Special Issue

Photocatalytic CO_2 Reduction Utilizing Light Energy Effectively

Message from the Guest Editors

It has been known for years that photocatalysts can convert CO2 into fuel such as CO, CH4, CH3OH, and so on. Recent efforts have focused on developing photocatalytic CO2 reduction technology, which should be carbon-neutral to be successful and widely used. However, the amount of product available and conversion efficiency are both quite low, and there are certain significant barriers to solving this problem—for example, the lack of a source of light energy, which is necessary for photocatalytic CO2 reduction. If light energy can be used effectively, it is expected that the CO2 reduction performance of photocatalysts will be improved. Conversion efficiency, quantum efficiency, and wave length and intensity of light are also important factors. This Special Issue focuses on issues linked to CO2 reduction technology and research that addresses the problems preventing us from achieving this goal.

Keywords

- Photocatalyst
- CO2 reduction
- Visible light response
- Energy conversion
- Quantum efficiency

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