Special Issue

Advances in the Functional Performance of Low-to-High-Entropy Alloys: Corrosion and Tribological Perspectives

Message from the Guest Editors

This Special Issue explores the evolving landscape of functional properties in metallic systems. Spanning from conventional alloys to complex medium-/high-entropy systems, this Special Issue emphasizes integrated insights into the composition–process–microstructure–property paradigm to guide the design of metallic materials for next-generation applications.

Both corrosion and tribological performance are system-dependent. These properties are fundamentally tied to composition, processing, and microstructure. Thus, a deeper mechanistic understanding is essential to fully unlock the functional potential of these emerging materials.

This Special Issue invites original research, reviews, and short communications on metallic systems—ranging from conventional to entropy alloys—focused on tailoring corrosion and tribological properties through composition, manufacturing routes (including post-processing), and microstructural control. We look forward to your submissions.

Guest Editors

Dr. Bhaskaranand Bhatt

Department of Applied Science and Technology, Politecnico di Torino, Corso Duca Degli Abruzzi 24, 10129 Turin, Italy

Prof. Dr. Mariangela Lombardi

1. Integrated Additive Manufacturing Center (IAM)—Politecnico di Torino, Corso Castelfidardo, 51, 10129 Torino, Italy
2. Department of Applied Science and Technology (DISAT), Politecnico di Torino, Corso Duca Degli Abruzzi, 24, 10129 Torino, Italy

Deadline for manuscript submissions

31 January 2026

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/244063

Metals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
metals@mdpi.com

mdpi.com/journal/metals

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

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, Ei Compendex, CAPlus / 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 18 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 2025).

MDPI