

Special Issue

Innovation and Development in Electrocatalysts for Hydrogen Production

Message from the Guest Editors

Water splitting via electrocatalytic hydrogen evolution reaction (HER) is an efficient and sustainable method for industrial hydrogen production that will help to address global energy and environmental concerns in the future. To date, platinum (Pt)-based materials remain the state-of-the-art HER electrocatalysts. The scarcity and high cost of Pt, on the other hand, severely restrict its commercial use. As a result, earth-abundant alternatives which also have high electrochemical stability and promising catalytic capability have become a hot research topic. This Special Issue aims to cover the most recent progress and advances in electrocatalysts for hydrogen production. This includes but is not limited to the design, synthesis, and characterization of novel HER electrocatalysts, as well as research on fundamental surface electrochemical reaction mechanisms, novel concepts in surface electrochemistry, and theoretical methods of direct interest and impact in the science and applications of HER electrocatalysts and electrocatalytic HER processes.

Guest Editors

Prof. Dr. Dayan Ma

State Key Laboratory for Mechanical Behavior of Materials, Xi'an Jiaotong University, Xi'an 710049, China

Dr. Hong-Bo Wang

School of Materials Science and Engineering, Chang'an University, Xi'an 710049, China

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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