Special Issue

Advanced High-Performance Metals and Alloys: Microstructural Evolution, Mechanical Properties, and Strengthening Mechanisms

Message from the Guest Editors

Advanced high-performance metals and alloys are essential in various engineering applications due to their outstanding mechanical properties and versatility. The microstructural evolution in these materials significantly influences their performance characteristics, making it vital to study these phenomena for the development of new alloys and the enhancement of existing ones. We are pleased to invite you to contribute to this important field of research. Our goal is to gather at least 10 articles, with the potential for the Special Issue to be printed in book form if this target is met. In this Special Issue, we welcome original research articles and comprehensive reviews. Research areas may include (but are not limited to) the following: - Microstructural characterization techniques; - Mechanical testing and property evaluation; - Strengthening mechanisms in metals and alloys; - Theoretical and computational modeling of microstructural changes; - Correlation between processing, microstructure, and performance. We look forward to receiving your contributions.

Guest Editors

Dr. Guobing Wei

College of Materials Science and Engineering, Chongqing University, Chongqing 400044, China

Dr. Xi Zhang

Henan Province Engineering Research Center of Additive Manufacturing Aeronautical Materials, Nanyang Institute of Technology 1, Nanyang 473004, China

Deadline for manuscript submissions

20 April 2026



an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/233742

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

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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

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

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