

## Special Issue

# Advanced Biomimetic Materials: Manufacturing and Mechanical Properties

### Message from the Guest Editors

In recent years, advanced biomimetic materials have emerged as a transformative approach in materials science, integrating nature-inspired hierarchical structures and dynamic mechanical properties to address complex engineering challenges. By emulating the multiscale architecture of biological systems, researchers leverage advanced manufacturing techniques to create materials with exceptional toughness, adaptability, and functionality. The cross-disciplinary integration of mechanics, biology, and materials science drives innovation in load-bearing implants and adaptive systems. Emerging research directions focus on self-healing mechanisms and stimuli-responsive behaviors. We welcome original research articles and reviews on topics related to biomimetic materials. We wish to contribute to the subject of the article, including but not limited to the following topics:

- Synthesis and characterization of biomimetic materials;
- Advanced materials: metals, composites, and polymers;
- Design of biomimetic structures;
- Multiscale manufacturing;
- Advanced surfaces and coatings;
- Additive manufacturing;
- Mechanical

---

### Guest Editors

Dr. Xinlin Li

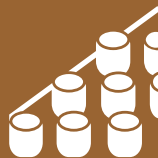
Dr. Jiafeng Song

Dr. Mingming Xu

---

### Deadline for manuscript submissions

closed (20 December 2025)



## Materials

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 6.4  
Indexed in PubMed

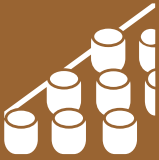


[mdpi.com/si/239674](https://mdpi.com/si/239674)

*Materials*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[materials@mdpi.com](mailto:materials@mdpi.com)

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





# Materials

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 6.4  
Indexed in PubMed



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



## About the Journal

### Message from the Editorial Board

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

---

### Editors-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Prof. Dr. Yuguang Ma

State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

---

### 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, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

#### Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) /  
CiteScore - Q1 (Condensed Matter Physics)