

Special Issue

Additive Manufacturing of Thermoplastic Polymers: Processing, Structure, and Engineering Performance

Message from the Guest Editors

This Special Issue focuses specifically on the additive manufacturing of thermoplastic polymers and their composite systems, emphasizing the relationships among processing parameters, microstructure evolution, and mechanical or functional performance. Topics of interest include, but are not limited to, high-temperature extrusion-based printing of high-performance thermoplastics, crystallization and phase morphology control, interfacial strength and anisotropy, fatigue and impact behavior, environmental durability, and structure–property optimization. Contributions addressing thermoplastic composites, functionally graded or lattice architectures, and application-driven studies for aerospace, biomedical, and energy systems are particularly encouraged. The aim of this Special Issue is to establish a focused platform for advancing the scientific understanding and engineering deployment of additively manufactured thermoplastic polymer materials.

Guest Editors

Dr. Bo Cao
Dr. Xiaojun Tan
Dr. Shuai Li

Deadline for manuscript submissions

30 September 2026



Polymers

an Open Access Journal
by MDPI

Impact Factor 5.8
CiteScore 11.0
Indexed in PubMed



mdpi.com/si/271740

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 5.8
CiteScore 11.0
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 5.8.

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, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q1 (Polymer Science) / CiteScore - Q1 (Polymers and Plastics)