

Molecular water oxidation catalysts in homogeneous phase and anchored on solid supports.

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The replacement of fossil fuels by a clean and renewable energy source is one of the most urgent and challenging issues our society is facing today, which is why intense research is devoted to this topic recently. Nature has been using sunlight as the primary energy input to oxidize water and generate carbohydrates (a solar fuel) for over a billion years. Inspired, but not constrained by nature, artificial systems^[1] can be designed to capture light and oxidize water and reduce protons or other organic compounds to generate useful chemical fuels. In this context this contribution will present the performance of key molecular water oxidation catalysts in homogeneous phase and anchored on solid supports to generate powerful hybrid electro- and photo-anodes for water splitting.²

References:

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