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Titolo	Biorefinery [[electronic resource]] : from biomass to chemicals and fuels / / edited by Michele Aresta, Angela Dibenedetto and Franck Dumeignil
Pubbl/distr/stampa	Berlin ; ; Boston, : Walter de Gruyter, c2012
ISBN	1-68015-208-4 9786613940384 1-283-62793-0 3-11-026028-X
Descrizione fisica	1 online resource (464 p.)
Altri autori (Persone)	ArestaM <1940-> (Michele) DibenedettoAngela DumeignilFranck
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Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front matter -- Contents -- Preface -- List of Contributing Authors -- 1 A new concept of biorefinery comes into operation: the EuroBioRef concept / Dumeignil, Franck -- 2 Refinery of the future: feedstock, processes, products / Dubois, Jean-Luc -- 3 The terrestrial biomass: formation and properties (crops and residual biomass) / Christou, Myrsini / Alexopoulou, Efthimia -- 4 Production of aquatic biomass and extraction of bio-oil / Dibenedetto, Angela -- 5 Biomass pretreatment: separation of cellulose , hemicellulose, and lignin - existing technologies and perspectives / Raspolli Galletti, Anna Maria / Antonetti, Claudia -- 6 Conversion of cellulose and hemicellulose into platform molecules: chemical routes / Serrano, David / Coronado, Juan M. / Melero, Juan A. -- 7 Conversion of cellulose, hemicellulose, and lignin into platform molecules: biotechnological approach / Rødsrud, Gudbrand / Frölander, Anders / Sjöde, Anders / Lersch, Martin -- 8 Conversion of lignin: chemical technologies and biotechnologies - oxidative strategies in lignin upgrade / Decina, Silvia / Crestini, Claudia -- 9 Process development and metabolic engineering for bioethanol

production from lignocellulosic biomass / Agrimi, Gennaro / Pisano, Isabella / Palmieri, Luigi -- 10 Catalytic conversion of biosourced raw materials: homogeneous catalysis / Fischmeister, Cédric / Bruneau, Christian / De Oliveira Vigier, Karine / Jérôme, François -- 11 Catalytic conversion of oils extracted from seeds: from polyunsaturated long chains to functional molecules / Garrier, Eva / Packet, Dirk -- 12 Heterogeneous catalysis applied to the conversion of biogenic substances, platform molecules, and oils / Dibenedetto, Angela / Colucci, Antonella / Pastore, Carlo -- 13 Biomass gasification: gas production and cleaning for diverse applications - CHP and chemical syntheses / Panopoulos, Kyriakos D. / Christodoulou, Christos / Koytsoumpa, Efthymia-Ioanna -- 14 From Syngas to fuels and chemicals: chemical and biotechnological routes / Ricci, Marco / Perego, Carlo -- 15 Conversion of biomass to fuels and chemicals via thermochemical processes / Lappas, Angelos A. / Iliopoulou, Eleni F. / Kalogiannis, Konstantinos / Stefanidis, Stylianos -- 16 Cellulosic ethanol production in northern Sweden - a case study of economic performance and GHG emissions / Slade, Raphael -- 17 Anaerobic fermentation: biogas from waste - the basic science / Aresta, Michele -- 18 From lab-scale to full-scale biogas plants / Farina, Roberto / Spagni, Alessandro -- Index

Sommario/riassunto

This book provides an introduction to the basic science and technologies for the conversion of biomass (terrestrial and aquatic) into chemicals and fuels, as well as an overview of innovations in the field. The entire value chain for converting raw materials into platform molecules and their transformation into final products are presented in detail. Both cellulosic and oleaginous biomass are considered. The book contains contributions by both academic scientists and industrial technologists so that each topic combines state-of-the-art scientific knowledge with innovative technologies relevant to chemical industries. Selected topics include: Refinery of the future: feedstock, processes, products The terrestrial and aquatic biomass production and properties Chemical technologies and biotechnologies for the conversion of cellulose, hemicellulose, lignine, algae, residual biomass Thermal, catalytic and enzymatic conversion of biomass Production of chemicals, polymeric materials, fuels (biogas, biodiesel, bioethanol, biohydrogen) Policy aspects of biomass product chains LCA applied to the energetic, economic and environmental evaluation of the production of fuels from biomass: ethanol, biooil and biodiesel, biogas, biohydrogen

2. Record Nr. UNINA9910346680403321

Autore	Ferreira Tiago Miguel
Titolo	Reducing The Seismic Vulnerability of Existing Buildings : : Assessment and Retrofit / / Tiago Miguel Ferreira, Rui Silva, Nuno Mendes
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ISBN	9783039212583 3039212583
Descrizione fisica	1 electronic resource (182 p.)
Soggetti	History of engineering and technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Devastating seismic events occurring all over the world keep raising the awareness of the scientific, technical and political communities to the need of identifying assets at risk and developing more effective and cost-efficient seismic risk mitigation strategies. Significant advances in earthquake engineering research have been achieved with the rise of new technologies and techniques with potential use in risk assessment, management and mitigation. Nevertheless, there is still much to be done, particularly with regard to existing buildings, most of them built without anti-seismic provisions. The wide variety of construction and structural systems, associated with the complex behaviour of their materials, greatly limit the application of current codes and building standards to the existing building stock. To tackle this issue, there is a fundamental need for developing multidisciplinary research that can lead to the development of more sophisticated and reliable methods of analysis, as well as to improved seismic retrofitting techniques compliant with buildings conservation principles. This book intends to contribute to the aforementioned goal by stimulating the exchange of ideas and knowledge on the assessment and reduction of the seismic vulnerability of existing buildings. 10 high quality contributions authored by international experts from Italy, Portugal, Morocco, Nepal,

Czech Republic and Spain are included herein. All contributions pursue the protection of existing buildings by considering the most updated methods and advanced solutions emerging from different fields of expertise.