

## Special Issue

# Mechanical Properties and Deformation Mechanisms of Advanced Metals and Alloys

### Message from the Guest Editors

To date, advanced metals and alloys with heterogeneous microstructure or novel composition design have opened an avenue towards resolving the strength–ductility paradox and for understanding the relationship between superior mechanical properties and trans-scale microstructures. The purpose of the present Special Issue is to elucidate the state-of-art of this growing research field from a fundamental and application perspective. Recent advances on mechanical properties/performance and mechanism of advanced metals and alloys would be emphasized, including strength–ductility synergy, tensile behaviors, impact behaviors, fatigue and fracture behaviors, as well as friction and wear behaviors. Because of your expertise in these fields, we cordially invite you to contribute a paper to this Special Issue. Experimental studies and simulation/modeling work are both encouraged and welcomed.

---

### Guest Editors

Prof. Dr. Fuping Yuan

Prof. Dr. Muxin Yang

Prof. Dr. Xiaolong Liu

---

### Deadline for manuscript submissions

closed (30 June 2023)



## Materials

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 6.4  
Indexed in PubMed



[mdpi.com/si/112802](https://mdpi.com/si/112802)

*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)