

## Special Issue

# Advanced Nanomaterials for Gaseous Storage

### Message from the Guest Editor

Gas storage and separation technologies find applications in energy storage, medicine, biology, and particularly environmental protection, and they are crucial in addressing global issues such as greenhouse gas reduction, clean energy development, and the control of toxic gases. Highly porous materials such as metal–organic frameworks (MOFs), zeolites, carbon-based substances, and polymers are capable of storing various gases, including greenhouse gases like carbon dioxide, energy-related gases like hydrogen and methane, and toxic gases such as carbon monoxide and ammonia. However, a key challenge remains in the design of materials with a sufficiently large adsorption capacity, a controlled gas-release rate, durability, and reusability. The chemical diversity of gases requires the selection of porous materials with properties that precisely correspond to their specific intended purpose. This Special Issue welcomes contributions focused on the characterization of solids designed for gaseous storage, including highly porous and other types of adsorbent nanomaterials.

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### Guest Editor

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## Materials

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### Message from the Editorial Board

*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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