

## Special Issue

# Advances in Titanium Matrix Composites

### Message from the Guest Editors

This Special Issue is devoted to the current state of the art in titanium matrix composites (TMCs). As one of the most important metal matrix composites (MMCs), TMCs exhibit high specific strength, elastic modulus, temperature durability, wear resistance, and formability. Recent innovative research has shown that tailoring a reinforcement network distribution that is completely different from the conventional homogeneous distribution can not only improve the strengthening effect but can also resolve the issue of poor tensile ductility in TMCs. In addition to microstructural tailoring, advanced fabrication methods have also been developed to produce TMCs with high mechanical performance, for instance, laser additive manufacturing and spark plasma sintering. This Special Issue particularly welcomes work related to the fabrication, hot processing, microstructure design and evolution, mechanical behavior, simulation, heat treatment, advanced characterization, and atomic-scale interface study of TMCs. We hope that the high-quality research papers presented in this Special Issue will play a positive role in promoting the rapid development of TMCs.

---

### Guest Editors

Dr. Qi An

Prof. Dr. Lechun Xie

Dr. Lian Li

---

### Deadline for manuscript submissions

closed (20 February 2025)



## Materials

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 6.4  
Indexed in PubMed



[mdpi.com/si/202180](https://mdpi.com/si/202180)

*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 Editor-in-Chief

*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.

---

### Editor-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

---

### 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)