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

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Deadline for manuscript submissions

closed (20 November 2025)

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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.

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