Special Issue

Mechanical Behavior and Radiation Response of Materials

Message from the Guest Editor

This Special Issue is dedicated to comprehending irradiation effects on microstructural evolution and their impact on the mechanical properties of materials for nuclear systems. Submissions can include original research articles or review articles covering a wide range of topics, including, but not limited to, the following:

- Material defects/precipitates and their influence on mechanical properties.
- Understanding defect formation and evolution through experimental or modeling studies.
- Deformation behavior and microstructural design for enhanced material performance.
- Innovations in advanced manufacturing and artificial intelligence/machine learning (Al/ML) applications.
- Small-scale testing and advanced characterization techniques for material analysis.

Guest Editor

Dr. Yanru Lin Oak Ridge National Laboratory, Oak Ridge, TN, USA

Deadline for manuscript submissions

20 September 2025



an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/198861

Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

mdpi.com/journal/materials





an Open Access Journal by MDPI

Impact Factor 3.2 CiteScore 6.4 Indexed in PubMed





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

 Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
 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)