

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.

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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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