Special Issue

Advanced Porous Adsorption Materials: Experiments, Adsorption Mechanisms and Applications

Message from the Guest Editors

Advanced porous adsorption materials include inorganic materials (solites, molecular sieves, and metal oxides), carbon materials (activated carbon, activated carbon fibers, carbon molecular sieves, nanoporous spherical carbons, and mesoporous ordered carbons). hybrid and polymeric materials (MOFs, COFs, and porous polymers), numerous composite materials, and other materials (aerogels, porous silicas, and carbon membranes). These materials form the foundation of modern technologies for the purification, separation, and storage of substances. Due to their large specific surface area and controlled pore size, they have the ability to selectively adsorb many chemicals, such as greenhouse gases, toxins, and organic vapors. The aim of this Special Issue is to collect the latest literature on advanced porous adsorption materials, including studies on related experiments, their adsorption mechanisms, and their applications. Original research articles, review articles, and short communications describing the current research directions and future prospects in the area of advanced porous adsorption materials are welcome.

Guest Editors

Dr. Małgorzata Wasilewska

Department of Physical Chemistry, Institute of Chemical Sciences, Maria Curie-Sklodowska University in Lublin, Lublin, Poland

Dr. Eduardo A. Lopez-Maldonado

Faculty of Chemical Sciences and Engineering, Autonomous University of Baja California, Tijuana 22424, Baja California, Mexico

Deadline for manuscript submissions

20 March 2026



an Open Access Journal by MDPI

Impact Factor 3.2 CiteScore 6.4 Indexed in PubMed



mdpi.com/si/250066

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

mdpi.com/journal/materials





an Open Access Journal by MDPI

Impact Factor 3.2 CiteScore 6.4 Indexed in PubMed





About the Journal

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.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

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

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)