Special Issue

Recent Advances in Multi-Functional Polymer-Based Hydrogels

Message from the Guest Editors

Recent advances in multi-functional polymer-based hydrogels have significantly expanded their applications in various fields, including biomedicine, environmental science, and soft robotics. These hydrogels, characterized by their high water content and tunable physicochemical properties, have been engineered to exhibit enhanced mechanical strength, self-healing capabilities, and stimuli-responsive behavior. Innovations in polymer chemistry and cross-linking techniques have enabled the development of hydrogels with tailored functionalities. In biomedicine, they are being utilized for drug delivery, tissue engineering, and wound healing, owing to their biocompatibility and ability to mimic natural tissues. Additionally, their use in environmental applications, such as water purification and pollutant removal, has been explored due to their high absorption capacity and selectivity. Integrating smart functionalities, like pH and temperature responsiveness, further expands their potential in advanced technologies. We are pleased to invite you, as renowned experts in this field, to contribute to this Special Issue and the development of scientific study.

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About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

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