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Titolo	Diverse Hydrogen Sources for Biomass-derivatives Conversion [[electronic resource]] : Reaction and Mechanism // by Zhibao Huo
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Soggetti	Hydrogen as fuel Green chemistry Catalysis Energy policy Energy and state Hydrogen Energy Green Chemistry Energy Policy, Economics and Management
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Nota di contenuto	Selective Hydrogenation of Levulinate Esters to 1,4-pentanediol Using a Ternary Skeletal CuAlZn Catalyst -- Catalytic Hydrogenation of Ethyl Levulinate into -Valerolactone over Raney Cu Catalyst -- Catalytic Transfer Hydrogenation of Levulinate Ester into -Valerolactone over Ternary Cu/ZnO/Al ₂ O ₃ Catalyst -- Catalytic Transfer Hydrogenation of Ethyl Levulinate into -Valerolactone over Air-stable Skeletal Cobalt Catalyst -- Catalytic Transfer Hydrogenation of 5-Hydroxymethylfurfural into 2,5-Dimethyl Furan over CuO/MgO/ZrO ₂ Catalyst -- Chemoselective Synthesis of Propionic Acid from Biomass and Lactic Acid over a Cobalt Catalyst in Aqueous Media -- A Novel Approach for 1,2-Propylene Glycol Production from Biomass-derived Lactic Acid -- Catalytic Conversion of Ethyl Lactate to 1,2-Propanediol over CuO -- Highly Selective Hydrothermal Production of Cyclohexanol from Biomass-derived Cyclohexanone over Cu Powder -- Efficient Conversion of Dimethyl Phthalate to Phthalide over CuO in Aqueous Media -- Heterogeneous Cu ₂ O-mediated Ethylene Glycol Production

from Dimethyl Oxalate -- Highly Efficient Conversion of Biomass-derived Glycolide to Ethylene Glycol over CuO in Water -- A Supported Ni Catalyst Produced from Ni-Al Hydrotalcite-like Precursor for Reduction of Furfuryl Alcohol to Tetrahydrofurfuryl Alcohol by NaBH₄ in Water.

Sommario/riassunto

The book covers advances in conversion of biomass and derivatives into useful chemicals and fuels. It describes our recent researches relating to the hydrogenation of biomass derivatives by diverse hydrogen sources such as water, isopropanol, gaseous hydrogen and NaBH₄ as well as their interesting mechanism aspects. A wide range of biomass derivatives and some novel hydrogenation processes are involved in this book. Development strategies and challenges in future research are also discussed. This book will help readers to expand their knowledge of biomass and its derivatives conversion.
