Special Issue

Microstructure based Modeling of Metallic Materials

Message from the Guest Editors

This Special Issue aims to consider integrated computational materials engineering (ICME) research focusing on the influence of microstructural characteristics on properties of metallic materials. For this purpose, the Special Issue covers all microstructure-based material processing models, evolution of microstructures, precipitation, and defect formation in casting, powder processing, semi-solid and solid state processing including thermomechanical processing and additive manufacturing. Additionally, it focuses on development of micromechanical models, taking into account various approaches, such as dislocations dynamics and crystal plasticity, to study the local mechanical properties, as well as damage initiation and propagation at the micro-scale.

Guest Editors

Prof. Dr. Veera Sundararaghavan

Department of Aerospace Engineering, University of Michigan, 1221 Beal Avenue, Ann Arbor, MI 48109-2102, USA

Dr. Ali Ramazani

Department of Mechanical Engineering, Massachusetts Institute of Technology (MIT), Cambridge, MA, USA

Deadline for manuscript submissions

closed (31 January 2018)

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/8963

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 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).

MDPI