

Special Issue

Advances in High-Entropy Alloys' Microstructure, Properties and Preparation

Message from the Guest Editor

The advent of high- and medium-entropy alloys (HEAs and MEAs) has broken through traditional alloy design methodologies, attracting increasing research attention due to their advanced performance and outstanding properties. Recent progress in compositional and structural design concepts, as well as preparation techniques, have further enhanced the performance of HEAs and MEAs, a topic within the scope of this Special Issue.

In this Special Issue, we welcome review articles and research papers that focus on microstructure, property, and preparation advances in high-entropy alloys and shed light on future research directions. The topics will include but are not limited to the following: (1) various types of HEAs and MEAs; (2) various strengthening and plasticity mechanisms; (3) various advanced design methods; (4) various advanced preparation techniques; and (5) various advanced characterization tools.

- high-entropy alloys
- medium-entropy alloys
- refractory high-entropy alloys
- mechanical performance
- computational-aided design
- powder metallurgy
- additive manufacturing
- transformation-induced plasticity
- heterostructure

Guest Editor

Dr. Chao Yang

Shanghai Key Laboratory of Advanced High-Temperature Materials and Precision Forming, School of Materials Science and Engineering, Shanghai Jiao Tong University, Shanghai 200240, China

Deadline for manuscript submissions

closed (28 February 2026)



Metals

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



mdpi.com/si/216265

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

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





Metals

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



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



About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

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 18.7 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 2025).