International Journal of Polymer Science

Special Issue on

Biomaterials, Biofuels, and Biochemical Products from Lignocellulosic Biomass

CALL FOR PAPERS

Lignocelluloses such as agricultural straws and woods are distributed in the world and have tremendous amounts over billions of tons. About 80% lignocelluloses have been traditionally used for paper industry, furniture industry, agriculture, and so on, while the rest have been treated as the wastes. Recently, biofuels and biochemical products from the waste of lignocellulosic biomass have received a great deal of attention due to the pollution elimination from the burning of waste lignocellulosic biomass and the production of the high value-added products. Lignocellulosic biomass is mainly composed of cellulose, hemicellulose, and lignin. Cellulose is a long-chain homopolysaccharide polymerized by *D*-glucose units with the linkage of β-1,4 glycosidic bonds, while hemicellulose is a heterogeneous polymer of pentoses and hexoses. These two components can be converted into cellulosic/hemicellulosic materials, glucose oligosaccharide, xylooligosaccharide, glucose, xylose, biofuels, and biochemical products. Lignin is a very complex polymer containing p-hydroxyphenyl, guaiacyl, and syringyl moieties. It can be made into surfactants, resins, adhesives, high-molecular polymers, hydrocarbons, and so on. Although the factors influencing the conversion efficiency of lignocellulosic biomass into biomaterials, biofuels, and biochemical products have been explored, the industrial application of the conversion technology of lignocellulosic biomass has been still problematic due to the high cost.

The aim of this special issue is to provide the academic platform illustrating the recent advances on the lignocellulosic conversion. This issue intends to publish high-quality research papers as well as review articles on the latest fundamental and technical development of biomaterials, biofuels, and biochemical products from various sources of lignocellulosic biomass.

Potential topics include but are not limited to the following:

- Biomaterials
- Liquid biofuels such as bioethanol, biodiesel, and hydrocarbon
- Gas biofuels like biomethane, biosyngas, and hydrogen
- Solid biofuels
- Low-molecular organic acids, aldehydes and alcohols, and amino acids
- Oligosaccharides
- Economic analysis/engineering perspectives of the technology

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/ijps/bbbl/.

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

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