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Nota di contenuto	Chapter 1. Microalgae Biomass Biorefinery: A Sustainable Renewable Energy Feedstock of the Future -- Chapter 2. Biorefinery approach for sustainable biodiesel and bioethanol production from microalgae -- Chapter 3. Microalgal promise to the next generation: A dual potential perspective as cosmeceuticals and biofuels -- Chapter 4. Microalgae-based technologies for removal of textile wastewater -- Chapter 5. Treatment of textile waste effluents using microalgae: a suitable approach for wastewater remediation and lipid production -- Chapter 6. The multifaceted microalgal approach to wastewater treatment to generate energy and essential chemicals -- Chapter 7. Heterotrophic micro-algal production system via utilization of wastewater in microalgal production -- Chapter 8. Recent developments in the enzymatic and bio-catalytic pretreatment of microalgae for efficient

biofuel production -- Chapter 9. Innovative & Strategic upgrades in large scale Microalgal Culture Techniques -- Chapter 10. Advances on harvesting and extraction systems in micro-algal bio-refinery.

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Sommario/riassunto

This edited book provides an account of past, present, and future constraints in microalgae-based biorefineries, emphasizing cultivation and refining processes. The book offers an insight into the recent advancements in the technologies and methods developed microalgae-based biorefinery for bioenergy and biochemicals production. The fast depletion of fossil fuels has forced researchers to move out of reliance on fossil fuels for the industrial and energy sector's needs. Due to its rich protein and lipid content, microalgal biomass has been considered one of the suitable substrates for the biorefinery. Microalgal production and harvesting for biofuel and chemicals is a tedious task. Several technological advances have been observed in this area, thus systematically checking the viability of technology at laboratory scale and then moving to large scale production, harvesting, extraction, processing, and characterization is the main focus of the book. This book is equally beneficial for researchers and engineers in biomass-based biorefineries or the bachelors, master, or young budding graduate students as a textbook. .

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