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

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

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.

Dr. Giorgio Pia

Guest Editor

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Message from the Editor-in-Chief

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