

Special Issue

Biopolymer Hydrogels: Synthesis, Properties and Applications

Message from the Guest Editors

In recent years, hydrogels have emerged as versatile biomaterials with applications in areas such as the biomedical, food, and agricultural sectors. Hydrogels have exhibited remarkable properties, including high water absorption and retention, controllable biodegradability, suitable mechanical characteristics, and excellent biocompatibility.

This Special Issue is dedicated to exploring the synthesis, structural design, and engineering of hydrogels, including physical and chemical crosslinking, as well as the incorporation of bioactive compounds and nanomaterials to improve their properties. Contributions may also focus on the evaluation of critical properties of hydrogels, such as internal and external microstructure, rheological and mechanical properties, water uptake, and chemical characterization by FTIR, XPS, and Raman spectroscopy, among others.

Submissions that address the relationship between synthesis and processing conditions and the resulting functional properties are especially encouraged. In addition, studies on “smart” hydrogels—materials capable of responding to external stimuli such as pH, temperature, and biological signals—are particularly welcome.

Guest Editors

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About the Journal

Message from the Editorial Board

Gels (ISSN 2310-2861) is recently established international, open access journal on physical and chemical gel-based materials. The journal aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. General topics include but not limited to synthesis, characterization and applications of new organogels, hydrogels and ionic gels made either from low molecular weight compounds or polymers, composite and hybrid materials where a metal is by some means incorporated into the gel network, and computational studies of these materials in order to provide a better understanding of gelation mechanism. We cordially invite you to consider publishing with us and contribute with your own grain of sand to the advance in this fascinating field.

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