



# Das Institut für Optische Technologien lädt ein zum Kolloquiumsvortrag

Prof. Dr. Michael Bredol  
Prof. Dr. Thomas Jüstel  
Prof. Dr. Ulrich Kynast  
Prof. Dr. Konrad Mertens  
Dr. Stephanie Möller  
Prof. Dr. Ulrich Wittrock

[www.fh-muenster.de/iot](http://www.fh-muenster.de/iot)

## Photocatalytic CO<sub>2</sub> Reduction: Where to go from here?

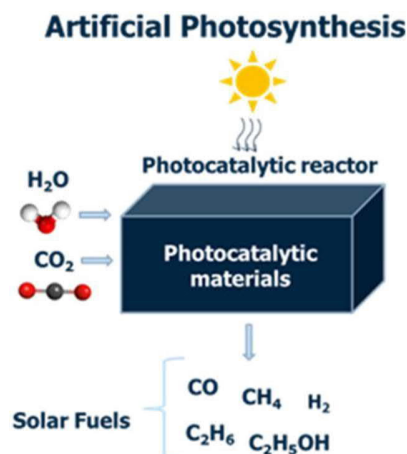
Prof. Dr. Jennifer Strunk

Leibniz Institute for Catalysis at the University of Rostock, Germany

Since the first reports on photocatalytic CO<sub>2</sub> reduction, research in this direction has been performed for almost 40 years now. The reaction allows not only to recycle CO<sub>2</sub>, but also to provide a source of renewable hydrocarbons. To evaluate the potential of photocatalytic CO<sub>2</sub> reduction, we conducted a thorough study on TiO<sub>2</sub> as model photocatalyst. Under conditions of highest purity it is demonstrated that continuous production of CH<sub>4</sub> from CO<sub>2</sub> as carbon source is truly possible. It is also verified that the reaction is indeed light-induced, but that it contains classical catalytic steps that are accelerated by higher temperature.

However, yields remain low, and product formation ceases after some time. The catalytic cycle is most likely not closed, since oxygen formation in the gas phase does not occur. Directions for future material and process development are suggested and discussed that bear the promise to realize photocatalytic CO<sub>2</sub> reduction on a larger scale in the future.

Einladender: Prof. Dr. Michael Bredol



Ort:  
Raum D 145  
(Gebäudeteil D, Parkplatz P3)  
Stegerwaldstraße 39  
48565 Steinfurt

Datum:  
Mittwoch, 22.01.2020

Uhrzeit:  
17.00 Uhr c.t.

