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Advanced Sound Absorption Materials and Applications

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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

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