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

Dr. Shilin Zhang

Prof. Dr. Aidong Tang

Dr. Chenyang Shi

Dr. Ying-De Huang

Deadline for manuscript submissions

31 March 2027

Gels

an Open Access Journal by MDPI

Impact Factor 6.4
CiteScore 10.3
Indexed in PubMed

mdpi.com/si/282110

Gels
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
gels@mdpi.com

mdpi.com/journal/gels

Gels

an Open Access Journal by MDPI

Impact Factor 6.4
CiteScore 10.3
Indexed in PubMed

mdpi.com/journal/gels

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

Prof. Dr. Esmaiel Jabbari
Biomimetic Materials and Tissue Engineering Laboratory, Department of Chemical Engineering, University of South Carolina, Columbia, SC 29208, USA

Prof. Dr. Chuanliang Feng
State Key Lab of Metal Matrix Composites, School of Materials Science and Engineering, Shanghai Jiao Tong University, Shanghai 200240, China

Author Benefits

High visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Polymer Science) / CiteScore - Q1 (Organic Chemistry)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 13 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the first half of 2026).