



Oxygen/Hydrogen-Based Electrocatalysis and Devices

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Message from the Guest Editor

Hydrogen production by water electrolysis (HER/OER), hydrogen fuel cells (HOR/ORR), and regenerative fuel cells (HOR/ORR/HER/OER), which are devices that can operate alternately as an electrolyzer and as a fuel cell, is promising to generate and make full use of hydrogen energy as an environmentally friendly and efficient solution. However, the expensive and low efficient catalyst and the irrational electrode architecture seriously hinder their development. In addition, for metal–air batteries, especially Zn–air batteries (ZABs), the ORR and OER processes are sluggish, and the issues of catalyst and electrode optimization also must be considered.

This Special Issue focuses on all topics dealing with catalysts, electrodes, and devices involving some important electrochemical reactions including ORR, OER, HOR, and HER, from fundamental to applied research. You are invited to submit recent advances in research to this Special Issue of Micromachines. Original research papers, communications, and review articles are welcome.





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