Special Issue

Recent Advances in Multi-Functional Hydrogels

Message from the Guest Editors

Polymeric hydrogels, as a vital class of soft materials, are composed of three-dimensional networks that can retain a substantial amount of water. A wide range of innovative hydrogels with multiple functionalities—such as thermo-sensitivity, photo-sensitivity, pH sensitivity, strain sensitivity, shape memory, magnetism, conductivity, luminescence, adhesion, self-healing, anti-fouling, and suitability for 3D printing—have been developed. These multifunctional hydrogels have shown promise in various applications, including biomedical engineering, environmental engineering, flexible electronic devices, zinc-ion batteries, supercapacitors, and soft robotics.

This Special Issue on "Recent Advances in Multi-functional Hydrogels" aims to showcase high-quality original research articles and comprehensive reviews that highlight the latest breakthroughs in this dynamic and interdisciplinary field. We welcome contributions that explore various aspects of hydrogels, including, but not limited to, biomedical, thermo-sensitive, self-healing, tough, and 3D-printed.

Guest Editors

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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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manuscripts are peer-reviewed and a first decision is provided to authors approximately 12.5 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).

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