Recent Advances in Thermochemical Conversion of Biomass

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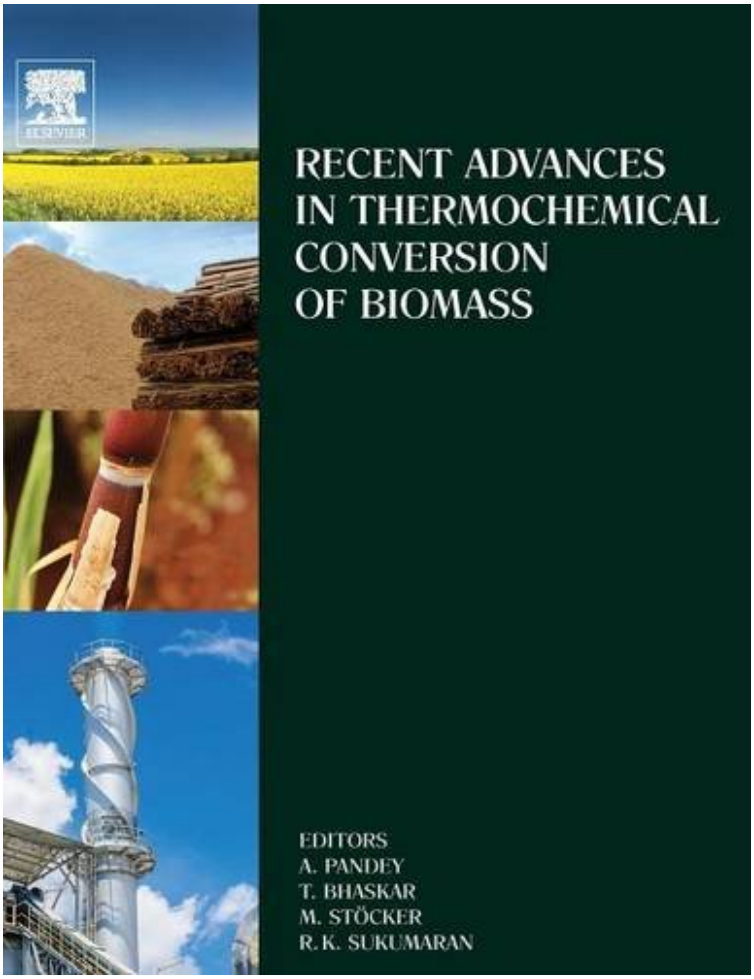

#4433189 in Books Ingramcontent 2015-03-18Original language:EnglishPDF # 1 9.25 x 1.06 x 7.52l, .0 #File Name: 0444632891504 pagesRecent Advances in Thermochemical Conversion of Biomass | File size: 48.Mb

From Ingramcontent : Recent Advances in Thermochemical Conversion of Biomass before purchasing it in order to gage whether or not it would be worth my time, and all praised Recent Advances in Thermochemical Conversion of Biomass:

This book provides general information and data on one of the most promising renewable energy sources: biomass for its thermochemical conversion. During the last few years, there has been increasing focus on developing the processes and technologies for the conversion of biomass to liquid and gaseous fuels and chemicals, in particular to develop low-cost technologies. This book provides date-based scientific information on the most advanced and innovative processing of biomass as well as the process development elements on thermochemical processing of biomass for the

production of biofuels and bio-products on (biomass-based biorefinery). The conversion of biomass to biofuels and other value-added products on the principle biorefinery offers potential from technological perspectives as alternate energy. The book covers intensive RD and technological developments done during the last few years in the area of renewable energy utilizing biomass as feedstock and will be highly beneficial for the researchers, scientists and engineers working in the area of biomass-biofuels- biorefinery. Provides the most advanced and innovative thermochemical conversion technology for biomassProvides information on large scales such as thermochemical biorefineryUseful for researchers intending to study scale upServes as both a textbook for graduate students and a reference book for researchersProvides information on integration of process and technology on thermochemical conversion of biomass

About the AuthorProfessor Ashok Pandey is currently with the Center of Innovative and Applied Bioprocessing, Mohali, Punjab, India; he was the former Deputy Director for CSIRs National Institute for Interdisciplinary Science and Technology at Trivandrum, where he head the Centre for Biofuels and Biotechnology Division. Professor Pandeys research interests are on bio-based economy for the production of fuels and chemicals. He has over 1000 publications and communications, which include 14 patents and design copyright, 34 books, 99 book chapters, and 391 original and review papers. Professor Pandey is the recipient of many national and international awards and fellowships, including Fellow of International Society for Energy, Environment and Sustainability, National Academy of Science (India), Biotech Research Society, India, and the International Organization of Biotechnology and Bioengineering. He was Chairman of the International Society of Food, Agriculture and Environment, Finland (Food Health) from 2003-2004. He is Founder President of the Biotech Research Society, India (www.brsi.in); International Coordinator and General Secretary of International Forum on Industrial Bioprocesses, France (www.ifibiop.org), and Vice-President of the International Society for Energy, Environment Sustainability (www.isees.org) and All India Biotech Association (www.aibaonline.com). Professor Pandey is Editor-in-chief of Bioresource Technology, Honorary Executive Advisors of Journal of Water Sustainability and Journal of Energy and Environmental Sustainability and editorial board member of several international and Indian journals. Prof. Pandey was also recently honoured as the Most Cited Author as per the Shanghai Ranking's Global Ranking of Academic Subjects 2016.Dr Thallada Bhaskar, Senior Scientist, is currently heading the Thermo-catalytic Processes Area, Bio-Fuels Division (BFD) at CSIR-Indian Institute of Petroleum, India. He received Ph D for his work at CSIR-Indian Institute of Chemical Technology (IICT) from Osmania University, Hyderabad in the year 1999. He carried out Postdoctoral Research at Okayama University, Okayama, Japan after which he joined as Research Assistant Professor and taught catalysis, chemical kinetics and thermodynamics for ~7 years. He has about 90 publications in journals of international repute, contributed 10 book chapters to renowned publishers (ACS, Elsevier, Woodhead Publishing, CRC Press etc) and 11 patents to his in his field of expertise in addition to 250 national and international symposia presentations. His 20 years of research experience cover various fields of science revolving around his expertise in heterogeneous catalysis thermo-chemical conversion of biomass, waste plastics and e-waste plastics into value added hydrocarbons. He has prepared several catalysts and thrown a light on the structure activity relationships of novel catalytic materials for hydrotreatment of fossil based crudes. His contributions to the field of sustainable hydrocarbons are in the form of process knowhow and catalyst developments. His patents and publications discuss crucial points encompassing wide areas of thermo-catalytic conversion like pyrolysis and hydrothermal liquefaction for biomass (agricultural, forest residues and aquatic biomass) and plastic waste (industrial and e-waste) conversion. In addition he worked on developing micro-channel reactors for several chemical reactions and separation processes. His other interests include utilization of non-conventional energies for the sustainable production of hydrocarbons utilizing the polymeric wastes available which will make the thermo-chemical methods of conversion more energy efficient. In view of his expertise, he is on the editorial board of 2 international peer reviewed journals and expert member of several committees. He received the Distinguished Researcher award from AIST (2013), Japan and Most Progressive Researcher award from FSRJ, Japan (2008). He is also the Fellow of Biotech Research Society of India and member of the Governing Council. He received the Raman Research Fellowship for the year 2013-14. He was also a JSPS Visiting Scientist to Tokyo Institute of Technology, Japan during 2009. He has carried out several research projects with great success with national and international collaborators. He has organized several international symposia in India and abroad in this area and visited several countries to deliver invited/ plenary lectures.Michael Stcker received his Diploma in Chemistry in 1975 and his Dr. rer. nat. degree in 1979 - both from the University of Mnster (Germany). He kept positions as Research Assistant at the Universities of Mnster (Germany, 1975-1979) and Bergen (Norway, 1980-1982) before he joined the Center for Industrial Research (SI - now SINTEF) in 1982. In 1988-1989 he had a sabbatical leave at the University of British Columbia in Vancouver (Canada). He is the Emeritus Editor-in-Chief of the scientific journal Microporous and Mesoporous Materials, published by Elsevier B.V. Furthermore, Michael Stcker kept side positions as Adjunct Professor at the University of Bergen (Norway, 1999-2004) and the Norwegian University for Science and Technology in Trondheim (Norway, 2004-2007). Michael Stcker has 30 years experience within the fields of synthesis, characterization and catalytic testing of different type of materials, covering mainly zeolites, micro- and

mesoporous materials and oxide materials related to catalysis, sorption technology, surface modification and design of novel processes. Special interests are within spectrocopy (Solid-state NMR, ESR, XPS), micro- and mesoporous materials, zeolites, catalytic cracking, desulphurization, MTO as well as bio-refinery related catalysis. He is the author or co-author of about 155 scientific journal publications (including 10 review papers and 10 Handbook chapters), and is co-inventor of two patents. Michael Stcker has co-edited two scientific books. He has presented about 130 lectures on a national and international basis, about 65 of them based on invitations. He has been project manager of a number of larger industrial contract research projects, Norwegian Research Council and EU projects. He served on the Board (Council) of the International Zeolites Association (IZA - 1998-2004), as Chairman of the IZA Catalysis Commission (1998-2004 - member since 1994) and as a member of the IZA Synthesis Commission (1992-2004). He is a Member of the Editorial Board of the Journal of Dispersion Science and Technology. He received the DGMK 2009 Award of the German Society for Petroleum and Coal Science and Technology.Dr Rajeev Sukumaran is senior scientist at the CSIR-National Institute for Interdisciplinary Science and Technology, in Trivandrum, India. He took his Masters and PhD in Biotechnology from Cochin University of Science and Technology (1993-2000). He had post doctoral trainings in molecular immunology and stem cell biology at Mount Sinai School of Medicine, New York and at the National University Hospital, Singapore respectively, and had worked in an industry on recombinant human insulin production. He joined CSIR-NIIST in November 2004 and since then has been working on enzymes for biomass to biofuel conversion and bioethanol from lignocellulosic biomass. Currently he is the activity leader for the Biofuels program of the Centre for Biofuels at NIIST, and had been the program coordinator for NIISTs major laboratory program on biofuels. He played a leading role in setting up the Centre for Biofuels lignocellulosic ethanol pilot plant at NIIST. Currently his main research interests include-Developing enzymes for biomass conversion to sugars and ethanol, Glucose tolerant -glucosidases from fungi, and developing molecular methods for heterologous gene expression in fungi. He has authored reports for national policy making bodies and for international agencies, on biofuels including the International Energy Agency. He is the academic editor of British Biotechnology Journal and is a member of the editorial board of Conference Papers in Energy. He has authored 56 publications in International Journals and 5 book chapters. He has also served as member of different task forces including Biotech Task Force for the State Council of Science, Technology and Environment, of Kerala state, India and is a member of the panel of reviewers (for R D projects) for the Ministry of New and Renewable Energy, Government of India.