Special Issue

Advances in Electrocatalysis and Photoelectrocatalysis

Message from the Guest Editors

Solar-driven conversion systems, such as photocatalysts suspension and photoelectrochemical (PEC) devices, serve as sustainable and environmentally benign platforms for the synthesis of solar fuels and fine chemicals, especially from the conversion of biomass and waste chemicals. Interfacing the light-absorbing material with a catalytic layer is essential to efficiently expedite the kinetics of reactions of interest and selectively convert the feedstocks into desired products. This Special Issue aims to cover the recent advances in the development of photoelectrodes and electrocatalysts for efficient and selective photo-(electro-)catalysis. This includes but is not limited to (i) the design, synthesis, and characterization of photoelectrocatalytic and electrocatalytic materials, (ii) the fundamental study of the mechanism behind the photo-(electro-)catalysis process, and (iii) the niche applications of PEC devices, including solar fuels generation and reforming of biomass and waste chemicals.

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