa Al-Khalaf*

Index

Editor

Dr. Junaid Ahmad Malik
Department of Zoology
Govt. Degree College, Bijbehara
Kashmir (J&K), India- 192124
Email: malik.junaidahmad@gmail.com