Special Issue

Additive Manufacturing of High Temperature Alloys

Message from the Guest Editors

High-temperature alloys, such as superalloys, are some of the most commonly employed alloys for metal additive manufacturing and have a wide range of applications in aircraft, gas turbines, turbocharger rotors, and a variety of other energy and aerospace applications. Additive manufacturing (AM) is considered an attractive manufacturing technique for components with complex geometries due to the nearnet shape production capability. However, one of the main challenges preventing the widespread use of the AM method for the production of critical parts is the uncertainty in the resultant properties, such as quality, reproducibility, and predictability of mechanical and functional performance. AM process condition optimization and post-processing heat treatments are then often employed to reduce these detrimental effects and enhance the properties. It is our pleasure to invite you to submit contributions that may take into account any of high-temperature alloy aspects involved in additive manufacturing.

Guest Editors

Dr. Vera Popovich

Department of Materials Science and Engineering, Delft University of Technology, Mekelweg 2, CD 2628 Delft, The Netherlands

Dr. Ehsan Hosseini

Empa, Swiss Federal Laboratories for Materials Science and Technology, Ueberlandstrasse 129, 8600 Dübendorf, Switzerland

Deadline for manuscript submissions

closed (20 March 2024)



Metals

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.3



mdpi.com/si/90568

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).

