

Workshop



Upgrading of biologically produced gases

September 24th, 2010

Place: Nell-Breuning-Haus
Wiesenstraße 17
52134 Herzogenrath
Germany
www.nbh.de

Costs: 50 € per person (incl. lunch, beverages)

Registration: until **September 6th, 2010**
by e-mail to Jakub Gebicki (jakub.gebicki@avt.rwth-aachen.de)

Description:

Gas separation technologies are state-of-the-art in chemical industry for many decades. The application of the same technologies is not necessarily the best way for separation of biologically produced gases from the energetic point of view.

The boundary conditions of chemical and biological processes for gas upgrading differ mainly in temperature and pressure. State-of-the-art adsorption and membrane processes are able to use the available gas pressure which is energetically beneficial while biologically produced gas must be compressed before. Furthermore, the volume flow and concentration can fluctuate if sunlight is used for biosolar hydrogen production. The gas upgrading must be able to handle this.

The workshop deals with the most promising gas separation technologies for biologically produced gases e.g. membrane processes, absorption and membrane contactors, a combination of absorption and membrane process. The workshop will give an overview over

- The principle and application of promising state-of-the-art and new gas separation technologies (absorption, membrane processes and membrane contactors)
- Biogas upgrading for grid-injection
- Upscaling of CO₂-selective membranes
- Membrane materials (polymers, ceramics) for different gas separation tasks

Programme:

Thursday, September 23rd, 2010

19⁰⁰ – 20⁰⁰ **Registration**

18⁰⁰ – 22⁰⁰ **Get-together**

Friday, September 24th, 2010

8³⁰ – 9¹⁵ **Registration**

9¹⁵ – 9⁴⁵ **Welcome**
Prof. Dr.-Ing. M. Modigell (AVT.MVT)

9⁴⁵ – 10³⁰ **Upgrading of biogas for grid injection**
Dr.-Ing. Ernst Murnleitner (AWITE Bioenergie GmbH)

10³⁰ – 11⁰⁰ *Coffee break*

11⁰⁰ – 11⁴⁵ **Absorption processes for gas separation**
Hugo Garcia (BASF SE)

11⁴⁵ – 12³⁰ **CO₂-selective membranes - from laboratory development to industrial application**
GMT Membrantechnik GmbH

12³⁰ – 14⁰⁰ *Lunch*

14⁰⁰ – 14⁴⁵ **Ceramic membranes for gas upgrading processes**
Dr.-Ing. Ingolf Voigt (Hermsdorfer Institut für Technische Keramik e.V.)

14⁴⁵ – 15³⁰ **Scale up and long term performance of a membrane based biogas upgrading for grid injection**
DI Dr. Michael Harasek (TU Wien)

15³⁰ – 16⁰⁰ *Coffee break*

16⁰⁰ – 16⁴⁵ **Membrane contactor for biogas separation**
Prof. Dr. Sci. Vladimir Teplyakov (A.V. Topchiev Institute of Petrochemical synthesis, RAS)

16⁴⁵ – 17⁰⁰ **Closure**
Prof. Dr.-Ing. M. Modigell (AVT.MVT)

How to find us

via A 44 (direction north)
exit Broichweiden-
Herzogenrath

via A 4 (direction west)
exit Laurenberg – Richterich

from direction Aachen
exit road Roermonder Straße
direction Herzogenrath –
Geilenkirchen

from direction Heinsberg/B221
via Merkstein to Herzogenrath
passage route direction Aachen



in Herzogenrath-Citycenter there is
sinage from all driving directions to
Oswald - von - Nell - Breuning -
Haus.

From train station by foot
from train station right down to
Kleikstraße, cross Kleikstraße and
head right down to pedestrian zone,
and cross Ferdinand-Schmetz-Platz
(pedestrian zone) and head to post
office (Adalbert-Steiner-Straße),
straight over crossing the crossroads
to Wiesenstraße.



In Düsseldorf main stations
there are trains departing every 60
minutes

In Aachen main station
there are trains departing every 30
minutes.

In Köln main station
there are trains departing every 15-30
minutes

