

Special Issue

Development in Carbon-Fiber-Reinforced Polymer Composites

Message from the Guest Editor

The widespread use of carbon-fiber-reinforced composite materials is a prominent feature of the structural design of aircraft. The biggest problem faced by using composite laminates is their susceptibility to delamination when subjected to impact loads. The damage evolution between adjacent layers can lead to material stiffness and strength degradation, ultimately leading to catastrophic failure of composite structures. By introducing toughening phases represented by nanofibers between adjacent layers, the goal of inhibiting delamination can be achieved. To promote the industrial development of new composite laminates, it is necessary to comprehensively evaluate the interlayer fracture characteristics and structural reliability of toughened composite materials in extreme environments.

This special issue focuses on the mechanics of nanofiber toughening carbon-fiber-reinforced polymer composites towards extreme environments, especially high temperatures, extreme cold, humidity, and high strain rate.

Guest Editor

Dr. Yuan Li

School of Mechanical Engineering, Northwestern Polytechnical University, Xi'an 710072, China

Deadline for manuscript submissions

closed (25 April 2025)



Polymers

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed



mdpi.com/si/180314

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

[mdpi.com/journal/
polymers](https://mdpi.com/journal/polymers)





Polymers

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed



[mdpi.com/journal/
polymers](https://mdpi.com/journal/polymers)



About the Journal

Message from the Editor-in-Chief

Since its foundation in 2009, *Polymers* has developed into an internationally renowned, extremely successful open access journal. The editorial team and the editorial board dedicatedly combine open-access publishing and high-quality rigorous peer reviewing. The performance of the journal has proven this strategy to be well-suited and highly successful. This is reflected in the increasing impact factor of *Polymers*, the most recent one being 4.7.

I would like to invite you to contribute to the success of the journal by sending us your high quality research papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Alexander Böker

Lehrstuhl für Polymermaterialien und Polymertechnologie, University of Potsdam, 14476 Potsdam-Golm, Germany

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), Ei Compendex, PubMed, PMC, FSTA, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q1 (Polymer Science) / CiteScore - Q1 (General Chemistry)