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Nanostructures for CO_2 Reduction

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

The increasing concentration of carbon dioxide (CO_2) in the atmosphere has been recognized as the primary factor for global warming. In recent years, development of routes for highly efficient conversion of CO_2 into fuels and added-value materials has received much attention as an integral part of carbon management. CO_2 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 CO_2 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

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Editor-in-Chief

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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.

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