



*gels*



an Open Access Journal by MDPI

## Advances in Synthetic and Bio-Based Aerogels: Mechanical Properties, Thermal Insulation, and Environmental Remediation

Guest Editors:

**Dr. Beatriz Merillas**

1. Cellular Materials Laboratory (CellMat), Department of Condensed Material Physics, Facultad de Ciencias, University of Valladolid, 47011 Valladolid, Spain

2. Chemical Process Engineering and Forest Products Research Centre, Department of Chemical Engineering, University of Coimbra, 3000-370 Coimbra, Portugal

**Dr. Luísa Durães**

Chemical Process Engineering and Forest Products Research Centre, Department of Chemical Engineering, University of Coimbra, 3000-370 Coimbra, Portugal

Deadline for manuscript submissions:  
**closed (15 September 2024)**

### Message from the Guest Editors

This Special Issue on “Advances in Synthetic and Bio-based Aerogels: Mechanical Properties, Thermal Insulation, and Environmental Remediation” is dedicated to recent innovative studies on the synthesis procedures and distinctive characteristics of aerogels for the referred applications.

This Special Issue is gathering research describing the production of aerogels through different methods and an exhaustive characterization in terms of textural properties, chemical composition, thermal insulation, mechanical properties, and uncommon adsorptive/catalytic performance, among others.

Aerogels usually present a unique combination of properties that can be tuned through changes in the production process that significantly alter their nanostructures. There are several procedures for tailoring the final properties of these materials by modifying the formulations, inducing changes in the structure through different processing steps, adding different fillers, etc.

We encourage authors to contribute to this Special Issue, which hopefully will provide valuable knowledge for the aerogel community.



[mdpi.com/si/187261](https://mdpi.com/si/187261)

**Special** Issue



*gels*



an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Esmail Jabbari

Biomimetic Materials and Tissue Engineering Laboratory,  
Department of Chemical Engineering, University of South Carolina, Columbia, SC 29208, USA

## 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.

## Author Benefits

**Open Access:** free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

**High visibility:** indexed within [Scopus](#), [SCIE \(Web of Science\)](#), [PubMed](#), [PMC](#), [CAPlus / SciFinder](#), and [other databases](#).

**Journal Rank:** JCR - Q1 (Polymer Science) / CiteScore - Q2 (Polymers and Plastics)

## Contact Us

---

*Gels* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/gels](http://mdpi.com/journal/gels)  
[gels@mdpi.com](mailto:gels@mdpi.com)  
[X@Gels\\_MDPI](#)