Special Issue

Advances in Biomass-Derived and Biodegradable Polymer Materials: Synthesis and Application

Message from the Guest Editor

With the increasing global temperature, reliance on fossil fuels, and great amounts of plastic waste, the development of biomass-derived and biodegradable polymers has become a pivotal area of research. These sustainable materials provide feasible alternatives to traditional petroleum-based polymers, reducing pollution and supporting circular economy principles. This Special Issue seeks to highlight recent advances in the synthesis, characterization, and application of polymers derived from renewable resources, such as agricultural residues, forestry by-products, and other biomass sources. Key topics include innovative synthesis methods, material property enhancements, and the preparation of biodegradable polymers with tailored functionalities for specific uses. Emphasis will also be placed on the relationship between polymer structure and performance, environmental impact assessments, and biodegradability studies. Potential contributors are invited to submit original research articles, reviews, and case studies exploring these cutting-edge advancements.

Guest Editor

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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