

Special Issue

Advances in Modelling and Numerical Evolution of Additive Manufacturing

Message from the Guest Editor

Additive manufacturing (AM) is a transformative approach to industrial production that enables the creation of lighter, stronger parts and systems. AM uses data computer-aided-design (CAD) software or 3D object scanners to direct hardware to deposit material, layer upon layer, in precise geometric shapes. However, it's difficult to precisely control the microstructure and shape during these point-by-point and layer-by-layer manners. To optimize the parameters and predict defects, we need to understand the vigorous reactions between the additive materials and the heat sources.

Modelling and simulation plays a critical role in this new era, enhancing traditional trial and error approaches for the design and optimization of components and materials. It can help both from a fundamental understanding of the underlying physical processes and enable the accelerated design to reduce the qualification cycle of additive manufactured parts.

We would like to invite you to submit your original research to this Special Issue. The scope of the Special Issue includes all aspects of research or reviews related to modelling and numerical simulation of AM.

Guest Editor

Dr. Lei Yang

School of Transportation and Logistics Engineering, Wuhan University of Technology, Wuhan 430070, China

Deadline for manuscript submissions

closed (15 July 2023)



Metals

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



mdpi.com/si/120514

Metals

Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
metals@mdpi.com

mdpi.com/journal/

[metals](https://mdpi.com/journal/metals)





Metals

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



[mdpi.com/journal/
metals](https://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).