







an Open Access Journal by MDPI

Synthesis, Porous Structure Analysis, and Application of Sorbents in CO₂ Capture

Guest Editor:

Dr. Paula Teixeira

Centro de Quimica Estrutural, Instituto Superior Técnico da Universidade de Lisboa, Lisboa, Portugal

Deadline for manuscript submissions: **closed (20 May 2023)**

Message from the Guest Editor

The International Energy Agency has consistently highlighted that there is no unique or simple solution to meeting international neutral climate goals; cutting emissions is an urgent priority, but the development and deployment of carbon removal technologies using different CO2 capture materials could play chief and complementary roles in shifting the energy sector toward carbon neutrality or negative emissions. This Special Issue, "Synthesis, Porous Structure Analysis, and Application of Sorbents in CO2 capture" will address topics related, but not limited to, advances in the synthesis of sorbents for CO₂ capture; manipulation of sorbents porosity; supported and sorbents: micronized and unsupported nanosized sorbents; and stability, activity and regeneration of sorbents under different technologic applications, at low, medium, or high temperature. Additionally, bifunctional sorbent materials for CO2 capture and conversion are welcome.

Original papers or reviews of efficient CO₂ capture sorbents synthesized by emerging and innovative techniques will be considered.













an Open Access Journal by MDPI

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, OC H3A 0C7, Canada

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The iournal covers twenty-five comprehensive biomaterials, energy materials, advanced composites. advanced materials characterization, porous materials, manufacturing processes and svstems. 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.

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

Contact Us

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