Special Issue

Stimuli-Responsive Nano-Hydrogels for Biomedical and Drug Delivery Applications

Message from the Guest Editors

Stimuli-responsive nano-hydrogels have emerged as a groundbreaking class of materials for biomedical and drug delivery applications. These hydrogels dynamically respond to external stimuli such as pH, temperature, light, enzymes, and magnetic or electric fields, enabling precise, controlled drug release. Their high biocompatibility, hydrophilicity, and tunable physicochemical properties make them highly suitable for precision medicine, tissue engineering, and theranostic applications. This Special Issue highlights the latest developments in the design, synthesis, characterization, and biomedical applications of stimuli-responsive nano-hydrogels. We welcome original research articles, comprehensive reviews, and short communications focusing on novel fabrication strategies, functionalization techniques, and applications in drug delivery, tissue regeneration, biosensing, and personalized medicine. Studies addressing the challenges related to stability, scalability, and clinical translation are also encouraged. We invite researchers to contribute high-quality articles to advance this rapidly evolving field.

Guest Editors

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Deadline for manuscript submissions

20 October 2025

Polymers

an Open Access Journal by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed

mdpi.com/si/235532

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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
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