



## Bio-Based Polymers: Synthesis and Applications

Guest Editors:

### Dr. Xuhao Zhou

Department of Chemistry and  
International Institute of  
Nanotechnology, Northwestern  
University, Evanston, IL 60208,  
USA

### Dr. Hao Sun

Department of Chemistry and  
Chemical & Biomedical  
Engineering, University of New  
Haven, West Haven, CT 06516,  
USA

Deadline for manuscript  
submissions:

**10 August 2024**

### Message from the Guest Editors

In the past few decades, research focus has dramatically increased on the synthesis of bio-based polymers from renewable sources with an aim to supplement and substitute fossil fuel-based polymers. Bio-based polymers may be classified into three main categories, including polymers directly extracted from biomass, polymers produced by microorganisms or genetically modified bacteria, and polymers synthesized using bio-based monomers. Although substantial efforts have been applied to generate bio-based polymers which have an identical chemical structure to those derived from fossil fuel, synthesizing new sustainable bio-based polymers with better function and performance is also a critical long-term goal to achieve.

This Special Issue aims to publish original works and reviews focusing on the synthesis of novel bio-based monomers and polymers from renewable resources. It will cover but not be limited to the following aspects: development and preparation of new synthetic bio-based polymers, including polyester, polypeptide, polysaccharide, polyphenol, synthetic melanin, etc.; and property evaluations and applications of synthetic bio-based polymers.





an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Alexander Böker**

Lehrstuhl für Polymermaterialien  
und Polymertechnologie,  
University of Potsdam, 14476  
Potsdam-Golm, Germany

## 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 5.0.

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.

## 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 (*Polymers and Plastics*)

## Contact Us

---

*Polymers* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/polymers](http://mdpi.com/journal/polymers)  
[polymers@mdpi.com](mailto:polymers@mdpi.com)  
[X@Polymers\\_MDPI](https://twitter.com/Polymers_MDPI)