Special Issue

Metal-Organic Frameworks towards Energy Conversion and Storage

Message from the Guest Editor

One of the most important issues for material scientists is the development of cost-effective and competitive energy conversion and storage systems, resulting in the increasing use of portable electronic devices and electric vehicles. Porous materials can play a pivotal role in providing functional void spaces for these energy related applications. Among others, metal–organic frameworks (MOFs) can be utilized for the generation of conductive media, storage of hydrogen and methane, electrochemical catalytic systems, and catalyst supports for energy relevant devices. Controlled pyrolysis of MOFs can also provide functional oxide-based or carbonaceous porous materials suitable as electrodes for various types of rechargeable batteries and supercapacitors. In this regard, this Special Issue covers all aspects of energy related applications of MOFs and MOF-derived porous materials.

Guest Editor

Prof. Dr. Seong Huh

Inorganic Nanomaterials Lab, Department of Chemistry, Hankuk University of Foreign Studies, Seoul, Korea

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Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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