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Nota di contenuto	Non-Wood Renewable Materials: Properties Improvement and Its Application -- Jatropha curcas L: A Future Energy Crop with Enormous Potential -- Upgrading of Oil Palm Empty Fruit Bunch to Value Added Products -- Bioenergy Derived from Electrochemically Active Biofilms -- In-Situ Transesterification Reaction for Biodiesel Production -- Abaca Fiber: A Renewable Bio-Resource for Industrial uses and Other Applications -- Micro Algal Biomass as a source of Renewable Energy -- Lignocellulosic biomass: As Future Alternative for Bioethanol Production -- Utilization of Sawmill By-Product for Making Cellulose and its Valuable Derivatives -- Upgrading of Oil Palm Biomass to Value-Added Products -- Polylactic Acid-Based Kenaf Biomass Synthesized via Ring Opening Polymerization -- Chemical Functionalization of Cellulosic Fibers for Green Polymer Composites Applications -- Kapok Fiber: Applications -- Nanofibrillated Cellulose: Sustainable Nanofiller with Broad Potentials Use -- Unlocking the Destructive Powers of Wood Eating Termites: From Pest to Biopolymer Derivatives Extractor -- Agricultural residues from crop harvesting and processing: A Renewable Source Of Bio-Energy -- Application of Micro or Small Scale Biomass Derived Fuel System for Power Generation -- Application of Biomass Derived Catalyst.

Sommario/riassunto

The current book is the second volume of the “Biomass and Bioenergy” series, specifically written to offer new and updated materials related to the applications of biomass and bioenergy. Unique topics include non-wood renewable materials (oil palm, bamboo, rattan, bagasse, and kenaf); upgrading of oil palm as added product (a long identified sustainable source of renewable energy); biodiesel synthesis using transesterification of triglycerides and application of single-step process for biodiesel synthesis from microalgae; electrochemically active biofilms for microbial fuel cells, nanomaterial synthesis, bioremediation and bio-hydrogen production; microalgal biomass as a source of renewable energy; a critical analysis of the current situation and future needs for lignocellulosic biomass; utilization of sawmill by-product for making cellulose and its valuable derivatives; valorization of oil palm biomass in relation to biorefinery approach; polylactic acid-based kenaf biomass synthesis; chemical functionalization of natural cellulosic fibers for green polymer composites applications; recent applications of kapok fiber; abaca fiber as a renewable bio-resource for industrial uses and other applications in environmental protection; recent advances in nanofibrillated cellulose extraction; termites from pest to biopolymer derivatives extractor with special emphasis on termite lignocellulolytic system; and last but not least, applications of biomass derived catalyst. We hope this book will serve as a comprehensive primer for individuals who are interested in learning about the vast potentials of tropical biomass.