



## Biodegradable Polymers: Synthesis, Characterization and Applications

Guest Editors:

**Dr. Kohei Iritani**

School of Engineering, Tokyo  
University of Technology,  
Hachioji, Japan

**Prof. Dr. Piotr Dobrzynski**

Centre of Polymer and Carbon  
Materials, Polish Academy of  
Sciences, 34 Marii Curie-  
Skłodowskiej Str., 41-819 Zabrze,  
Poland

Deadline for manuscript  
submissions:

**15 October 2024**

### Message from the Guest Editors

Biomaterials have attracted intense interest for solving problems such as increase in CO<sub>2</sub> gas emission, exhaustion of petroleum resources, and expansion of microplastics. As bio-based materials, biomass polymers, which are made from plant-based raw materials such as corn and sugarcane, are well known. Although CO<sub>2</sub> gas is emitted by burning biomass polymers, carbon recycling can be achieved through photosynthesis of plant growth. As another significant material, biodegradable polymers, which are decomposed into CO<sub>2</sub> and H<sub>2</sub>O in nature by microorganisms, have been widely researched all over the world, with some studies focusing on marine decomposed polymers to solve the problem of micro-plastics in the ocean. For the construction of a sustainable society, it would be necessary to develop technologies for the efficient production of materials from biomass and for the development of materials with a low environmental impact.

Thus, this Special Issue invites researchers to submit original research and review articles on biodegradable polymers. describing their synthesis, processing, the course of degradation, as well as examples of various interesting applications.





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 (General Chemistry)

## Contact Us

---

*Polymers* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
www.mdpi.com

mdpi.com/journal/polymers  
polymers@mdpi.com  
X@Polymers\_MDPI