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Nota di contenuto	Chapter 1: Dark fermentation and bioelectrochemical systems for enhanced biohydrogen production from palm oil mill effluent: current progress, potentials, and future perspectives -- Chapter 2: Spent mushroom substrate as biofertilizer for agriculture application -- Chapter 3: Biological treatment of agro-industrial waste -- Chapter 4: Proteomics of lignocellulose substrates bioconversion in anaerobic digesters to increase carbon recovery as methane -- Chapter 5: Circular economy and agroindustrial wastewater: potential of microalgae in bioremediation processes -- Chapter 6: Utilization of agro-waste as carbon source for biohydrogen production: prospect and challenges in Malaysia -- Chapter 7: Agro-industrial waste as substrates for the production of bacterial pigment -- Chapter 8: Analysis of termite microbiome and biodegradation of various phenolic

compounds by a bacterium isolated from the termite gut in louisiana, usa -- Chapter 9: Compatible technologies to anaerobic digestion for the integral valorization of organic waste -- Chapter 10: Recycling and reuse of ayurvedic pharma industry wastes -- Chapter 11: Production of unicellular biomass as a food ingredient from agro-industrial waste -- Chapter 12: Cyanobacterial degradation of organophosphorus pesticides -- Chapter 13: Microbial identification and extracellular polymeric substances characterization of aerobic granules developed in treating rubber processing waste water -- Chapter 14: Granulation and biodegradation by microbial species in granular sequencing batch reactor for soy-sauce wastewater treatment.

Sommario/riassunto

Agriculture and industry are the two most important economic sectors for various countries around the globe, providing millions of jobs as well as being the main source of income for these countries. Nevertheless, with the increasing demand for agricultural and industrial produce, huge amounts of waste are also being produced. Without proper management, this waste (both liquid and solid) poses a serious threat to overall environmental quality, mainly due to its toxicity and slow degradation processes. Current approaches are effective but would normally require huge capital investments, are labour intensive and generate potential hazardous by-products. As such, there is a need for alternative approaches that are cheaper, easier-to-handle and have a minimum potential impact on environmental quality. This book presents up-to-date approaches using biological techniques to manage the abundance of waste generated from agricultural and industrial activities. It discusses techniques such as bioconversion, biodegradation, biotransformation, and biomonitoring as well as the utilization of these wastes. A number of chapters also include individual case studies to enhance readers' understanding of the topics. This comprehensive book is a useful resource for anyone involved in agricultural and industrial waste management, green chemistry or biotechnology. It is also recommended as a reference work for graduate students and all agriculture and biotechnology libraries.