Special Issue

Photocatalytic Water Splitting: Challenges and Prospects

Message from the Guest Editor

Photocatalytic water splitting has been considered as one of the most promising strategies for producing renewable and clean hydrogen fuel. This process involves the use of photocatalysts to convert sunlight energy into chemical energy, which could be utilized to split water into hydrogen and oxygen. Although significant progress has been made in this field over the past few decades, there are still several challenges that need to be addressed in order to achieve efficient and cost-effective photocatalysts for photocatalytic water splitting. This Special Issue aims to bring together researchers from different fields to discuss the latest developments and challenges in photocatalytic water splitting, including the design and synthesis of new photocatalysts, the optimization of reaction conditions, the photoinduced carrier dynamics at the interfaces of photocatalysts, and the integration of photocatalytic systems into practical applications. The articles in this Special Issue will provide insights and perspectives on the future prospects of photocatalytic water splitting as a sustainable and clean energy source.

Guest Editor

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