

## UniCat Special Lecture

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Lecturer: **Dr. Ekkehard Schwab**, Catalysis for Syngas  
Production and Processing, BASF SE, Ludwigshafen,  
Germany

Title: **Syngas - a key chemical for the storage of  
renewable energy**

Abstract: Mixtures of Hydrogen with either CO/CO<sub>2</sub> or Nitrogen are generally called synthesis gas. Historically they were first used for city-illumination and later heating and cooking purposes ("towngas"). By far the largest syngas users today are the Ammonia, Methanol, and Fischer Tropsch processes. A much smaller fraction is consumed in petrochemical processes like Hydroformylation or the production of Acetic Acid. Most syngas production processes are highly endothermic. Renewable energy sources for electricity like wind or solar are characterized by their fluctuating availability. These fluctuations are not in line with the demand side. For a stable energy supply, therefore storage devices are indispensable. Energy storage in chemical bonds appears to be the most attractive option for large energy volumes. Syngas in this context is an interesting intermediate at the interface between electricity and chemistry.

The talk will give an overview on the quantitative dimensions of the task and present an example for the development of a catalyst that might be used in this context in the future.

Date: **Wednesday, November 07, 2012**

Time: **5:15 pm - around 6:45 pm**

Location: **TU Berlin, Gerhard Ertl Center  
Marchstr. 6, 10587 Berlin  
Building BEL, Seminar Room BEL 301**

Organiser: **Dr. Frank Rosowski (UniCat-BASF Joint Lab)**

Coffee and tea will be served thirty minutes prior to the lecture start.  
**Guests are cordially invited to attend!**

Prof. Dr. Matthias Driess, Chair of the Cluster of Excellence UniCat