Special Issue

Advanced Simulation and Modeling Technologies of Metallurgical Processes—2nd Edition

Message from the Guest Editor

The current numerical methods for metallurgical processes cover a wide array of applications, such as multiphase flow, multi-physics processes, optimization, and process simulation. The detailed and vast amounts of simulation data allow a thorough analysis of the relevant processes and their interactions that reveal the underlying physics.

In this Special Issue, we seek to provide a wide set of articles on various aspects of simulation and modeling technologies in metallurgical processes. It is hoped that this open access Special Issue will provide a place for anyone to familiarize themselves with the current state of technologies in metallurgical processes. Articles on the ironmaking and steelmaking process are desired, such as data-driver modeling in sintering, blast furnaces and basic oxygen furnaces, gas-solid flow behavior by means of CFD, particle motion behavior by means of the discrete element method (DEM), new process development based on carbon peaking and carbon neutralization, the application of mathematical models, and new methods of visualization and intelligence.

Guest Editor

Dr. Haifeng Li

Key Laboratory for Ecological Metallurgy of Multimetallic Mineral (Ministry of Education), School of Metallurgy, Northeastern University, Shenyang 110819, China

Deadline for manuscript submissions

10 December 2025



Metals

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.3



mdpi.com/si/223483

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).

