Special Issue

Microstructure and Mechanical Properties of Nickel-Based Superalloy and Titanium Alloy

Message from the Guest Editor

Nickel-based superalloys and titanium alloys are widely used to fabricate key components for aerospace and aeroengines. With the increase in the requirements regarding performance and temperature, a significant amount of attention has been given to alloy design and microstructure control for nickel-based superalloys and titanium alloys. With the aim to encourage the application of the latest research findings in the field of aerospace and aeroengines, this Special Issue mainly focuses on microstructure control (including phase transformation mechanism, texture evolution, recrystallization, etc.) during thermal manufacturing (hot forging, rolling, extruding, etc.) and serving processes (tension, compression, creep, etc.). Additionally, papers that describe research work on alloy design, such as composition optimization, interstitial element control, and multiscale calculation, are also invited to this issue.

Guest Editor

Prof. Dr. Bin Tang

State Key Laboratory of Solidification Processing, Northwestern Polytechnical University, Xi'an 710072, China

Deadline for manuscript submissions

closed (31 January 2022)

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/88234

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