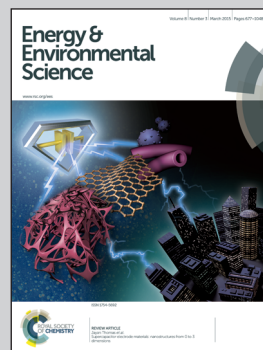


Showcasing research from the laboratories of Dr Junwang Tang at University College London.

Title: Visible-Light Driven Heterojunction Photocatalysts for Water Splitting – A Critical Review

Artificial photosynthesis over semiconductor photocatalysts to produce clean chemical fuels, such as hydrogen, has attracted much interest as a promising route to meet the global demand for renewable energy supplies and mitigate the harmful effects of fossil fuel combustion. This critical review seeks to give an overview of the concept of semiconductor heterojunction construction and the current state-of-the-art visible-light driven junction water splitting photo(electro)catalysts reported over the past ten years. Experimental observations of the proposed charge transfer mechanism across the junctions, together with a description of recent successes in the theoretical modelling of semiconductor electronic structures at interfaces, and how these explain the functionality of the junction structures are highlighted.

As featured in:



See Junwang Tang et al., *Energy Environ. Sci.*, 2015, 8, 731.



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