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Advanced Nanomaterials and Nanocomposites for Electrochemical Applications

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Message from the Guest Editors

Dear Colleagues,

The development of nanostructured materials for lab-scale electrochemical energy devices involves the tuning of properties, such as the surface area, conductivity, active site density, chemical and electrochemical stability and product selectivity. Nanomaterials developed for application in voltametric sensing devices involve the design of nanoarchitectures that can support the highly sensitive detection of target analytes such as toxic chemicals, biomarkers and microorganisms with a high degree of accuracy. The advent of two-dimensional nanomaterials and their composites has opened an active area of research.

This Special Issue aims to present the recent progress achieved in the development of advanced nanomaterials and nanocomposites for electrochemical applications. We welcome original research articles and review papers focused on the synthesis, properties and structure–property–performance relationships of nanomaterials and nanocomposites developed for applications in electrochemical and bio/chemosensing.



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Special Issue



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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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