



Advances in Lightweight Metal Matrix Composites

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)

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.





an Open Access Journal by MDPI

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

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.

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), Inspec, CAPlus / SciFinder, and other databases.

Journal Rank: JCR - Q2 (*Metallurgy and Metallurgical Engineering*) / CiteScore - Q1 (Metals and Alloys)

Contact Us

Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/metals
metals@mdpi.com
[X@Metals_MDPI](https://twitter.com/Metals_MDPI)