

## Special Issue

# Advanced Sound Absorption Materials and Applications

### Message from the Guest Editor

Research on materials for sound absorption and noise mitigation has dramatically evolved in recent years. The discovery of new physical phenomena has provided new innovative solutions and technology for the development of advanced sound absorption materials. Many challenges for the engineering of acoustic materials for sound absorption have motivated this research, such as reducing the density and thickness of materials or developing new promising alternatives for both thermal insulation and acoustic absorption. Prediction tools are very powerful for understanding and describing the acoustic characteristics of different media from the microstructure to demonstrate their acoustical macro-behavior. Acoustic artificial metamaterials with exotic effective parameters have advances in manipulating and absorbing sound waves, particularly in sound absorption. Perfect sound absorption and absorption at subwavelength thickness can be obtained by properly designing these materials. Science and engineering converge in this field of acoustics to discover, develop, and fabricate new advanced sound absorption materials for future promising applications.

### Guest Editor

Dr. Ruben Picó Vila

1. Instituto de Investigación para la Gestión Integrada de Zonas Costeras, Universitat Politècnica de València, Carrer del Paranimf 1, 46730 Gandia, València, Spain
2. Universitat Politècnica de València disabled, Valencia, Spain

### Deadline for manuscript submissions

closed (20 December 2022)



## Materials

an Open Access Journal  
by MDPI

Impact Factor 3.2  
CiteScore 6.4  
Indexed in PubMed



[mdpi.com/si/64251](https://mdpi.com/si/64251)

*Materials*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[materials@mdpi.com](mailto: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)