Special Issue

Advances in Lightweight Material Forming Technology

Message from the Guest Editor

Lightweight metal material forming technology plays a significant role in the fields of aerospace, automotives, and electronics. The theory of and the technology enabling liquid metal forming, metal semi-solid forming, metal plastic forming, metal connection, and metal powder forming have been established. On this basis, researchers have developed advanced forming technologies including die casting, squeeze casting, additive manufacturing, rolling, forging, extrusion, and electric field/magnetic field/ultrasonic-assisted forming technology, etc. Good forming techniques are crucial for controlling the shape and performance of components. Therefore, advances in lightweight material forming technology are topical issues being addressed by researchers around the world.

The aim of this Special Issue (SI) is to provide the readers of Metals with the recent advances in lightweight material forming technology. The scope of this SI encompasses the forming technology of Al/Mg/Ti alloys, and Al/Mg/Ti matrix composites, the use of advanced characterization methods, the effects of the microstructure on properties, and the discovery of novel phenomenological aspects or mechanisms.

Guest Editor

Dr. Minqiang Gao

Key Laboratory of Near-Net Forming of Light Metals of Liaoning Province, Dalian Jiaotong University, Dalian 116028, China

Deadline for manuscript submissions

15 August 2025

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/203344

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