Special Issue

Advances in Materials Fracture with Multiscale Modeling

Message from the Guest Editors

Fracture mechanics is essential for the safety analysis and design of engineering structures such as aircraft, ships, and automobiles. However, damage and fracture of materials is a complex behavior that starts at the atomistic scale then develops in the microscale with heterogeneous phases, and finally formulates observable cracks in the macroscale, which eventually leads to material fracture. Multiscale modeling enables studying the damage and fracture of materials considering the synergic contributions from various scales. Based on these understandings, this Special Issue is focused on studies of material fracture based on multiscale modeling. Relevant studies on the models, algorithms, implementations, applications, as well as findings on material fracture behaviors based on these methods are sincerely welcomed.

Guest Editors

Prof. Dr. Zhanli Liu

Prof. Dr. David Garoz Gómez

Prof. Dr. Leiting Dong

Deadline for manuscript submissions

closed (20 May 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/104015

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

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

MDPI

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)