



an Open Access Journal by MDPI

Fatigue Crack Growth in Metallic Materials (Volume II)

Guest Editors:

Prof. Dr. Fernando Ventura Antunes

Centre for Mechanical Engineering, Materials and Processes (CEMMPRE), Department of Mechanical Engineering, University of Coimbra, 3030-788 Coimbra, Portugal

Prof. Dr. Francisco A. Díaz

Department of Mechanical and Mining Engineering, Campus Las Lagunillas, University of Jaen, 23071 Jaén, Spain

Deadline for manuscript submissions:
closed (20 January 2025)

Message from the Guest Editors

Design against fatigue is fundamental in components submitted to cyclic loads. The damage tolerance approach assumes the presence of small cracks and the propagation life is used to define inspection intervals. The ability to accurately predict fatigue crack growth rates is therefore fundamental. Despite the significant research developed in the last several decades, further work is needed to understand the fundamental mechanisms and to accurately model fatigue crack growth. The coexistence of ductile and brittle mechanisms, and crack tip shielding are not totally understood. The appearance of new metallic alloys, the development of new technologies such as additive manufacturing introduces challenging complexities. On the other hand, the development of numerical and experimental tools gives opportunity for a better understanding of the phenomenon.

We invite researchers to submit papers focused on the study of fatigue crack growth in metallic materials. The study of fundamental mechanisms and crack driving parameters, the development of new models and equipment, and the application to real components and structures are welcome. Both original and review papers are welcome.





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 and Metallurgical Engineering) / CiteScore - Q1 (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)