

Special Issue

Lightweight Structural Materials for Automotive and Aerospace

Message from the Guest Editor

Although modern transport represents a vital part of the global economy, it is also a significant source of pollutants, contributing 13% of overall greenhouse gas and 25% of CO₂ emissions coming from the combustion of fossil fuels. The application of materials with high strength-to-weight ratios in transportation vehicles, also known as lightweighting, is an important strategy for improving fuel economy and reducing harmful pollution. Thus, to withstand growing requirements of next-generation vehicles, there is a need for stronger and lighter innovative structural materials.

It is my pleasure to invite you to submit a manuscript to this Special Issue, which will focus on current and emerging structural metallic materials for automotive and aerospace applications. In addition to traditional Al-, Ti-, and Mg-based alloys, this SI will include novel lightweight high-entropy alloys that are also becoming candidates for substantial weight reduction. The scope will cover fundamental research, all aspects of alloy development, synthesis, heat treatment, component manufacturing, the structure–property relationship, testing, computer simulation, and application-related topics.

Guest Editor

Dr. Frank Czerwinski
Natural Resources Canada, CanmetMATERIALS, Hamilton, ON, Canada

Deadline for manuscript submissions

closed (31 August 2021)



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/28179

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 Editorial Board

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