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Titolo	Extremophilic Fungi : Ecology, Physiology and Applications / / edited by Sanjay Sahay
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Descrizione fisica	1 online resource (727 pages)
Collana	Biomedical and Life Sciences Series
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Soggetti	Fungi Mycology Microbiology Microbial ecology Microbial genetics Microbial Ecology Microbial Genetics Fongs Genètica microbiana Microbiologia Ecologia Llibres electrònics
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Formato	Materiale a stampa
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	A. Basic information. Chapter 1. Isolation, culture and maintenance of extremophilic fungi -- Chapter 2. Modern tools for the identification of fungi including yeasts -- B. Eco-physiology -- Chapter 3. Major habitats and diversity of thermophilic fungi -- Chapter 4. Thermophilic Fungi: Habitats and morpho-molecular adaptation -- Chapter 5. Modulation of physiological and molecular switches in thermophilic fungi-a brief outlook -- Chapter 6. Psychrotrophic microfungi: Major habitats, diversity and living strategies -- Chapter 7. Physiology and molecular biology of psychrotrophic fungi: an insight -- Chapter 8. Ecology, physiology and diversity of peizophilic fungi -- Chapter 9.

Halophilic, acidophilic, alkaliphilic, metallophilic and radioresistant: Habitats and their living strategies -- Chapter 10. Ecology and diversity of microaerophilic fungi including endophytes -- Chapter 11. Soil fungi and hypoxic soils and aquatic sediments -- Chapter 12. Chaotolerant fungi: An unexplored group of extremophile -- Chapter 13. Xerophilic fungi: Physiology, Genetics and Biotechnology -- C. Applications -- Chapter 14. Extremophilic enzymes: catalytic features and industrial applications -- Chapter 15. Biotechnological application of extremophilic fungi -- Chapter 16. Extremophylic cellulases: Screening, purification, catalysis and applications -- Chapter 17. Extremophilic fungal xylanases: Screening, purification, assay and applications -- Chapter 18. Extremophilic fungal lipases: Screening, purification, assay and applications -- Chapter 19. Extremophilic fungal proteases: Screening, purification, assay and applications -- Chapter 20. Extremophilic fungal amylases: Screening, purification, assay and applications* -- Chapter 21. Extremophilic fungi as source of bioactive molecules -- Chapter 22. Piezophilic Fungi: Source of novel natural products with preclinical and clinical significance -- Chapter 23. Biotechnological applications of microaerophilic including endophytic fungi -- Chapter 24. Wholecell application potential of extremophilic fungi in bioremediation -- Chapter 25. Extremophilic fungi: Potential applications in sustainable agriculture -- Chapter 26. Nanomolecules: Synthesis by extremophilic fungi, related techniques and applications -- Chapter 27. Fungal extremozymes: A potential bioresource for green chemistry -- Chapter 28. Fungal extremozymes in green chemistry -- Chapter 29. Phylogenomics, Microbiome, and Morphological insights of extremophilic Truffles:the tale of a sensory stimulating ectomycorrhizal filamentous fungus.

Sommario/riassunto

This contributory volume is a comprehensive account of recent research on extremophilic fungi. It brings to the readers, latest information on all categories of extremophilic fungi, their isolation, culture, and potential applications. The book aims at providing the audience in-depth and updated theoretical concepts, also application on the field. It will serve as a supplementary reading material in addition to basic mycology textbooks. The book fills the gap in literature and will be useful to the postgraduate students and researchers in the field of mycology, agriculture, biotechnology and Microbiology.