

Bioenergy Special Issue: International Conference on Bioenergy Technologies and Joint Symposium with AIChE Forest Products Division, Nanjing, China, October 2012

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Lignocellulosic biomass, such as agriculture residue, historically has been an energy source in many rural areas. This is especially true in China, where not many years ago rural families relied on rice and wheat straw or corn stover as energy sources for cooking. Agriculture residue has also been used for biogas production in China for several decades, and combustion and gasification of municipal waste have also been a source of energy. Rapid economic development in the past two decades has raised concerns over energy supply and the environmental impact of fossil fuel, which has led the Chinese government to invest heavily in research and development for bioenergy production from lignocelluloses. Since 1990, total investment has been more than 1 billion RMB. Chinese Academy of Sciences (CAS) established the Qingdao Institute of Bioenergy and Bioprocess Technology (QIBEBT) with an initial investment of US \$50 million. The QIBEBT focuses on biomass energy research and technical explorations, complementing the bioenergy research efforts at the Guangzhou Institute of Energy Conversion of CAS, which focuses on process engineering. The QIBEBT has recently expanded to a second phase with more investments. This special issue is based on selected papers presented at the 2012 International Conference on Bioenergy Technologies and Joint Symposium with the American Institute of Chemical Engineers (AIChE) Forest Products Division held in Nanjing, China. The biannual conference sponsored by the Biomass Energy Technical Committee of China Renewable Energy Society is one

of the largest showcases of bioenergy research and development in China. Co-sponsorship by the Forest Products Division of AIChE enhanced participation in the conference.

This special issue reveals that current bioenergy research in China is no longer limited to traditional biogas, combustion, and gasification. It also involves biochemical, catalytic conversion, and new plant breeding. Also ongoing is research involving co-product development through the biorefinery concept. Yang et al. from Capital Normal University (Beijing China) reported one-step saccharification and fermentation by expressing AGA1 gene of native α -agglutinin into the genomes of *Saccharomyces cerevisiae* Y5. Mu et al. from Georgia Institute of Technology conducted a review on upgrading lignin pyrolysis oil. Hu et al. of Northeastern Forestry University discussed thermal energy storage using nanocapsules with carboxymethyl cellulose.

We hope that through this special issue, readers get a glimpse of bioenergy research in China. We also hope that this issue can help promote international research collaboration in bioenergy. Finally, we hope that readers consider using *BioEnergy Research* as their primary source for research and publication. We see tremendous growth of the journal in terms of both numbers and quality of papers published as it enters its sixth year of publication.

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