



Nanostructures for CO₂ Reduction

Guest Editor:

Prof. Dr. Rafael Camarillo

Faculty of Environmental
Sciences and Biochemistry,
University of Castilla-La Mancha,
Toledo, Spain

Deadline for manuscript
submissions:

closed (31 January 2022)

Message from the Guest Editor

Dear Colleagues,

The increasing concentration of carbon dioxide (CO₂) in the atmosphere has been recognized as the primary factor for global warming. In recent years, development of routes for highly efficient conversion of CO₂ into fuels and added-value materials has received much attention as an integral part of carbon management. CO₂ reduction can be achieved by a variety of technologies: mineralization, electrochemical conversion, thermochemical conversion, photochemical/photo-electrochemical conversion, enzymatic conversion, etc. Most of these processes are developed through nanostructured materials. These materials exhibit improved properties mainly due to their high surface-volume ratios.

This Special Issue of *Nanomaterials* will attempt to cover recent advancements in the synthesis, characterization, and assessment of different nanostructures during CO₂ reduction processes, including deposition, doping, codoping, support, functionalization, surface modification, junction, sensitization, immobilization, surface plasmon, clustering, self-assembly, etc.

Prof. Dr. Rafael Camarillo

Guest Editor





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Shirley Chiang

Department of Physics, University
of California Davis, One Shields
Avenue, Davis, CA 95616-5270,
USA

Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal-organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank: JCR - Q2 (*Chemistry, Multidisciplinary*) / CiteScore - Q1 (General Chemical Engineering)

Contact Us

Nanomaterials Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/nanomaterials
nanomaterials@mdpi.com
[X@nano_mdpi](https://x.com/nano_mdpi)