

Special Issue

Advances in Porous Lightweight Materials and Lattice Structures

Message from the Guest Editors

We are delighted to organize a Special Issue focused on porous lightweight materials and lattice structures. The energy-saving, emission reduction, and structural and functional properties of these kinds of materials have attracted increasing interest in recent years. High energy absorption in static and dynamic compression, an increased noise absorption capability, a high stiffness-to-weight ratio, and increased functional properties can be achieved through advanced processing technologies. This Special Issue invites the submission of papers related to porous materials and their applications in many fields. Contributions from academic and applied researchers related (but not limited) to the following topics regarding porous materials and lattice structures are strongly encouraged:

- Synthesis and fabrication;
- Novel processing technologies;
- New developments and applications;
- Experimental characterization;
- Mechanical properties;
- Simulation

Full papers, communications, and reviews are all welcome.

Guest Editors

Dr. Girolamo Costanza

Department of Industrial Engineering, University of Rome Tor Vergata,
Via del Politecnico, 1 00133 Rome, Italy

Dr. Maria Elisa Tata

Department of Civil Engineering and Computer Science, University of
Rome Tor Vergata, Via del Politecnico, 1 00133 Rome, Italy

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/199908

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)