



materials



an Open Access Journal by MDPI

Materials Characterizations Using In-Situ Techniques

Guest Editors:

Dr. Zibin Chen

School of Aerospace, Mechanical and Mechatronic Engineering, the University of Sydney, Sydney, NSW 2006, Australia

Prof. Dr. Xiaozhou Liao

School of Aerospace, Mechanical and Mechatronic Engineering, the University of Sydney, Sydney, NSW 2006, Australia

Prof. Dr. Wenge Yang

Center for High Pressure Science and Technology Advanced Research, 1690 Cailun Road, Shanghai, China

Deadline for manuscript submissions:

closed (10 May 2022)

Message from the Guest Editors

The development of state-of-the-art in situ characterization techniques has significantly advanced our understanding of the structure–property relationships of materials. Here, we propose a Special Issue in *Materials* focusing on recent advances in in situ microscopy techniques and their applications in materials research. Contributions in the forms of review articles and research papers are all welcome. Content covered in this Special Issue will include but is not limited to the following fields:

- In situ structural characterization using optical microscopy, electron microscopy, scanning probe microscopy, and synchrotron radiation techniques;
- In situ property measurement/testing;
- Development of in situ techniques;
- Dynamic simulations to uncover deformation mechanisms and/or fundamental physics of materials.



mdpi.com/si/73107

Special issue



an Open Access Journal by MDPI

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

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.

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 - Q1 (Metallurgy and Metallurgical Engineering) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/materials
materials@mdpi.com
[X@Materials_Mdpi](https://twitter.com/Materials_Mdpi)