

Special Issue

Advances of Indentation Technology in Materials

Message from the Guest Editors

Indentation has become an indispensable technique in material science and engineering, providing valuable insights into mechanical behavior and properties of local regions, and exerting a revolutionary impact on the testing of small samples. As this technology continues to develop, we must explore its application in various material systems and address existing challenges. This Special Issue's topics of interest include, but are not limited to:

- Development of new indentation techniques and methodologies;
- Characterization of mechanical properties via instrumented indentation;
- Understanding of deformation or fracture mechanisms by indentation;
- Evaluating material behaviour under extreme conditions;
- Assessing distribution of local properties by indentation;
- Advancements in probe materials, surface treatment, and geometries;
- Integration of indentation with other characterization techniques;
- Applications of indentation in different material systems;
- Modeling and simulation of indentation experiments;
- Standardization and calibration of indentation techniques.

We invite researchers to contribute to this Special Issue and address the topics above.

Guest Editors

Prof. Dr. Ming Liu

Prof. Dr. Xu Long

Prof. Dr. Lixun Cai

Prof. Dr. Yan Li

Deadline for manuscript submissions

closed (20 October 2025)



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/188680

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)