

Special Issue

Mechanical Properties and Structure Control of Superalloys

Message from the Guest Editors

Superalloys are a group of nickel, iron–nickel and cobalt alloys, which exhibit excellent heat-resistant properties and high stiffness, strength, toughness and dimensional stability at high temperatures, as well good resistance to corrosion and oxidation at high temperatures. Currently, there are demands for high-performance superalloys via alloy design, microstructural control, emerging fabrication techniques, etc. Contributions related to microstructure design and microstructural control are collected in this Special Issue, together with their relation to the microstructure evolution and mechanical performance of superalloys. The goal of this Special Issue of *Materials* is to present contributions related to microstructure design and microstructural control as well the relationship between microstructure and mechanical performance of superalloys in different processing techniques including casting, solidification, heat treatment procedures, hot-working, cold-working and additive manufacturing. It is my pleasure to invite you to submit a manuscript for publication in this Special Issue.

Guest Editors

Prof. Dr. Song Xiang

Guizhou Key Laboratory of Materials Mechanical Behavior and Microstructure, College of Materials and Metallurgy, Guizhou University, Guiyang 550025, China

Dr. Yuanbiao Tan

Guizhou Key Laboratory of Materials Mechanical Behavior and Microstructure, College of Materials and Metallurgy, Guizhou University, Guiyang 550025, China

Deadline for manuscript submissions

closed (20 September 2024)



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/184173

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

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





Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) /
CiteScore - Q1 (Condensed Matter Physics)