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Nota di contenuto	Chapter 1. Biorefinery for agro-industrial waste into value added biopolymers: Production and applications -- Chapter 2. A biorefinery based zero-waste utilization of non-edible oil seeds for biodiesel and biofuel production along with chemicals and biomaterials -- Chapter 3. Emerging trends in food industry waste valorization for bioethanol production -- Chapter 4. Development of Pretreatment of Lignocellulose for Bioenergy -- Chapter 5. Thermal Pre/Treatment of Organic Fraction of Municipal Solid Waste -- Chapter 6. Biotechnological aspects of microbial pretreatment of lignocellulosic biomass -- Chapter 7. Enhanced biofuel production from lignocellulosic biomass: an overview of advanced physico-chemical and biological technologies -- Chapter 8. A kinetic framework for microwave-irradiated catalytic conversion of lignocelluloses to biofuel precursors by employing Protic and Aprotic Ionic liquids -- Chapter 9. Biomass fractionation based on enzymatic hydrolysis for biorefinery systems -- Chapter 10. Sustainability of Biorefineries: Challenges Associated with Hydrolysis Methods for Biomass Valorization -- Chapter 11. Efficient utilization of lignocellulosic biomass: hydrolysis methods for biorefineries -- Chapter 12. Lytic Polysaccharide Monoxygenases-Driven Degradation of Biorefinery Lignocellulose -- Chapter 13. Algal bio-economy: A platform for clean energy and fuel -- Chapter 14. Biopolymer – Production from biomass -- Chapter 15.

Recent Advances in Biochar-Based Mitigation of Dyes, Agrochemicals and Pharmaceutical Pollutants -- Chapter 16. Electro-Fermentation of Biomass for High Value Organic Acids -- Chapter 17. Bioenergy-byproducts Based Electrodes for Flexible Supercapacitors -- Chapter 18. A Sustainable bio-jet fuel: An alternative energy source for aviation sector -- Chapter 19. Biogas biorefinery -- Chapter 20. Multiproduct algal biorefineries; challenges and opportunities -- Chapter 21. Genetic engineering for enhancement of biofuel production in microalgae -- Chapter 22. Decentralised Anaerobic Digestion Systems as Basis for Future Bio-refinery Platforms -- Chapter 23. Techno-Economic Assessment of Biomass-Based Integrated Biorefinery for Energy and Value-Added Product.-.

#### Sommario/riassunto

This book provides a comprehensive account of past, present and future of the biomass based biorefineries. It is an all-inclusive and insightful compilation of recent advancements in the technology and methods used for conversion of biomass to bioenergy and other useful biochemicals. The book also focuses on the limitations of existing technologies and provides the future prospects, as well as discusses socio-economic impact of biomass based biorefineries. This book assists researchers in the area of lignocellulosic biorefineries and can be used by the students, scientist and academician as an advanced reference textbook.