



Damage, Fracture and Fatigue of Ceramic Matrix Composites (CMCs)

Guest Editors:

Dr. Longbiao Li

College of Civil Aviation, Nanjing
University of Aeronautics and
Astronautics, No.29, Jiangjun
Ave., Nanjing 211106, China

Prof. Dr. Zhaoke Chen

State Key Laboratory of Powder
Metallurgy, Central South
University, Changsha, China

Deadline for manuscript
submissions:

closed (10 March 2024)

Message from the Guest Editors

This Special Issue, “Damage, Fracture and Fatigue of Ceramic-Matrix Composites”, will address advances in material processing, material modelling and characterization, performance evaluation, and testing of ceramic-matrix composites (CMCs) for high-temperature applications. Compared with superalloy, the density of fiber-reinforced CMCs is only approximately one-third that of the superalloy, and the operating temperature can reach approximately 1350 °C for long-term use. Therefore, CMCs are considered the lightweight high-temperature material with the most potential for hot-section components in gas turbine engines. To improve the reliability and safety of CMC components during operation, it is necessary to perform investigations on damage and failure mechanisms analysis, and develop models to predict the damage, fracture and lifetime.

For more information, please click the following link:

https://www.mdpi.com/journal/materials/special_issues/ceramic_matrix_composites

Dr. Longbiao Li
Prof. Dr. Zhaoke Chen
Guest Editors





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)