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Autore	Hafiza Shukor
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Altri autori (Persone)	Mohd Zaini MakhtarMuaz Abu Zahrim Yaser
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Nota di contenuto	The Biomass Processing As A Key Enabler of Circular Economy Practices: Emphasizing Its Potential To Convert Biomass Into Valuable Resources And Contribute To The Sustainable Use of Natural Resources -- Malaysia Biomass Utilization, Bioenergy and Supply Chain -- Extraction Technologies for Bioactive Compounds -- Biomass Conversion Technology to Renewable Energy -- Enzymes and single cell protein production via biorefineries approach -- Biosynthesis of Solvents and Chemicals from Biomass via Green Approaches -- Low-cost recycling of Agricultural Biomass into Compost using Black Soldier Fly and Compost Worms -- Biomass-fuelled and Light Energy-driven Bioelectrochemical System -- Biomass Utilization in Food Technology -- Preparation and characterization of activated carbon from grass clippings biomass for the removal of dye contaminated waste water -- Potential production of high-liquid hydrocarbons from blended Chlorella sp. and cooking oil via co-pyrolysis as a new waste

management strategy -- Vegetable Oil as a Renewable Feedstock for Biobased Polyurethane Foam: A Sustainable Alternative -- Sustainability of Biomass Utilization: Engineering & Economic Aspects -- The Way Forward for Emerging Trends and Innovations in Biomass Processing for Circular Economy.

Sommario/riassunto

This book explores the pivotal role of biomass processing in catalyzing a sustainable circular economy, highlighting its ability to convert waste into useful materials. It offers a wide spectrum of topics, from Malaysia's biomass use to bioenergy supply chains and cutting-edge extraction technologies for bioactive compounds. Key bioconversion strategies like enzyme and single-cell protein production via biorefineries and green biosynthesis of solvents and chemicals are explored in detail. The book describes innovative low-cost biomimetic technologies using Black Soldier Fly and Compost Worms, bioelectrochemical systems fueled by biomass, and the use of biomass in food technology. The book further describes activated carbon production from wastewater treatment, hydrocarbons in high liquids using co-pyrolysis, and vegetable oils as renewable raw materials for polyurethane biobased foam. The primary themes include sustainability, engineering, and economic sustainability, with explorations of the latest trends and innovations in the processing of biomass. The use of biomass in circular economy principles, its transformation into renewable sources of energy, and its incorporation in various sectors are also explained. Through new technologies and eco-friendly strategies, this book is a necessity for researchers, business professionals, and policymakers committed to the innovation of biomass-based solutions.