catalysts

an Open Access Journal by MDPI

IMPACT FACTOR 4.0

CITESCORE 7.6

Advances in Photo(electro)catalytic Hydrogen Production

Guest Editors:

Prof. Dr. Baojun Ma
College of Chemistry and Chemical Engineering, Ningxia University, Yinchuan 750021, China

Dr. Xiaoman Li
College of Chemistry and Chemical Engineering, Ningxia University, Yinchuan 750021, China

Dr. Wei Wang
College of Chemistry and Chemical Engineering, Ningxia University, Yinchuan 750021, China

Deadline for manuscript submissions:
closed (15 April 2024)

Message from the Guest Editors

Hydrogen energy, as an efficient, clean and sustainable "carbon free" energy is of great significance to the sustainable development of human society. Among several hydrogen production technologies, photo(electric) hydrogen production has attracted much attention because its energy comes from abundant solar energy and electric energy converted by solar energy, potentially solving the energy crisis and avoiding environmental pollution caused by traditional fossil energy hydrogen production. Initially, the efficiency of the hydrogen production process is rather limited, which mainly results from the existing drawbacks of catalysts such as instability and low activity. Here, it is of great value to evaluate the photo(electric) hydrogen production system, engineering electrodes with advanced materials, the parameters in water oxidation reactions occurring on the surface of anodes, and the basic functions of co-catalysts on the promotion of electrocatalysts, photoelectrocatalyst, and photocatalyst performance. We welcome colleagues in the field of photo(electro)catalysis to submit your original research articles and review articles.