

Special Issue

Catalysis for Biomass Conversion: Innovative Processes, Theory and Computational Methods

Message from the Guest Editors

Plant biomass consists of three main components: lignin, cellulose and hemicellulose. Currently, research is being actively conducted on the processing of these components into valuable chemicals. Various catalysts are used for the processing of plant raw material components. For example, Ru/C, Pt/C, Rh/C, ZnPd/C, Ni/C, Pt/ZrO₂, Pd/ZrO₂ and many other catalysts have been used for the hydrogenation of lignocellulosic biomass, leading to the production of various methoxyphenols, celluloses and other valuable chemicals. In addition, an important area of research is the development, production and study of new biomass-conversion catalysts and their comparison with traditional catalysts. Additionally, this Special Issue welcomes reviews on the catalytic processing of biomass (including fermentative catalysis) and its components, and on theoretical computational methods for studying both catalytically modified biosubstances as well as catalysts and catalytic processes. At the same time, the discussion of new areas of application, market prospects for new biomass conversion catalysts and other products is also welcome.

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