

# Colloquium on Chemical Reaction Engineering 2011 (CCRE-2011)

## “Chemical Reaction Engineering for Methane Valorization”



### second circular

October 10 – 11, 2011  
Technical University Munich  
Garching



event number 702

### How to convert methane into desired chemicals and fuels?

Paraffins, the name is derived from “parum affinis” or “barely reactive”, are known for their inertness, other than combustion into carbon dioxide and water. Methane in particular is a difficult molecule to convert into desired chemicals or fuels in an economically viable way. Synthesis gas ( $\text{CO} + \text{H}_2$ ) production is the only, present day implemented alternative to methane combustion. It requires huge production capacities, however, which do not match with the many stranded natural gas reserves nor with the amounts of biogas that can be reasonably produced from waste biomass.

Research activities, hence, focus on reaction and reactor engineering to enhance the selectivity, yields and stability in the conversion of methane into desired chemicals and fuels. Oxidative routes, such as direct conversion of methane to methanol, oxidative coupling of methane, as well as non oxidative routes, such as methane aromatization, are being explored and reported on. The quest for innovative catalysts through rational catalyst design is one route to pursue this success. The implementation of alternative reactor concepts, including microreactors and membrane reactors is another one.

### Target Audience:

(Junior) Scientists with a background in chemistry or chemical engineering sharing a common interest in reaction kinetics, catalysis and reactor design will find a unique opportunity in this colloquium to get in touch with experts in the field of methane valorization.

### fee and registration:

The registration fee includes all lunches, dinner, poster session and coffee breaks

<b>Regular</b> (early bird)	245 €
(from Sept. 26 <sup>th</sup> )	295 €
<b>Student</b>	150 €

To register please download the registration form from the colloquium website <http://users.UGent.be/~jthybaut/CCRE> and send the completed form no later than 25th September 2011 to Petra.Vereecken@UGent.be

## Colloquium Programme:

The colloquium brings together a selection of excellent speakers from academia and industry with a particular expertise in the exploitation of methane resources. The latter is not limited to (stranded) natural gas but also includes bio gas obtained from fermentation of waste biomass. An overview of the state of the art in methane valorization as well as of the current and future challenges to be addressed is included in the program

### Confirmed speakers:

Claude Mirodatos (IRCElyon, France)  
Enrico Tronconi (Polimi, Italy)  
Anders Holmen (NTNU, Norway)  
Johannes Lercher (TUM, Germany)  
Ganpiero Groppi (Polimi, Italy)  
Tom Remans (Shell, The Netherlands)

### Poster session:

Attendees are invited to present their work in a poster session. Oral flash introductions (5 min. max) to the posters are accounted for in the schedule. Prize(s) are foreseen for the best poster(s).

A midday to midday schedule is implemented to allow attendees comfortable travelling with spending one night in Munich. Sandwich lunches are foreseen upon arrival and departure. On Monday evening, a dinner in down town Munich is included.

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## Venue:

The colloquium is organized at the premises of the Technical University Munich. It is located in Garching, between Munich airport and the city centre. How to reach the venue is explained on the colloquium web-site

### Recommended hotels

- Hotel König Ludwig (Garching)
  - o [http://www.hkl.de/index\\_e.html](http://www.hkl.de/index_e.html)
- ETAP hotel (Garching Hochbrück)
  - o <http://www.etaphotel.com/>

The colloquium on

“Chemical Reaction Engineering for Methane Valorization”

is organised by

Dr. André van Veen (TUM)  
Prof. Joris W. Thybaut (UGent)  
Prof. Kai-Olaf Hinrichsen (TUM)  
Prof. Guy B. Marin (UGent)  
Prof. Leslaw Mleczko (BTS)



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Munich panorama photograph kindly provided by David Kostner