Special Issue

Design of High-Entropy Alloys

Message from the Guest Editors

High entropy alloys (HEAs) and complex, concentrated alloys (CCAs) have resulted from new approaches to alloy design, which emerged 16 years ago. HEAs/CCAs suggest the usage of multiple (at least 3–5) principle elements taken in close to equiatomic proportions with the possible presence of minor components. Due to such a complex chemical composition, the alloys can have unique structures and properties. Moreover, in addition to alloys, high entropy ceramics and coatings have recently emerged and already demonstrated remarkable properties.

Special Issue on the Design of High Entropy Alloys welcomes submissions on topics within the above-mentioned scope. Works on fundamental aspects like phase formation and transformations, strengthening and deformation mechanisms, as well as diffusion are welcome. Investigations of functional properties of HEAs and non-metallic high-entropy materials are also eagerly anticipated. We hope paper published in the Special Issue will advance our understanding of composition–structure–properties relationships in HEAs and contribute to the design of new materials with unprecedented properties for future applications.

Guest Editors

Prof. Dr. Sergey V. Zherebtsov

Department of Materials Science and Nanotechnology, Belgorod State University,85 Pobeda str, 308015 Belgorod, Russia

Dr. Nikita Stepanov

Lab. of Bulk Nanostructured Materials, Belgorod State University, 85 Pobeda str, 308015 Belgorod, Russia

Deadline for manuscript submissions

closed (30 April 2022)

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/41993

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