Special Issue

Catalysis by Metal-Oxide Nanostructures

Message from the Guest Editor

Research into the subject of catalysis by metal-oxide nanostructured materials has been increasing over the past few years. Metal oxides (single or mixed) have been successfully used as catalysts, themselves, or as supports for single and multi-noble metals. Examples of metal oxides are silica, alumina, titania, zirconia, zeolites, Fe2O3, Fe3O4, ZnO, polyoxometallates (POMs), perovskites, phosphates, multicomponent mixed oxides (molybdates, tungstates, antimonates, etc.), hexaaluminates, etc. Such materials have been successfully used in several catalytic reactions of crucial importance, such as total and partial (selective) oxidation, hydrodesulphurisation, depollution, deNOx, deSOx, acid and base catalyses, biomass conversion, photocatalysis, among others. This Special Issue aims to cover the recent developments in the field in catalysis. Papers dealing with any type of metal oxide nanostructures, their preparation, characterisation, use for a type of catalytic reaction, mechanistic studies, and theoretical studies, among others, are most welcome. We hope you will contribute a paper.

Guest Editor

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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