Special Issue

Next-Generation Smart Polymers: Stimuli-Responsive and Covalent Adaptable Materials for Sustainable Technologies

Message from the Guest Editor

This Special Issue focuses on the design and advancement of next-generation smart polymeric materials that combine stimuli-responsiveness with structural adaptability and sustainability. Smart materials are broadly defined by their ability to respond dynamically to external stimuli such as temperature, light, pH, pressure, or electromagnetic fields. In this context, covalent adaptable networks (CANs) represent a new frontier in smart materials. Together, stimulus-responsive polymers and CANs form a continuum of intelligent materials capable of real-time responses and long-term adaptability. However, significant challenges remain, including complex synthesis routes, limited responsiveness under diverse conditions, stability in demanding environments, scalability, and the integration of sustainable practices. This Special Issue invites contributions that push the boundaries of smart material design, addressing the chemical, functional, and ecological dimensions necessary to realize multifunctional, adaptive materials for future technologies.

Guest Editor

Dr. Camilla Noè
Politecnico di Torino, Corso Duca degli Abruzzi 24, Turin, Italy

Deadline for manuscript submissions

20 January 2026

Polymers

an Open Access Journal by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed

mdpi.com/si/242235

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

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)

MDPI