Special Issue

Advances in Lignocellulose Research and Applications

Message from the Guest Editors

Lignocellulose is the most abundant renewable biomass on Earth, which serves as a key component of plant cell walls, and it is primarily composed of cellulose, hemicellulose, and lignin. As the global demand for sustainable alternatives to fossil-based resources grows, lignocellulose has emerged as a critical feedstock for bioenergy, biomaterials, and green chemistry. Recent breakthroughs in pretreatment technologies, enzymatic hydrolysis, lignin valorization, and nanocellulose engineering have unlocked unprecedented opportunities to convert this complex biopolymer into biofuels, biodegradable plastics, high-performance composites, and functional nanomaterials. This Special Issue focuses on cutting-edge research and innovative applications in lignocellulose science, and topics include advances in efficient biomass deconstruction, novel catalytic processes, scalable biorefinery systems, and the development of lignocellulose-derived products for applications in papermaking, packaging, construction, and the pharmaceutical industry. We also explore challenges such as achieving cost-effective commercialization, enhancing material properties, and addressing environmental impacts.

Guest Editors

Prof. Dr. Shufang Wu

Prof. Dr. Guolin Tong

Dr. Qiulu Chu

Deadline for manuscript submissions

10 November 2025

Polymers

an Open Access Journal by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed

mdpi.com/si/240252

Polymers
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
polymers@mdpi.com

mdpi.com/journal/polymers

Polymers

an Open Access Journal by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed

mdpi.com/journal/polymers

About the Journal

Message from the Editor-in-Chief

Since its foundation in 2009, *Polymers* has developed into an internationally renowned, extremely successful open access journal. The editorial team and the editorial board dedicatedly combine open-access publishing and high-quality rigorous peer reviewing. The performance of the journal has proven this strategy to be well-suited and highly successful. This is reflected in the increasing impact factor of *Polymers*, the most recent one being 4.7.

I would like to invite you to contribute to the success of the journal by sending us your high quality research papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Alexander Böker
Lehrstuhl für Polymermaterialien und Polymertechnologie, University of Potsdam, 14476 Potsdam-Golm, Germany

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, PubMed, PMC, FSTA, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q1 (Polymer Science) / CiteScore - Q1 (General Chemistry)

MDPI