Special Issue

Synthesis, Physicochemical Characterization and Application of Nanostructured Metals and Metal Oxides

Message from the Guest Editors

Metal and metal oxide nanostructured materials are widely applied in different fields such as catalysis, biomedicine, molecule and gas sensing, environmental remediation, sorption, and energy harvesting. Their central role in technological progress arises from their unique physicochemical properties compared to their bulk counterparts, namely chemical, textural, electrical, optical, magnetic, and thermal properties. Moreover, efficient synthesis methods have been developed so far to tailor their composition, microstructure, shape, size, and texture and to combine different phases in nano-heterostructures to produce materials with controlled and ad hoc physicochemical properties. Therefore, the Special Issue entitled "Synthesis, Physicochemical Characterization and Application of Nanostructured Metals and Metal Oxides", hosted by Nanomaterials, is devoted to the collection of recent advances in the field of metal and metal oxide nanostructures, applied in different research fields through the publication of reviews, regular research papers, communications, and short notes.

Guest Editors

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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.

Editor-in-Chief

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