Special Issue

Polymer Hydrogels: Synthesis, Characterization and Applications

Message from the Guest Editors

Defined as 3D water-retaining networks made from hydrophilic polymer chains, hydrogels have recently attracted widespread attention in both scientific and industrial fields owing to their exceptional promise in a wide range of applications, such as tissue engineering and drug delivery. The formation of hydrogel can involve physical, chemical, and hybrid bonding. They can be produced via different routes, such as freeze–thaw processes, solution mixing, radical polymerization, and suspension polymerization. As a result of its unique feature (mimic extracellular matrix, biocompatibility, and biodegradability), the new-generation "smart hydrogels" can respond to external stimuli (e.g., pH, temperature, mechanical force, and light) that leads to a wide application of hydrogel materials (e.g., bio-sensors). This Special Issue focuses on the synthesis, characterization, and application of novel polymer-based hydrogel systems. We invite researchers to share their latest findings in the form of research articles, rapid communications, and reviews.

Guest Editors

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Deadline for manuscript submissions

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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
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