

## Special Issue

# Antibacterial Hydrogels: Properties and Applications

### Message from the Guest Editors

Despite the groundbreaking discovery of antibiotics during the 20th century, their incessant use, deficient waste management, and environmental transmission have led to a concerning increase in antimicrobial resistance.

In this context, antibacterial hydrogels have gained significant attention as promising solutions, given their overall good biocompatibility, low toxicity, availability, viscoelasticity, and biodegradability.

This Special Issue is dedicated to exploring up-to-date advances in the field of antibacterial hydrogels, with emphasis on development of novel formulations, characterization and assessment of their antibacterial efficacy, and their translational potential into real-world applications. We expect to provide a holistic overview of the state-of-the-art research regarding antibacterial hydrogels and identify emerging trends and future research prospects.

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### Guest Editors

Dr. Patrícia Correia

Dr. Ana Sofia Martins Gomes

Dr. Paula A. C. Gomes

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### Deadline for manuscript submissions

18 December 2025



## Gels

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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.

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### 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

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