

Special Issue

Photo(electro)catalysis in Energy and Environment: Theories, Experiments, and Applications

Message from the Guest Editors

We are delighted to invite you to contribute to a new Special Issue, which is dedicated to examining recent theoretical and experimental research achievements and applications regarding photoelectrocatalysis applications. The concept of photoelectrocatalysis combines electrochemistry and photocatalysis. In photoelectrocatalysis, selecting the right material is critical to obtaining charge carriers. In recent decades, transition metal oxides have been widely studied in photoelectrocatalysis systems. The Special Issue also relates to the experimental and theoretical assessment of potential catalysts for photo/electrocatalytic reactions. It involves the synthesis, characterization, evaluation of properties, synthesis of composite materials, conversion of CO₂ into value-added products, photoelectrocatalytic oxidation and reduction of pharmaceutical pollutants, and photodegradation applications. These technologies offer an optimistic approach to addressing the global energy and environmental crisis.

- photoelectrocatalysts
- material
- molecular catalysts
- electrocatalysis
- photocatalysis
- CO₂ reduction

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