

## Special Issue

# Biopolymers for Biocatalysis, Photocatalysis, and Electrocatalysis: Innovative Pathways in Green Catalysis

### Message from the Guest Editor

This Special Issue explores the frontiers of polymer science in the context of sustainable catalytic technologies, with a particular focus on advanced applications of biopolymers in biocatalysis, photocatalysis, and electrocatalysis. Due to their renewable origins and biodegradability, biopolymers offer unique opportunities to develop eco-friendly and efficient catalytic processes, contributing to reducing the environmental impact of industrial processes. The aim of this collection is to stimulate discussion on new approaches to the design, functionalization, and application of biopolymers as catalytic materials, examining their performance, stability, and the role they may play in a circular economy. The Special Issue will welcome original contributions and reviews on topics including:

- Development and characterization of biopolymers for advanced catalytic systems;
- Innovations in biopolymer-based biocatalysis for specific reactions;
- Biopolymer applications in photocatalysis for pollutant degradation;
- Electrocatalysis solutions for clean energy generation through biopolymers;
- Synthesis and optimization of hybrid materials based on biopolymers and their green applications.

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### Guest Editor

Dr. Eliana Capecchi

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### Deadline for manuscript submissions

closed (10 June 2025)



## Polymers

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## 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.

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### Editor-in-Chief

Prof. Dr. Alexander Böker

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