Special Issue

Functionally Graded Graphene Nanocomposite Materials and Structures

Message from the Guest Editors

This Special Issue focuses on the mechanical analysis of functionally graded graphene-reinforced composite materials and structures, highlighting their potential for advanced engineering applications. Functionally graded materials (FGMs) that incorporate graphene offer unique mechanical properties, such as high strength-to-weight ratios, improved stiffness, and enhanced thermal stability and structural performance. These characteristics make them ideal for applications in aerospace, automotive, and biomedical industries.This Special Issue welcomes research that explores theoretical, computational, and experimental studies on the design, analysis, and optimization of these advanced composites. Topics of interest include, but are not limited to, functionally graded graphene nanocomposites, graphene origami metamaterials, graphene smart materials, etc. This issue aims to serve as a comprehensive resource for researchers, engineers, and practitioners working on the development and application of these innovative materials and structures.

Guest Editors

Dr. Shaoyu Zhao

Dr. Jiajia Mao

Dr. Yihe Zhang

Deadline for manuscript submissions

20 November 2025

Materials

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 5.8
Indexed in PubMed

mdpi.com/si/219907

Materials
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

mdpi.com/journal/materials

MDPI

Materials

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 5.8
Indexed in PubMed

mdpi.com/journal/materials

MDPI

About the Journal

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.

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

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 - Q1 (Metallurgy and Metallurgical Engineering) / CiteScore - Q2 (Condensed Matter Physics)