

Special Issue on
Biomass Valorization for Energy to Improve the Bioeconomy

CALL FOR PAPERS

Biomass is a renewable energy source not only because the energy in it comes from the sun, but also because biomass can regrow over a relatively short period of time compared with the hundreds of millions of years that it took for fossil fuels to form. Biomass is any organic, decomposable material which is available on a renewable basis. Biomass includes residues from forestry and agricultural operations, herbaceous and woody energy crops, and municipal organic wastes as well as manure. Bioenergy is the energy derived from the conversion of biomass where it can be used directly as fuel. Biofuels are liquid fuels that are produced using fermentation of biomass. Biopower constitutes heat and electric power produced from biomass, waste-to-energy conversion, and gasification of biomass and liquid fuels such as bio-oil.

Development of bioenergy can help to address the environmental issues and improve the bio-based economy. The major challenge to produce bio-based solid and liquid fuels is the cost and scale-up. To advance the bioeconomy development, small regional systems for sustainable and cost-effective production of biofuels, industrial chemicals, and bio-based products, increasing stakeholder engagement, and necessary policies are important. Also, animal feed and other applications may be used as coproducts, potentially augmenting the economic value and feasibility of the supply chain to increase rural prosperity and advance a sustainable bioeconomy. Research should also be focused on accelerating the sustainable development and dependable availability of regionally adapted bioenergy crops, both woody and herbaceous.

The focus of this special issue is on biomass valorization to energy to improve the bioeconomy. Biomass valorization to bioenergy production includes thermochemical and biochemical conversion techniques. The subject areas of the special issue include supply of consistent and dependable feedstock, supply chains systems, conventional and advanced preprocessing and pretreatment technologies, and technoeconomic analysis to produce bioenergy. We would like to invite researchers to submit original research and review articles which will help to advance the use of biomass for bioenergy production.

Potential topics include but are not limited to the following:

- ▶ Biomass feedstocks
- ▶ Biomass supply chain logistics
- ▶ Biomass quality
- ▶ Biomass preprocessing and pretreatments
- ▶ Bioenergy solid, liquid, and gas products
- ▶ Risk analysis of bioenergy systems
- ▶ Technoeconomic analysis of bioenergy systems

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jen/bve/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor

Jaya S. Tumuluru, Idaho National Laboratory, Idaho Falls, USA
jayashankar.tumuluru@inl.gov

Guest Editors

Shahab Sokhansanj, University of British Columbia, Vancouver, Canada
shahabs@chbe.ubc.ca

Joseph D. Smith, Missouri University of Science and Technology, Rolla, USA
smithjose@mst.edu

Submission Deadline

Friday, 2 March 2018

Publication Date

July 2018