# Special Issue

# High-Performance Thermoplastic Polymer Composites: From Fabrication to Application

### Message from the Guest Editors

Polymer composites, particularly thermoplastic polymer composites, have seen substantial advancements in recent years. These materials are widely used in aerospace, automotive, construction, and biomedical applications due to their lightweight properties, high strength, durability, and environmental benefits. Research has focused on improving mechanical properties, sustainability, and processing techniques to enhance their performance and commercial viability. Special emphasis will be placed on, but not limited to, the following:

- Nanomaterial reinforcements for enhanced performance;
- Sustainable and recyclable polymer composites;
- Three-dimensional printing and advanced manufacturing techniques;
- High-performance aerospace and automotive applications;
- Self-healing and smart composites;
- Hybrid composites for improved performance.

**Keywords:**

-
  - nanomaterials
  - eco-friendly alternatives
  - bio-based resins and natural fiber
  - 3D printing
  - high-performance applications
  - self-healing polymer composites
  - shape memory polymers
  - hybrid composites

**Guest Editors**

Dr. Shakila Parveen Asrafali

Department of Fiber System Engineering, Yeungnam University, Gyeongsan 38541, Republic of Korea

Prof. Dr. Jaewoong Lee

Department of Fiber System Engineering, Yeungnam University, Gyeongsan 38541, Republic of Korea

**Polymers**

**an Open Access Journal by MDPI**

**Impact Factor 4.9**
**CiteScore 9.7**
**Indexed in PubMed**

mdpi.com/si/239060

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

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

MDPI

# 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 4.7.

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
Lehrstuhl für Polymermaterialien und Polymertechnologie, University of Potsdam, 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 (General Chemistry )