Special Issue

Photo(electro)catalytic Water Splitting for H2 Production

Message from the Guest Editors

Hydrogen is a promising alternative to unsustainable fossil fuels due to its vital role in ammonia and clean-burning fuel production. About 96% of the world's hydrogen comes from the reformation of fossil fuels, which utilize high energy, followed by CO2 emissions. Efficient and sustainable hydrogen can be produced with the help of the advanced photocatalysis and Electrocatalysis, from water splitting, where electrolysis of water can be achieved at room temperature, the only required inputs are water and energy. The main challenge is efficiency, stability, cheap earth-abundant catalyst, and the separation of H2 and O2 during the reaction. The vision of this Special Issue is to report novel catalysts for (photo) electrochemical conversion processes which can convert water into H2. We invite contributions which cover the following topics.

- Computational Modelling of Catalysts for Water Splitting
- Reaction Mechanism of Oxygen Evolution Reaction & Hydrogen Evolution Reaction Catalysts
- 2D materials for Water Electrolysis
- Perovskites-based Photo or Electrocatalysts
- Metal oxides for Photoelectrochemical process
- Z-Scheme Heterojunctions-based Photo(electro)catalysts

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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