Special Issue

Research on Performance Improvement of Advanced Alloys

Message from the Guest Editors

Advanced alloys are the strong foundation of modern industry. It is a fact that advanced alloys commonly serve as structural or functional materials for innovative designs targeting properties such as lightweight, heat resistance, wearing resistance, etc. Excellent functional properties are important for more attractive and efficient products in terms of improved properties or lower production cost. Consequently, it is a so significant issue how to adjust the microstructure and even the corresponding properties of advanced alloys. Furthermore, it is necessary to explore heat treatment processes, forming processes, surface treatment processes, etc. The aim of this issue is to discuss recent advances and new developments in the relationships between various processes and service performance of advanced alloys. The scope of the issue is not only limited to heat treatment processes, forming processes and surface treatment processes, but also includes advanced alloy design, physical and numerical simulation, microstructure characterization, performance evaluation, etc.

Guest Editors

Prof. Dr. Guozheng Quan

School of Material Science and Engineering, Chongqing University, Chongqing 400044, China

Dr. Chuntang Yu

School of Material Science and Engineering, Chongqing University of Technology, Chongqing 401320, China

Deadline for manuscript submissions

closed (20 July 2025)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/207533

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

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

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)

MDPI