

Special Issue

Mechanical Performance and Microstructural Characterization of Light Alloys (3rd Edition)

Message from the Guest Editor

Light alloys, such as aluminum, magnesium, and titanium, are important materials for the automobile, aircraft, and electronic industries. In recent decades, many studies have reported on the microstructure characteristics, mechanical performance, and advantages of light alloys. Many outstanding studies have resulted in fast progress being made. However, to the best of our knowledge, there are, of course, still many unknown theories and unsolved problems in light alloys. Thus, to further trigger the development of light alloys, the relationship between microstructure characteristics and mechanical performance needs to be researched more deeply. For this reason, the present Special Issue, entitled “Mechanical Performance and Microstructural Characterization of Light Alloys”, is proposed. This Special Issue aims to collect excellent studies on light alloys from around the world, including, but not limited to, aluminum alloys; magnesium alloys; titanium alloy; mechanical performance; microstructure characterization; heat treatment; plastic processing; precipitation; phase transformation; SEM; EBSD; FIB; TEM; and in situ X-rays.

Guest Editor

Dr. Qinghuan Huo

School of Materials Science and Engineering, Central South University, Changsha 410083, China

Deadline for manuscript submissions

20 March 2027



Materials

an Open Access Journal
by MDPI

Impact Factor 3.7
CiteScore 7.0
Indexed in PubMed



mdpi.com/si/235629

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 3.7
CiteScore 7.0
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.

Editors-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

Prof. Dr. Yuguang Ma

State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

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 (Materials Science, Multidisciplinary) / CiteScore - Q1 (Condensed Matter Physics)