Special Issue

Recent Advances in the Mechanical Properties and Microstructural Features of Porous Materials

Message from the Guest Editor

Porous materials have diverse applications in numerous industrial, mechanical, chemical, environmental, civil engineering and architecture fields as filters, absorbers, fuel cell electrodes, hot gas collectors, engine components, biomaterials applications, piezo-electric materials, thermal and acoustical insulators, and structural aspects. For many years, researchers have remained focused on the fabrication of dense materials in order to ensure remarkable mechanical properties, stability and durability. However, over time, it has been understood that porosity (pore fraction, shape, size and topology) could be a fundamental characteristic capable of improving material performance. Due to the far-reaching implications for different areas of science and technology, understanding the relationships between structure and mechanical properties represents an outstanding challenge in the field. With the aim to faciliate current studies and address future ones, the present Special Issue aims at providing a detailed state-of-the-art and research activity concerning the mechanical behavior of porous materials.

Guest Editor

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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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