Special Issue

Lignocellulose: Properties, Characterization and Applications

Message from the Guest Editors

Lignocellulosic biomass is a key sustainable feedstock to produce materials, chemicals, and fuels replacing fossil carbon resources. However, given lignocellulose chemical and structural complexity, its viable transformation in biorefineries is still not economically optimal. This chemical complexity can also be considered as an advantage because a wide spectrum of biomolecules can be produced from polysaccharides in lignocellulose, bringing innovative properties and a better environmental impact. Contributions will be articles presenting characterization techniques providing in-depth information on polysaccharide structure, organization, and chemical composition that are critical to optimize lignocellulose valorization. Additionally, applications of polysaccharides from lignocellulose to make various bioproducts are expected, from products designed at the nanoscale (e.g., nano-assemblies, complex biomolecules) to materials (e.g., composites) and commodities (biofuels, bioenergy).

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About the Journal

Message from the Editor-in-Chief

Polysaccharides and their derivatives are ubiquitous biopolymers, and therefore in recent years their potential use has increasingly been explored. *Polysaccharides* are still the biggest class of biopolymers used in classical industries such as the paper and textile industry. The progress and fundamental aspects of the new synthesis pathways and derivatization routes, characterization, properties, as well as processing of polysaccharides is important for their possible application in modern sustainable functional materials and future green technologies.

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