



Noble Metal and Metal Oxide Nanoparticles and Their Nano-Composites for Catalytic and Biomedical Applications

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Noble metal and metal oxide nanostructures, especially combined in core-shell, onion-, dumbbell-, and flower-like heterodimers, represent highly inspiring platforms for multiple applications in heterogeneous catalysis, environmental sciences, biology, and medicine. Plasmonic nanostructures, comprising spherical, core-shell, rod-like, and star-shaped Au, Pt, and Pd nanoparticles, provide unique interactions with light which enable controllable plasmonic heating (of tumor tissue) and versatile photocatalytic applications.

This multidisciplinary Special Issue on Noble Metal and Metal Oxide Nanostructures focuses on controllable syntheses of redox active noble-metal metal-oxide nanoheterostructures for feasible applications in photocatalysis (H₂ and solar energy generation) and as theranostics in cancer medicine. Interdisciplinary working scientists are encouraged to submit original research articles and review articles.





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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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