

## Special Issue

# Advances in Lightweight Metal Matrix Composites

### Message from the Guest Editors

Metal matrix composites (MMCs) have attracted great interest from the materials community due to superior mechanical and tribological properties compared with their metal counterparts, such as better strength and wear resistance, modulus, and higher working temperature. The use of novel reinforcements, such as nanotubes and 2D materials, together with new production technologies as additive manufacturing have driven advances in this field in the last few years. Additionally, the combination of these upgraded properties with lightweight metallic matrices results in a great weight reduction potential for different sectors. Tailoring different properties for fulfilling several demands by scientists and engineers is also desirable. Improved thermal, magnetic, and electrical characteristics or self-healing attributes are pursued to obtain functional or multi-functional MMCs. This Special Issue will face challenges and opportunities for lightweight metal matrix composites to show the progress beyond the state of the art in the research of Al, Mg, and Ti-based MMCs and their improved functionalities, above all using novel reinforcements, such as carbon nanotubes or graphene.

---

### Guest Editors

Dr. Pilar Rey

AIMEN, Technological Centre, Polígono de Cataboi, E36418 Porriño, Pontevedra, Spain

Dr. Gaspar González-Doncel

Department of Physical Metallurgy, Centro Nacional de Investigaciones Metalúrgicas (CENIM) C.S.I.C., Av. de Gregorio Del Amo No. 8, E-28040 Madrid, Spain

---

### Deadline for manuscript submissions

closed (30 June 2024)



## Metals

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.6  
CiteScore 4.9



[mdpi.com/si/69323](https://mdpi.com/si/69323)

*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 17.8 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the second half of 2024).