

Special Issue

Microstructure, Mechanical Properties and Additive Manufacturing of Steels

Message from the Guest Editors

Metals and alloys are widely used as automotive components, radio and electrical equipment, precision tools for flight controls, and telecommunications devices. Various plastic-forming processes produce high-performance parts with complex shapes with varying levels of accuracy and surface quality. Moreover, advanced plastic deformation processes can greatly improve the microstructure and mechanical properties of metal materials. It is crucial to study the microstructure developments and properties of metals and alloys in the whole life cycle to promote the development and application of final products. This Special Issue aims to publish original, important, and developed research papers that focus on the microstructure, mechanical properties, and additive manufacturing of steels.

In this Special Issue, we welcome the submission of the latest research on the appropriate topics, including, but not limited to, the following: metal-forming processes; finite element simulation technology during plastic deformation; the severe plastic deformation process of metal materials; microstructure evolution; mechanical properties test; and additive manufacturing of steels.

Guest Editors

Dr. Robert Bidulský

Bodva Industry and Innovation Cluster, Budulov 174, 04501 Moldava nad Bodvou, Slovakia

Dr. Jana Bidulská

Faculty of Materials, Metallurgy and Recycling, Technical University of Kosice, Kosice, Slovakia

Deadline for manuscript submissions

closed (20 November 2025)



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/195992

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)