



Characterization and Mechanics of Fiber-Reinforced Polymer Matrix Composites

Guest Editor:

Dr. Michael May

Fraunhofer Institute for High-Speed Dynamics, Ernst-Mach-Institut, EMI Ernst-Zermelo-Straße 4, 79104 Freiburg, Germany

Deadline for manuscript submissions:

closed (31 October 2021)

Message from the Guest Editor

Polymer matrix composite materials have been introduced in several industries, due to their excellent weight-specific mechanical properties. In recent years, more and more sophisticated models have been developed attempting to describe the behavior of polymer matrix composites under quasi-static, thermal, cyclic, or high-rate loading. The availability of these simulation models provides a foundation for predictive simulation of composite materials. Over the years, several test methods have been standardized for unidirectional composites subjected to quasi-static loading. However, if the architecture of the composite changes or if the loading conditions vary there are nearly no standardized test methods.

This Special Issue, therefore, seeks original papers on advanced test methods for polymer matrix composite materials. In particular, new ideas on measuring strain-rate dependent material properties, hygro-thermal effects, fatigue loading, multi-axial loading, and fracture mechanical methods are solicited.

It is my pleasure to invite you to submit a manuscript to this Special Issue. Full papers, communications, and reviews are all 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 & 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)