Special Issue

Polymer-Based Composite Nanomaterials: Structure, Properties and Applications

Message from the Guest Editors

Polymer-based composite nanomaterials are widely used in almost all fields of modern techniques and medicine. Composite matrices of graphene–nanotube structures serve as a base of polymer biocompatible nanomaterials used for the design of implants for tissue engineering. High-performance MXene-based polymer nanocomposites are already produced, in particular, on the base of Ti3C2. Ultrathin 2D PMMA/Ti2Si0.75Al0.25C2 nanosheet composites demonstrate outstanding thermal and mechanical properties, including improved thermal conductivity, increased Young's modulus, and reduced thermal expansion compared to bulk samples and PMMA. Herewith, one of the main challenges in this direction is obtaining a stable polymer-based composite nanomaterials structure that provides the specified properties. Such materials are complex since they consist of different layers, and thus, special attention should be paid to them. Topology and layering also determine physical properties, and it is also required to explore the possibilities of expanding polymer-based composite nanomaterials applications and to search for new applications.

Guest Editors

Prof. Dr. Olga E. Glukhova

1. Department of Physics, Saratov State University, Saratov 410012, Russia
2. Institute for Bionic Technologies and Engineering, I.M. Sechenov First Moscow State Medical University, Moscow 119991, Russia

Prof. Dr. Gang Zhang

ASTAR, Institute of High Performance Computing (IHPC), Singapore 138632, Singapore

Deadline for manuscript submissions

closed (3 July 2025)

Polymers

an Open Access Journal by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed

mdpi.com/si/132991

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)