

## Special Issue

# Mechanical Properties of Deformed Alloys and Compounds

### Message from the Guest Editors

Plastic deformation is an effective technique for producing bulk metals with tailored properties. Recently, severe plastic deformation (SPD) techniques have attracted much attention due to their ability to fabricate ultrafine or nanostructured materials. Manufacturing this kind of materials is an important advance in materials research due to their outstanding strength and their usually limited uniform elongation compared to coarse-grained counterparts, as indicated by the well-known Hall–Petch relationship. It is commonly accepted that pre-deformation greatly affects the deformation behaviors of metals. However, one significant drawback of the achieved structures is their limited thermal stability as a consequence of their highly unstable substructural features. The Special Issue will include the following topics: correlation between mechanical properties and microstructure of highly deformed alloys and compounds; microstructures and their development, including phase equilibrium and transformations; thermomechanical stability; mechanical performance, with strength, toughness, impact, and fatigue behavior; and formability, covering rolling, stamping, welding, among others.

---

### Guest Editors

Dr. Joan Josep Roa

R&D Department-Test Lab, Steros GPA Innovative S.L., C/Maracaibo 1, Naus 2-6, 08030 Barcelona, Spain

Dr. Sebastian Suarez

Department of Materials Science, Saarland University, 66123 Saarbrücken, Germany

---

### Deadline for manuscript submissions

closed (1 July 2021)



## Metals

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.6  
CiteScore 4.9



[mdpi.com/si/45943](https://mdpi.com/si/45943)

*Metals*

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

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





# Metals

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.6  
CiteScore 4.9



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



## About the Journal

### Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

---

### Editors-in-Chief

Prof. Dr. Hugo F. Lopez

Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang

Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

---

### Author Benefits

#### High Visibility:

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

#### Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) /  
CiteScore - Q1 (Metals and Alloys)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.5 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2024).