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Nota di contenuto	Part I General -- Introduction to Biosynthetic Technology and Environmental -- Part II: Biosynthetic Approaches and Products -- Management of Agro-Industrial Wastes with the Aid of Synthetic Biology -- Advances and Tools in Engineering Yeast for Pharmaceutical Production -- Plant Biosynthetic Engineering through Transcription Regulation: An insight into Molecular Mechanisms During Environmental Stress -- Oil Palm Biomass and its Kinetic Transformation Properties -- Selection and Utilization of Agro-Industrial Waste for Biosynthesis and Hyper-Production of Pullulan: A Review -- Production, Characterization, and Applications of Microbial Poly-Glutamic Acid -- Bioprocesses for the Production of 2,5-Furandicarboxylic Acid -- Biosynthesis of 1,3-Propanediol: Genetics and Applications -- Biosynthesis and Technological Advancements of Biosurfactants -- Recovery of Nutraceuticals from Agri-Food Industry Waste by Lactic Acid Fermentation -- Manno-Oligosaccharides as Prebiotic Valued Products from Agro-Waste -- Computational Modelling and Prediction of Microalgae Growth Focused towards Improved Lipid Production -- Perennial Energy Crops on Drained Peatlands in Finland -- Part III: Environmental Assessment and Waste Management -- Bioenergy Conversion from Aquatic Weed Water Hyacinth into Agronomically Valuable Vermicompos -- Mitigation of

Global Warming Potential for Cleaner Composting -- Recent Advances in Composting of Organic and Hazardous Waste: A Road Map to Safer Environment -- Biomarkers Currently used in Water Pollution Monitoring Program -- Bioremediation by Microalgae: Current and Emerging Trends for Effluents Treatments for Value Addition of Waste Streams -- Environmental Assessment of Biorefineries.

Sommario/riassunto

This book provides a comprehensive review of biosynthetic approaches to the production of industrially important chemicals and the environmental challenges involved. Its 19 chapters discuss different aspects of biosynthetic technology from the perspective of leading experts in the field. It covers various biorefinery approaches, including the use of microbes, metabolically engineered plants, biomass-based and green technology methods. Further, it examines important research in the areas of organic and hazardous waste composting, management and recovery of nutraceuticals from agro-industrial waste, biosynthesis and technological advancements of biosurfactants and waste water bioremediation. This book contributes to the scientific literature on biosynthetic technologies and the related environmental challenges for researchers and academics working in this area around the globe.