Special Issue

Advanced Tunable Micro-Mesoporous Carbon Materials for Gas Adsorption/Capture

Message from the Guest Editor

A key area of research explored in this issue is the design and synthesis of tailored micro-mesoporous carbon materials. These articles delve into the strategies employed to control the pore size distribution, surface chemistry, and morphology of carbon materials, thereby optimizing their gas adsorption properties. The contributions highlight innovative synthesis techniques and the use of various precursors, templating agents, and activation methods to achieve desired carbon structures. These investigations provide valuable insights into the relationship between the carbon material's structure and its gas adsorption performance. Furthermore, this Special Issue covers a wide range of gas separation and purification applications, from capturing greenhouse gases and climate change mitigation to removing pollutants from industrial effluents, CO2 and H2S capture, direct air capture of CO2 and volatile organic compound (VOC) removal. It is my hope that this collection will inspire researchers and stimulate new ideas for developing efficient gas separation and capture technologies.

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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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