Special Issue

Synthesis and Applications of Metal-Derived Catalysts on Semiconductor Materials for Photoelectrocatalytic Processes

Message from the Guest Editors

Photoelectrocatalysis takes advantage of an intimate combination of photovoltaic and electrocatalytic processes. Applying a potential to a photoelectrode with a surface catalyst can effectively: (i) overcome the kinetic barriers of traditional electrochemical conversion in catalytic materials and (ii) reduce the significant recombination of electron–hole pairs in photocatalytic systems. This Special Issue aims to cover recent progress in the development of bimetallic-derived semiconductor materials and their applications in photoelectrocatalysis. We welcome original research and short communications on the following topics:

- The synthesis and assembly processes of bimetallic catalysts on semiconductors: bimetallic deposition, grafting, and surface engineering.
- The electronic, geometrical, and compositional effects on photoelectrochemical performance.
- The design and implementation of photoelectrocatalytic cells.
- Heterogeneous and molecular photoelectrocatalysts.
- Plasmonic photoelectrocatalysis based on bimetallics.

Guest Editors

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Editor-in-Chief

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