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Aerogel Materials and Their Advanced Applications

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Message from the Guest Editors

Aerogels are advanced materials with outstanding properties, including a high specific surface area and porosity, and a low thermal conductivity, density, dielectric constant, and refractive index. Aerogels can be widely applied in thermal insulation, acoustic insulation, optics, hypervelocity particle capture, environmental protection, biomedical engineering, fire protection, etc. Among these applications, thermal insulation is currently the dominant market.

This Special Issue aims to analyze the potential solutions to facilitate translational research and the industrial adoption of aerogels based on the aerogel formation chemistries, structure, and properties, especially with the recent research and technological advances. Particular attention will be paid to the established sol–gel chemistries, newly developed synthesis processes, and characterization tools. The publication of original research articles, rapid communications, and reviews in this Special Issue will contribute to the development of aerogel materials and their advanced applications.













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Message from the Editor-in-Chief

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