Special Issue

Innovative Catalysts for Photo/Electrochemical Conversion of Small Molecules to Fuels and Value-Added Chemicals

Message from the Guest Editors

The emerging photo/electro-convert renewable small molecules (H2O, CO2, N2, O2, H2, NH3, CH4, etc.) of transportable fuels and value-added chemicals, as a sustainable and environmentally benign technology, are of great potential to replace the traditional fossil fuel-based industrial synthesis. The development of appropriate reaction systems and innovative catalysts is a key step in the photo/electrocatalytic process for efficient activation and formation of chemical bonds. Although recently these reactions have been well-studied, the catalyst design, system optimization and reaction mechanisms for the objective of high selectivity and yield are yet to reach their optimum in consideration of the requirement of applications. Therefore, this Special Issue of *Catalysts* will highlight recent developments in the photo/electrochemical conversion of small molecules to fuels and value-added chemicals. The welcome submissions of original research and review articles by researchers from all disciplines investigating topics relevant to the photo/electrochemical synthesis of fuels and value-added chemicals.

Guest Editors

Dr. Gaofeng Chen

Dr. Jian Li

Dr. Feili Lai

Dr. Hui Cheng

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
catalysts@mdpi.com

mdpi.com/journal/catalysts

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Editor-in-Chief

Prof. Dr. Keith Hohn
Carl R. Ice College of Engineering, Kansas State University, Manhattan, KS, USA

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.6 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).

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