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Fabrication of octahedron like BiOI/MOF composite photocatalysts with enhanced photocatalytic hydrogen evolution from water splitting**Jerry J Wu, Yu Wen Chien, and Gang Juan Lee**
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An octahedron-like metal-organic framework (MOF) was successfully synthesized by the ultrasound irradiation synthesis method. Meanwhile, a novel visible-light-driven BiOI/MOF composite photocatalyst was also synthesized by the microwave irradiation

synthesis. MOFs, a new class of porous crystalline materials, has attracted tremendous attention considering their broad application prospect because MOF possesses the repeated crystalline structures and thereby improving the harvest of solar energy and transportation of charge carriers. In this article, the result has revealed that the appropriate modification of MOF could reach the maximum hydrogen yield under visible light irradiation. The hydrogen evolution from de-ionized water containing at pH 7 and 0.20g/L of BiOI/MOF composite photocatalyst had the maximum of 2,516.8 μ mol/h/g. Therefore,

this study has substantially demonstrated to enhance the photocatalytic efficiency of BiOI photocatalyst using MOF modified BiOI.

Biography

Jerry Wu received his PhD degree in 1998 from the Graduate School of Civil and Environmental Engineering, Michigan State University, USA. He is currently a Distinguished Professor at Feng Chia University in Taiwan. His research interests include ozonation and advanced oxidation processes for water and wastewater treatment, functional materials for the sensor, energy, medical, biochemical, and environmental applications, analytical techniques for molecule substances and micropollutants. In addition, he is also interested in the nanomaterials synthesis and photocatalysis applications. He has published more than 120 papers in reputed journals and has been serving as an Editorial Board Member of several journals.

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