

Special Issue

Electrocatalysis/Photocatalysis for CO₂ Conversion, H₂ Production, and Pollutant Removal

Message from the Guest Editors

Electrocatalysis/photocatalysis are the acceleration of electroreactions/photoreactions by heterogeneous electrocatalysts/photocatalysts to produce valuable chemicals or to decompose harmful materials. These methods can provide various approaches to alleviate serious environmental problems. The electrocatalytic/photocatalytic conversion of CO₂ can be the more environmentally friendly approach for production of the CO₂-derived chemicals. In addition, H₂ production by water splitting is one of the prominent methodologies which has been carried out for past few decades. Not only the production of the chemicals and fuels, but also the decomposition of harmful organic pollutants can be achieved by electrocatalysis/photocatalysis. For this Special Issue, we welcome the papers focusing on the diverse synthesis methods and novel designs of crystal structures for the electrocatalysts/photocatalysts to improve their electrochemical/photochemical performance with high stability, as well as theoretical reaction mechanisms at the molecular level occurring on the well-designed catalytic surfaces.

Guest Editors

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Deadline for manuscript submissions

closed (10 October 2023)



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