

Special Issue

Polymeric Metamaterials: Design, Fabrication, Testing and Modeling

Message from the Guest Editors

Polymeric metamaterials are architected cellular materials, also known as lattice materials, which are made of polymeric materials or their composites. Metamaterials can have architected microstructures that are inspired by nature, topology optimization and/or human engineering intuition, and provide multifunctional attributes that cannot be achieved by conventional polymeric materials and composites. There has been an increasing interest in the designing, fabricating, testing and modeling of polymeric metamaterials. Therefore, the scope of this Special Issue is intended to assemble a collection of recent research on the design, fabrication, testing and modeling of polymeric metamaterials and composites including, but not limited to, topics such as the property–topology–material relationship, new lattice topologies, macro/micro-additive manufacturing techniques for such materials, inverse design using machine learning techniques, effect of manufacturing defects on lattice material properties, multiscale topology optimization and generative design methods, etc.

Guest Editors

Prof. Dr. Rashid K. Abu Al-Rub

Advanced Digital & Additive Manufacturing Center, Khalifa University,
Abu Dhabi, United Arab Emirates

Dr. Imad Barsoum

Advanced Digital & Additive Manufacturing Center, Khalifa University,
Abu Dhabi, United Arab Emirates

Deadline for manuscript submissions

closed (15 June 2024)



Polymers

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed



mdpi.com/si/146818

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 4.9
CiteScore 9.7
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 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.

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, CAPIus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q1 (Polymer Science) / CiteScore - Q1 (General Chemistry)