

Special Issue

Advances in Biomimetic Smart Hydrogels

Message from the Guest Editor

Biomimetic smart hydrogels are functional polymer materials that exhibit characteristics that are bio-inspired by living organisms. They have broad applications in the fields of biomedical engineering, flexible electronic devices, soft robotics, as well as environmentally friendly and clean energy devices. The specific roles played by different types of smart hydrogels vary depending on the application scenario. Despite being in the exploratory stage, only a limited number of commercialized smart hydrogel products have entered the market thus far. Consequently, significant efforts have been devoted to exploring diverse strategies aimed at meeting the stringent requirements and standards of practical applications. The objective of this Special Issue of *Polymers*, titled “Advances in Biomimetic Smart Hydrogels”, is to compile articles that cover a wide range of interesting, yet advanced topics, including biomimetic design and fabrication, the characterization of physicochemical properties, biomimetic theoretical mechanisms, and the expansion of applications in innovative, yet challenging scenarios, etc.

Guest Editor

Prof. Dr. Xiangyu Liang

Agricultural Genomics Institute at Shenzhen, Chinese Academy of Agricultural Sciences, Shenzhen, China

Deadline for manuscript submissions

30 September 2025



Polymers

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed



mdpi.com/si/200678

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 4.7.

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)