





an Open Access Journal by MDPI

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

Guest Editors:

Prof. Dr. Ki Tae Park

Department of Chemical Engineering, Konkuk University, 120 Neungdong-ro, Gwangjin-gu, Seoul 05029, Republic of Korea

Prof. Dr. Chang-Tang Chang

Department of Environmental Engineering, National I-Lan University, Yilan 260007, Taiwan

Dr. Wonhee Lee

Climate Change Research Division, Korea Institute of Energy Research (KIER), 152 Gajeong-ro, Yuseong-gu, Daejeon 34129, Republic of Korea

Deadline for manuscript submissions:

closed (10 October 2023)

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.



