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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Processing and Properties of Date palm fibers and its Composites -- Bamboo Fiber Processing, Properties and Applications -- Abaca fiber: A Renewable Bio-Resource for Industrial Uses and Other Applications -- Processing and Properties of Bagasse Fibres -- Agricultural Biomass Raw Materials: The Current State and Future Potentialities -- Kapok Fiber: Structure and Properties -- Production of Natural Fiber Obtained from the Leaves of Pineapple Plants (Ananas comosus) Cultivated in Costa Rica -- Indian Date Leaf FRP Composites: Mechanical and Dielectric Properties -- Sugarcane Straw and Bagasse -- Studies on Okra Bast Fibre Reinforced Phenol Formaldehyde Resin Composites -- Okra Fibres as Potential Reinforcement in Biocomposites -- Biomass Resources in Environmental and Socio-Economic Analysis of Fuel-Wood Consumption -- Production of Algal Biomass -- Natural Fibers

Reinforced Polymeric Matrix: Thermal, Mechanical and Interfacial Properties -- Lignocellulosic Materials as the Potential Source of Catalyst -- Straw Availability, Quality, Recovery and Energy Use of Sugarcane -- Jatropha curcas: A Prospective Energy Crop -- Algal Biomass Production Using Waste Water -- Biomass Steam Gasification for Hydrogen Production: A Systematic Review -- Bioethanol G2 : Production Process and Recent Studies.

Sommario/riassunto

At present biomass and bioenergy are the most significant renewable energy options and will remain so in the near and medium-term future. Biomass has the potential to become the world's largest and most sustainable energy source and will be very much in demand. Bioenergy is based on resources that can be utilized on a sustainable basis all around the world and can thus serve as an effective option for the provision of energy services. In addition, the benefits accrued go beyond energy provision, creating unique opportunities for regional development. The current book is the first of a two volume series "Biomass and Bioenergy", which is an up to date account of highly important characteristics of biomass and bioenergy. The present book comprising of twenty chapters from distinguished scientists and researchers around the tropics, reporting the diversity of untapped biomass and bioenergy resources, their processing and properties as well as their value-added functions as a bio-based feedstock in a sustainable economy. This book articulately highlighted the usefulness of biomass residues that are mostly known in the tropical world. In this book, the inclusion of a broad range of bast fibres, for example, kapok, pine apple leaf, Indian date fibre etc., mainly existing in the tropics with unexploited potential of vast and wide range value-addition in an energy-intensive world makes perfect sense. Lastly, chapters on alternative energy sources highlight the progress in algal biomass research as well as biomass steam gasification for Hydrogen production. We hope this book will serve as a comprehensive primer for individuals who are interested in learning about the vast potentials of tropical biomass.