

Special Issue

Gel-Based Next-Generation Energy Storage

Message from the Guest Editors

The rapid evolution of next-generation energy storage systems demands materials that simultaneously offer high ionic conductivity, mechanical flexibility, interfacial stability, and safety. Gel-based materials—including hydrogels, organogels, ionogels, and aerogels—have emerged as versatile platforms to address these challenges.

This Special Issue, titled “Gel-Based Next-Generation Energy Storage”, aims to collect cutting-edge research and review articles that explore the design, synthesis, characterization, and application of gel materials for advanced energy storage technologies. Topics of interest include but are not limited to gel electrolytes for lithium-ion, sodium-ion, zinc-ion, and solid-state batteries; gel-based supercapacitors; redox-active gels; self-healing and stretchable gel electrodes; interface engineering between gels and electrodes; in situ characterization of gel-based systems; and computational modeling of ion transport in gel networks. We cordially invite the submission of original research articles, reviews, short communications, and perspectives that address these exciting themes.

Guest Editors

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Deadline for manuscript submissions

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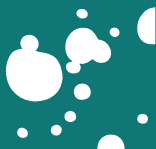


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About the Journal

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.

Editors-in-Chief

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