# **Special Issue**

# Aluminum Alloys and Aluminum-Based Matrix Composites

# Message from the Guest Editors

Because of their high specific strength, excellent corrosion resistance and workability, aluminum alloys have become one of the most crucial materials in achieving structural weight reduction, being widely used in aerospace, high-speed rail transit and automotive lightweight fields. Generally speaking, the preparation process of aluminum alloy products includes casting, homogenization, forming based on extrusion, stamping, stretching, forging or rolling, solid solution, quenching and aging. The study of the strain hardening behavior and thermal dynamic softening behavior is of great significance for the optimization of deformation parameters. The prediction and elimination of quenching residual stress have an important impact on the final performance, with aging being the key method for strengthening aluminum alloys, which can also be strengthened with heat treatments. This Special Issue aims to report on innovative research in the fields of composition design; forming, heat treatment and welding processes; microstructure and the property evolution of aluminum alloys.

## **Guest Editors**

Dr. Di Feng

Dr. Qianhao Zang

Dr. Ying Liu

Dr. Yunsoo Lee

## Deadline for manuscript submissions

closed (31 October 2023)



# **Metals**

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.3



mdpi.com/si/144633

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).

