## Solar Light-Driving Photoconversion of CO2 Into Renewable Hydrocarbon Fuels

Authors : Yong Zhou, Congping Wu, Zhigang Zou

**Abstract :** With the rapid societal development, energy demand has increased exponentially and is mainly based on traditional and nonrenewable energy resources, such as petroleum, fossil fuels, and coal. The combustion of carbon-containing fuels releases a large amount of  $CO_2$ , causing the greenhouse effect that contribute to climate change. Photocatalytic  $CO_2$  reduction into solar fuels is a promising approach to simultaneously alleviate current energy and environmental issues. In this study, we report the synthesis of a series of atomically ultrathin 2D structures, which contain an ultrahigh fraction of surface atoms, benefitting for efficiency and selectivity regulation of the target products toward  $CO_2$  photoconversion.

Keywords : Photocatalysis, CO<sub>2</sub>, Solar fuels, Nanostructure

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