

Special Issue

Biomass to Biopolymers: Sustainable Materials Engineering

Message from the Guest Editor

Biomass-to-biopolymers represents a transformative approach in sustainable materials engineering, leveraging renewable biomass resources (e.g., Starch, Cellulose, Chitosan, Gelatin, etc.) to produce eco-friendly polymers. Unlike traditional petrochemical-based plastics, biopolymers derived from agricultural waste, plant fibers, or microbial fermentation offer biodegradability, reduced carbon footprint, and enhanced circularity. Applications span packaging, biomedical devices, and biodegradable textiles, aligning with global sustainability goals. Challenges remain in scalability, cost-competitiveness, and performance optimization, but advancements in green chemistry and biorefinery integration promise to accelerate adoption. This innovation underscores the potential of biomass-driven solutions to mitigate environmental impact while fostering a bio-based economy.

Guest Editor

Dr. Xugang Dang

Institute of Biomass and Function Materials & College of Bioresources Chemistry and Materials Engineering, Shaanxi University of Science and Technology, Xi'an, China

Deadline for manuscript submissions

30 June 2026



Polymers

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed



mdpi.com/si/262475

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

[mdpi.com/journal/
polymers](https://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](https://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 4.9.

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

Fraunhofer-Institut für Angewandte Polymerforschung, Lehrstuhl für Polymermaterialien und Polymertechnologie, Universität Potsdam, Geiselbergstraße 69, 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, CAPIus / SciFinder, Inspec, and other databases.

Journal Rank:

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