



*gels*



an Open Access Journal by MDPI

## 3D Printing of Gels: Applications and Properties

Guest Editor:

**Dr. Daniele Tammaro**

Department of Chemical,  
Materials and Production  
Engineering, University of Naples  
Federico II, 80125 Naples, Italy

Deadline for manuscript  
submissions:

**closed (31 January 2024)**

### Message from the Guest Editor

The 3D printing of gels is a very popular method to produce scaffolds to be used in tissue engineering and other biomedical applications (bioscaffolds), as well as in other advanced technological areas. Bioprinting, cell printing, or even organ printing are the labels coined for the printing of tissues using additive manufacturing. Bioprinting combines 3D printing technology, cell biology, and material science, by linking a device that enables the deposition of bioinks with the build platform, where cooling leads to solidification. The inks mostly used as building materials for extrusion bioprinting are based on hydrogels, either in the form of gel precursors or as performed gels.

This Special Issue focuses on the design of hydrogels and their printing process for different bioprinting applications. Relevant topics include, but are not limited to, theoretical and experimental investigations, mechanical properties, biological properties, thermal performance, structural characteristics, forming processes, and tissue formation.



[mdpi.com/si/141933](https://mdpi.com/si/141933)

# 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](#), [CAPus / SciFinder](#), and [other databases](#).

**Journal Rank:** JCR - Q1 (*Polymer Science*)

## Contact Us

---

*Gels* Editorial Office  
MDPI, St. Alban-Anlage 66  
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](#)