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Altri autori (Persone)	DubeyRamesh Chandra
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Nota di contenuto	Chapter 1. Screening methods for biosurfactant producing microorganisms -- Chapter 2. Purification assessment and assay of biosurfactant efficacy -- Chapter 3. Methods of screening and applications of biosurfactants produced by Actinomycetes -- Chapter 4. Methods of screening and applications of biosurfactants produced by cyanobacteria -- Chapter 5. Fungal biosurfactants and its applications -- Chapter 6. Production of biosurfactant by bacteria from extreme environments: Biotechnological potential and applications -- Chapter 7. Microbial Biosurfactants: An Eco-friendly perspective for environmental remediation -- Chapter 8. Lipopeptide and rhamnolipid biosurfactant as biopesticides -- Chapter 9. Biosurfactants for the formulation of sustainable agrochemicals -- Chapter 10. Biosurfactants: Role in plant growth promotion and disease management -- Chapter 11. Rhamnolipids from Pseudomonas aeruginosa in the cleaning of polluted environments -- Chapter 12.

Mosquitocidal activity of biosurfactant -- Chapter 13. Biosurfactants as promising surface-active agents: Current understanding and applications -- Chapter 14. Role of Biosurfactant in enzyme production -- Chapter 15. Biosurfactants in food processing industry -- Chapter 16. Biosurfactant in cosmetic industry -- Chapter 17. Applications of microbial biosurfactants in detergents -- Chapter 18. Application of biosurfactant in petroleum -- Chapter 19. Biosurfactants in medical industry -- Chapter 20. Biosurfactants: An antiviral perspective -- Chapter 21. Biosurfactants-mediated nanoparticles as next generation therapeutics -- Chapter 22. Production Cost of Traditional Surfactants and Biosurfactants.

Sommario/riassunto

This book provides an overview of biosurfactants as biobased compounds, and highlights novel applications in several industries, including biotech, food processing, cosmetic, oil recovery/petroleum, pharmaceutical, detergent and textile. In the past few decades, biosurfactants have emerged as promising alternative surface-active agents to chemical surfactants due to their high biodegradability, low toxicity, multi-functionality under extreme pH and temperature conditions, long-term physicochemical stability, and their production from renewable sources. This book presents the fundamental aspects (classification, structure, genetics, and properties) of biosurfactants and how their features contribute to the global bioeconomy. Chapters from expert contributors discuss the latest screening, purification and characterization methods of new biosurfactants and biosurfactant-producing fungi and bacteria, including extremophiles. Particular attention is given to the role of biosurfactants in the formulation of sustainable agrochemicals, and their application as eco-friendly mosquitocidal agents, and biopesticides. Readers will discover a perspective on the antiviral activity of biosurfactants, in which the latest in vitro and in silico studies are discussed. Readers will also find more about the foremost therapeutic attributes of biosurfactant-mediated nanoparticles as next-generation drug delivery systems. Given its breadth, this book appeals to a wide readership, from students and academic researchers to scientists and professionals from industry, interested in the study and application of microbial surfactants.
