

Special Issue

Mechanical Metamaterials: Optimization and New Design Ideas

Message from the Guest Editors

Mechanical metamaterials are artificial structures that have properties contrary to conventional mechanical properties, realized mainly by carefully constructing the geometric structure of the microstructure units rather than their material composition. Although mechanical metamaterials have been extensively studied in recent years, the potential of their performances has not been fully reached, mostly due to the limitation of design techniques. To give full play to their excellent and diverse mechanical properties, novel optimization methods and new design ideas are desired. This Special Issue explores the latest research in structural optimization methods for enhancing the functionalities of mechanical metamaterials, including size, shape, and topology optimization strategies, and new ideas for designing novel mechanical metamaterials with prominent and diverse mechanical properties, e.g., origami/kirigami techniques and artificial intelligence.

Guest Editors

Dr. Jie Liu
Prof. Dr. Hao Li
Dr. Zhenpei Wang

Deadline for manuscript submissions

closed (10 March 2023)



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/90718

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

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





Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



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



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