

Solar overall water splitting on photocatalysts with wide visible light utilization

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Abstract: Solar water splitting for hydrogen production is one of the most promising ways of converting solar energy into chemical energy. Towards it, one or two-step (Z-scheme) method has been developed. The key issues of solar water splitting are how to achieve highly efficient light harvesting, charge separation and surface catalysis etc..^[1]

This talk will give a simple introduction of background on the significance and research progress on solar overall water splitting. Afterwards, we will give a detailed introduction on the assembly of Z-scheme overall water splitting systems recently achieved in our laboratory.^[2-10] Meanwhile, the effect of surface and interface strategies on the charge separation as well as catalytic performances will be discussed.

Key words: Photocatalysis, Water splitting, Hydrogen, Visible light

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