

Special Issue

Aerogel Materials and Their Advanced Applications

Message from the Guest Editors

Aerogels are advanced materials with outstanding properties, including a high specific surface area and porosity, and a low thermal conductivity, density, dielectric constant, and refractive index. Aerogels can be widely applied in thermal insulation, acoustic insulation, optics, hypervelocity particle capture, environmental protection, biomedical engineering, fire protection, etc. Among these applications, thermal insulation is currently the dominant market. This Special Issue aims to analyze the potential solutions to facilitate translational research and the industrial adoption of aerogels based on the aerogel formation chemistries, structure, and properties, especially with the recent research and technological advances. Particular attention will be paid to the established sol–gel chemistries, newly developed synthesis processes, and characterization tools. The publication of original research articles, rapid communications, and reviews in this Special Issue will contribute to the development of aerogel materials and their advanced applications.

Guest Editors

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Deadline for manuscript submissions

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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

Prof. Dr. Esmail Jabbari

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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).