Special Issue

Hybrid Nanomaterials and/or Nanocomposites for Photo(Electro-) Catalytic Applications

Message from the Guest Editors

Research on hybrid nanomaterials and nanocomposites has gained significant momentum in recent years, driven by their multifunctional properties and potential applications in fields such as energy conversion, sensors, and catalysis. Compared to individual components, hybrid nanomaterials and nanocomposites comprising multiple components offer a highly promising approach for integrating desired structures or properties into a single nanoscale entity. These nanostructures or nanoparticles often exhibit superior performance, benefiting from the combination of multiple functionalities and synergistic effects at the nanoscale, thereby addressing limitations encountered in emerging applications, particularly in photo(electro-) catalysis, such as enhanced catalytic activity, stability, and selectivity. In this Special Issue, we invite contributions of research articles, review articles, and short communications from leading groups in the field, with the aim of providing new insights into the transition from materials design to photo(electro-) catalysis at the current forefront of this discipline.

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

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