Special Issue

Design of Hydrogels and Hydrogel-Derived Materials for Controlled Molecule Release Applications

Message from the Guest Editors

In recent years, the need for precise, sustained, and stimuli-responsive molecules release—such as in pharmaceuticals, agrochemicals, nutrients, or bioactive compounds—has positioned hydrogels as key candidates for addressing this challenge. Their inherent properties, including their high water contents, porous networks, and their ability to respond to environmental triggers, enable the design of smart systems tailored for targeted and time-dependent delivery. This Special Issue, entitled "Design of Hydrogels and Hydrogel-Derived Materials for Controlled Molecule Release Applications," invites original research and comprehensive reviews that explore the design, synthesis, and characterization of hydrogels aimed at controlled release. Topics of interest include, but are not limited to, the following:

- Smart and stimuli-responsive hydrogels for drug and gene delivery;
- Hydrogels for the controlled release of agrochemicals, nutrients, or growth factors;
- Biodegradable and biocompatible hydrogel systems;
- Nanocomposite or hybrid hydrogels for enhanced release profiles;
- Advances in hydrogel fabrication techniques for release applications.

Guest Editors

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Deadline for manuscript submissions

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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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