

Special Issue

Advances in Multi-Material Hydrogel for 3D Bioprinting

Message from the Guest Editors

This Special Issue focuses on recent advances in multi-hydrogel formulations for 3D bioprinting, including novel bioink compositions, hybrid hydrogels, interpenetrating networks, and dynamic hydrogels with tunable stress relaxation properties. Studies that address mechanical characterization, biocompatibility, crosslinking strategies, and multi-material bioprinting approaches are encouraged. We also welcome contributions that investigate cell–biomaterial interactions, tissue regeneration applications, and the computational modelling of multi-hydrogel bioprinting.

We invite researchers working in the fields of biomaterials, bioengineering, and tissue fabrication to submit original research, reviews, and perspectives on this emerging topic.

- 3D bioprinting
- bioinks
- multi-hydrogel system
- hybrid hydrogels
- self-healing hydrogels
- dynamic hydrogels
- photocrosslinking
- rheology
- tissue engineering

Guest Editors

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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).