Special Issue

Experimental Testing and Numerical Modelling for Structural Dynamics

Message from the Guest Editors

Experimental validation and numerical simulations play a pivotal role in ensuring the safety and performance of structures under dynamic loads. The aim of this issue is to serve the scientific community by highlighting these advancements. Contributions may explore novel sensor technologies, advanced testing methods, and digital simulation approaches that enhance the dynamic analysis, testing, monitoring, and design abilities. This issue also address application studies spanning earthquake engineering, aerospace, civil infrastructure, biological, and mechanical systems. Original unpublished manuscripts are solicited in all areas of experimental and computational structural dynamics, including, but not limited to, the following:

- Experimental techniques;
- Computational methods;
- Nonlinear structural dynamics;
- Stochastic dynamics and uncertain systems;
- Dynamic Model validation;
- Vibration control;
- Smart materials and structures;
- Dynamic sensors and actuators;
- Energy harvesting;
- Structural health monitoring;
- Load identification and monitoring;
- Dynamics of jointed structures.

Guest Editors

Prof. Dr. Chao Xu

School of Astronautics, Northwestern Polytechnical University, Xi'an 710072, China

Dr. Zexing Yu

Xi'an Institute of Space Radio Technology, Xi'an, China

Deadline for manuscript submissions

20 November 2025

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/234437

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

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

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