Biofuels in Brazil [Fundamental Aspects, Recent Developments, and Future Perspectives /

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Life sciences | Renewable energy resources | Microbial ecology | Microbiology | Renewable energy sources | Alternate energy sources | Green energy industries | Life Sciences | Microbiology | Microbial Ecology | Renewable and Green Energy

Monografía

This book discusses the commercialization of biofuels and the Brazilian government policies for the promotion of renewable energy program in Brazil, which could be a learning module for several countries for implementing biofuels policy to improve their socioeconomic status and make them energy independent. Researchers in academia and industries, policy makers, and economic analysts will be assisted by important source of information in their ongoing research and future perspectives. This book will benefit graduate and postgraduate students of chemical and biochemical engineering, forestry, microbiology, biochemistry, biotechnology, applied chemistry, environmental science, sustainable energy, and biotech business disciplines by signifying the applied aspects of bioenergy production from various natural sources and their implications. Graduate and postgraduate students as well as postdoctoral researchers will find clear concepts of feedstock analysis, feedstock degradation, microbial fermentation, genetic engineering, renewable energy generation and storage, climate changes, and techno-economic analysis of biofuels production technologies

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Ambient Impacts of Sugarcane Expansion in Brazil: Effects of The Second Generation Ethanol Production -- Integrated Production of 1G-2G Bioethanol and Bioelectricity from Sugarcane: Impact of Bagasse Pretreatment Processes -- Potential Biomass Resources for Cellulosic Ethanol Production in Brazil: Availability, Feedstock Analysis, Feedstock Composition and Conversion Yields -- Advances in Methods to Improve the Sugarcane Crop as g2sEnergy Caneg3s for Biorefinery: An Appraisal -- The Essential Role of Plant Cell Wall Degrading Enzymes in the Success of Biorefineries: Current Status and Future Challenges -- Mapping of Cell Wall Components in Lignified Biomass as a Tool to Understand Recalcitrance -- Dilute Acid Pretreatment and Enzymatic Hydrolysis of Sugarcane Bagasse for Ethanol Production -- Scale-Up Pretreatment Studies on Sugarcane Bagasse and Straw for Second-Generation Ethanol Production -- Novel Yeast Strains from Brazilian Biodiversity: Biotechnological Applications in Lignocellulose Conversion to Biofuels -- Trends in Biodiesel Production: Present Status and Future Directions -- Critical Technological Analysis for Enzymatic Biodiesel Production: An Appraisal and Future Directions -- Critical Analysis of Feedstock Availability and Composition, and New Potential Resources For Biodiesel Production in Brazil -- Techno-Economic and Life Cycle Analysis of Biodiesel Production: Perception of Land Use, Climate Change and Sustainability Measurements -- Microalgal Feedstock for Bioenergy: Opportunities and Challenges -- Technological Advancements in Biohydrogen Production and Bagasse Gasification Process in the Sugarcane Industry Regarding to Brazilian Conditions -- Non-Conventional Renewable Sources in Brazil and Their Impact on the Success of Bioenergy

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