

Special Issue

Photocatalytic Hydrogen Evolution

Message from the Guest Editors

Energy crises and global warming are key challenges for researchers in order to develop a sustainable society for the future. Solar energy conversion is a remarkable, clean, and sustainable solution to nullify the effects of fossil fuels. The findings of photocatalytic hydrogen production by Fujishima and Honda realized that “water will be the coal for the future”. Hydrogen is a carbon-free clean fuel with a high specific energy of combustion. TiO_2 , g-C $_3\text{N}_4$ and CdS are three pillars of water splitting photocatalysts owing to their superior electronic and optical properties. This Special Issue aims to present the significant features of oxide, sulfide, and carbon based photocatalysts for cost-effective hydrogen production in the following topics: UV or visible or solar light assisted hydrogen production; photocatalytic hydrogen evolution using seawater/industrial waste water; and photocatalytic reactor design for efficient hydrogen production. We also welcome manuscripts on novel photocatalytic materials, systems, or mechanisms for hydrogen production.

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