



Advanced Nanomaterials for Water Splitting

Guest Editor:

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Deadline for manuscript
submissions:

closed (31 August 2022)

Message from the Guest Editor

The research on solar hydrogen generation by water splitting is growing rapidly. This special issue will focus on the recent progress and latest advanced research on photocatalysts, electrocatalysts, photoelectrochemical cells, which have great potential for clean and sustainable energy. For this special issue, we solicit original research manuscripts on, but not limited to, the following research areas: (1) Emerging photocatalysts, electrocatalysts, or photoelectrochemical cells for water splitting; (2) Advanced in situ/operando characterizations; (3) Synthesis and characterization of novel nanoscale photoelectrodes for solar energy materials; (4) Plasmonic nanostructures for solar energy applications; (5) Defect engineering and surface passivation for efficient water splitting redox reactions; (6) Electronic structures and physicochemical properties of surface and interface of hybrid nanostructures for solar energy conversion; (7) Charge carrier dynamics in photocatalysts and photoelectrodes; (8) New concepts and modelling of materials and devices for efficient water splitting.





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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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