Special Issue

Microstructure and Mechanical Properties of High-Entropy Alloys

Message from the Guest Editor

The properties of High entropy alloys (HEA) are remarkable due to their special deformation mechanisms, which are due to their compositional complexities, which lead to unique microstructures. The microstructures of HEAs are normally dominated by solid solution phase(s), in addition, a series of local environments, such as lattice distortion and chemical short-range ordering, are frequently seen. These types of local environments were found to significantly affect the mechanical properties/behavior of HEAs. This new Special Issue of HEAs welcomes submissions on a variety of different topics. Fundamental studies on the identification and quantification of various strengthening mechanisms, phase formation/transformation during solidification/annealing/aging, microstructural evolution and deformation mechanisms during different types of loading, the characterization and analysis of local environments are equally welcome. We expect that the papers published in this SI will theoretically advance our understanding of the microstructure-mechanical property correlation for HEAs and practically contribute to the design of novel advanced materials with enhanced properties.

Guest Editor

Prof. Dr. Zhenggang Wu

College of Materials Science and Engineering, Hunan University, Changsha 410082, China

Deadline for manuscript submissions

closed (30 June 2022)



Metals

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.3



mdpi.com/si/88022

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



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 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).

