

Special Issue

Synthesis, Characterization and Applications of Collagen-Based Gels

Message from the Guest Editors

Being the most abundant protein in mammals, with a triple-helix structure and an innately biocompatible, biomimetic, biodegradable, and haemostatic nature, collagen became one of the most commonly used biopolymers. Moreover, owing to the remarkable capacity of its fibers to self-assemble via non-covalent bonds and form in situ gels, collagen has been exploited in a plethora of applications, such as tissue engineering, drug delivery systems, skin care, etc. However, sometimes, collagen-based gels face some limitations in the form of a weak mechanical strength and lack of elasticity. Thus, with this Special Issue, we aim to gather researchers who are interested in the field of collagen-based gels, from both a theoretical and applicative perspective. In particular, we welcome submissions presenting new insights into their fabrication, optimization parameters, drug loading and release mechanisms, the formulation and manufacturing aspects of novel collagen-based gels, and their innovative applications, with an emphasis on their biomedical use.

Guest Editors

Dr. Andreea-Mariana Negrescu

Department of Biochemistry and Molecular Biology, Faculty of Biology,
University of Bucharest, 91-95 Splaiul Independentei, 050095
Bucharest, Romania

Prof. Dr. Anișoara Cîmpean

Department of Biochemistry and Molecular Biology, Faculty of Biology,
University of Bucharest, 91-95 Splaiul Independentei, 050095
Bucharest, Romania

Deadline for manuscript submissions

30 September 2025



Gels

an Open Access Journal
by MDPI

Impact Factor 5.3
CiteScore 7.6
Indexed in PubMed



mdpi.com/si/226589

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

[mdpi.com/journal/
gels](https://mdpi.com/journal/gels)





Gels

an Open Access Journal
by MDPI

Impact Factor 5.3
CiteScore 7.6
Indexed in PubMed



[mdpi.com/journal/
gels](https://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.

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

Author Benefits

High visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPus / 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 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).