Special Issue

Printable Biomaterials from Tissue Engineering to Orthopedics: Fabrication, Mechanical Performance, and Biological Behavior

Message from the Guest Editors

This Special Issue aims to provide a forum for the discussion of recent advances in printable biomaterials. The rapid advancements in 3D printing and bioprinting technologies have revolutionized the field of biomaterials, enabling the design and fabrication of complex, customized structures with applications that range from tissue engineering to orthopedic implants. Moreover, the integration of 3D printing with other technologies such as microfluidics and robotics for enhanced fabrication is crucial for the design of novel technologies. This Special Issue will focus on recent advances in printable biomaterials, encompassing their synthesis, characterization, functionalization, and clinical applications. We welcome contributions that explore the full spectrum of printable biomaterials, including hydrogels, bioceramics, polymers, and composite materials designed for tissue regeneration, orthopedic repairs, drug delivery, and other medical applications. Additionally, this Special Issue will focus on the design, synthesis and characterization of bioinks for the 3D bioprinting of tissues and scaffolds.

Guest Editors

Dr. Gianpaolo Serino
Department of Mechanical and Aerospace Engineering (DIMEAS), Politecnico di Torino, 10129 Turin, Italy

Prof. Dr. Gulden Camci-Unal
Department of Chemical Engineering, University of Massachusetts Lowell, Lowell, MA 01854, USA

Deadline for manuscript submissions

31 January 2026

Bioengineering

an Open Access Journal by MDPI

Impact Factor 3.7
CiteScore 5.3
Indexed in PubMed

mdpi.com/si/225338

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

mdpi.com/journal/bioengineering

Bioengineering

an Open Access Journal by MDPI

Impact Factor 3.7
CiteScore 5.3
Indexed in PubMed

mdpi.com/journal/bioengineering

About the Journal

Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Bioengineering* (ISSN 2306-5354). *Bioengineering* is published in open access format – research articles, reviews and other contents are released on the Internet immediately after acceptance. The scientific community and the general public have unlimited and free access to the content as soon as it is published. *Bioengineering* provides an advanced forum for the science and technology of bioengineering. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Anthony Guiseppi-Elie
Department of Biomedical Engineering, Texas A&M University, College Station, TX 77843, USA

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Biomedical) Rapid Publication: manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.2 days after submission; acceptance to publication is undertaken in 3.3 days (median values for papers published in this journal in the first half of 2025).

Recognition of Reviewers:

reviewers who provide timely, thorough peer-review reports receive vouchers entitling them to a discount on the APC of their next publication in any MDPI journal, in appreciation of the work done.

MDPI