Special Issue

Advances in Structural and Mechanical Properties and Characterization of Aerogels

Message from the Guest Editors

The properties of aerogels are controlled by their solid content, high porosity, pore size distribution, pore volume and the corresponding inner surfaces of the open porous network structure. As a result, materials with low densities, good thermal and acoustic insulation behavior, high sorption capacities, tunable electrical conductivities and last but not least highly variable mechanical properties, are obtained. In this Special Issue, we invite authors to contribute their current research results with respect to the structure and mechanical properties of aerogels. The mechanical properties of aerogels can be changed not only by process control during chemical synthesis and drying, but also by combining them with different materials. Submissions pertaining to the following topics on aerogels will be considered.

- Novel approaches to improve the structure and mechanical properties of aerogels or aerogel composites;
- Characterization of the structural, fractal or mechanical properties;
- Modeling studies describing their structure–property relationships;
- Review articles on the abovementioned topics.

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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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