



Recent Advances in Damage Mechanics of Composite Materials

Guest Editor:

Dr. Dionysios T.G. Katerelos

1. Mechanics of Natural Risks
Institute, University Research and
Innovation Center, Ionian
University, 28200 Lixouri, Greece
2. Department of Audiovisual
Arts, Laboratory of Applied
Musical Acoustics and Vibrations,
Ionian University, 28200 Lixouri,
Greece

Deadline for manuscript
submissions:

20 November 2024

Message from the Guest Editor

Dear Colleagues,

This Special Issue calls for publications on recent advances surrounding the damage mechanics of composite materials. Advances in this field are focused on improving the ways that we understand, predict, and mitigate damage initiation, progression, and failure mechanisms. In this Special Issue, we plan to include the latest discoveries associated with the following: (a) multi-scale computational simulations and models of damage processes; (b) refined progressive damage models; (c) advanced experimental characterization techniques that enable a detailed characterization of damage initiation and growth; (d) the integration of sensors and smart materials into composite structures, providing early warnings; (e) results from efforts focused on developing self-healing mechanisms to autonomously repair damage and extend service life; (f) tailored design for damage tolerance based on advanced manufacturing techniques; (g) research results on the impact of environmental factors on damage behavior and long-term durability; (h) machine learning and data-driven approaches, leading to more accurate and efficient damage prediction models.





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

Contact Us

Materials Editorial Office
MDPI, St. Alban-Anlage 66
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)