Special Issue

Photocatalysis: Past, Present, and Future Outlook

Message from the Guest Editor

Photocatalysis has its origins in the early 20th century, but significant advancements occurred in the 1970s with the discovery of water splitting using TiO_2 electrodes under UV light by Fujishima and Honda. This landmark finding paved the way for exploring photocatalytic materials and their applications. Early research primarily focused on understanding the fundamental mechanisms, developing new photocatalytic materials, and exploring their potential applications in environmental purification, such as the degradation of organic pollutants and water treatment.

In recent years, photocatalysis has seen substantial progress in both fundamental research and practical applications. With ongoing advancements in material science, process engineering, and interdisciplinary approaches, photocatalysis is poised to make significant contributions to sustainable development and technological innovation in the future. The continued collaboration between academia, industry, and policymakers will be crucial in realizing the full potential of photocatalytic technologies.

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