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Advanced Nanomaterials for Photocatalytic Applications

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Message from the Guest Editors

Dear Colleagues,

Rapid industrialization and human activities have led over the last few decades to severe environmental pollution which has affected a large part of our planet. Nanomaterials-based photocatalytic processes have shown high potential in disinfection of aqueous media by a large number of pollutants, such as dyes, pesticides, pharmaceuticals, toxins, and so on. This special issue aspires to collect regular and review articles focusing on the use of nanomaterials and nanotechnology to advance techniques able to combat against various types of pollutions, based on photocatalytic approaches that are efficient, reliable, environmentally friendly and cost effective. Contributions should include narrow and wide bandgap semiconductors exploiting visible and UV light, as well as new concepts for advancing immobilized photo-reactors.

Topics include but are not limited to: synthesis and characterization of nanomaterials and hybrid nanostructures (i.e. core/shell) of various dimensionalities; applications of nanomaterials for water disinfection from various type of pollutants (dyes, pharmaceuticals, etc.); slurry and immobilized photocatalysts, etc.