

The interactive course

Design and Optimisation of Catalytic Processes: From Laboratory Experiments to Design of Industrial Reactors

is organised by



and kindly supported by

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Programme



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DG Research



through the
IP TOPCOMBI



Course fee and registration

The total number of participants is limited to 24 to maximise the benefit for the participants.

Course Fee 395 € (no VAT requested)

The course fee includes the course, course material, breaks and lunches at the university campus.

To register please download the registration form from the TOPCOMBI website <http://www.topcombi.org/> and send the completed form no later than **15th November 2009** to

DECHEMA e.V. Phone: +49 69 7564 239
Monika Locherer Fax: +49 69 7564 117
Theodor-Heuss-Allee 25 E-mail:
D-60486 Frankfurt locherer@dechema.de
Germany

Registrations will be accepted and confirmed according to their date of receipt. Payment has to be effected in advance.

Accommodation

It is recommended to book accommodation at the

Express By Holiday Inn Phone: +32-9-2225885
AKKERHAGE 2 Fax: +32-9-2201222
GHENT Email:
9000 BELGIUM hotel@hiexgent.be

A block reservation has been made for the participants of the course at a special rate of 95 € (+ 2,50) per room including breakfast.

To get these conditions, rooms can be booked using the reservation code **5786**. Remember to book before 15th December 2009.



Interactive Course

Design and Optimisation of Catalytic Processes: From Laboratory Experiments to Design of Industrial Reactors



11.-15.1.2010

**Laboratory for Chemical Technology
Ghent University (Belgium)**

Do you have what it takes to bring a chemical process to industrial scale?

To scale-up a chemical process successfully from laboratory to industrial scale is arguably the most essential Know-How of the (petro-) chemical and pharmaceutical process industries.

Beyond the sound knowledge base of each person, the efficient interdisciplinary interaction between the different knowledge areas involved is critical.

However, this framework of constraints and opportunities can not be taught in the classroom.

This hands-on interactive course is especially designed to recreate the industrial process development environment.

As part of an interdisciplinary team of chemists and chemical engineers the participants build the case for the scale-up of the chemical process of catalytic hydroisomerisation of alkanes in simulations, laboratory and pilot plant experiments.

Experienced mentors will support the development and application of strategies for optimisation priorities, rigorous quality control, realistic economic evaluation and efficient project management under time and cost pressure.

This complex and challenging task will be achieved by successful and target-oriented interaction of the participants and interchange, evaluation and validation of information from all accessible sources.

Target Group:

This interactive course is open to interested junior scientists from industry or master / doctorate students from academia with a background in chemical engineering or chemistry.

Course Programme:

The course is based on a new concept, emphasising hands-on involvement and teamwork over theoretical teaching. The process will be developed in parallel and interlinked by the participants in laboratory experiments, simulations and pilot plant trials.

Monday, 11.1.2010 (Lectures)

Hydroisomerisation of alkanes
Basics of industrial scale-up
Catalyst synthesis and optimisation
Data requirements and kinetic simulation
Engineering requirements
Economic aspects of industrial scale-up

Tuesday, 12.1. 2010 (Teamwork)

Introduction into laboratory, simulation and pilot plant procedures
Write operational manuals
Carry out laboratory experiments, operate pilot plant and simulate process on standard conditions
Develop strategies for

- Optimising process conditions
- Rigorous quality control
- Economic evaluation
- Efficient project management

Wednesday, 13.1.2010 and Thursday, 14.1.2010 (Teamwork)

- Laboratory experiments, pilot plant trials and simulations to validate applicability and verify transferability of respective data within standard conditions and at operative limits.
- Application and documentation of progress of developed strategies to the process.

Friday, 15.1.2010 (Teamwork/Debriefing)

Discussion and documentation of progress and results within teams, presentations and final discussions. Feedback on the course.

Location:

Laboratory for Chemical Technology
Krijgslaan 281
9000 Gent
Belgium

By train: go to Gent Sint-Pieters station
From Gent Sint-Pieters train station to Campus Sterre

- Take tramway (De Lijn) line 21 or 22, direction Zwijnaarde
- Exit tramway at stop "Krijgslaan"
- Cross the Krijgslaan (avenue) and enter the Campus Sterre
- Follow road signs "S5 - Chemische Proceskunde en Technische Chemie"



Ghent was founded at the confluence of two rivers, the Leie and the Scheldt in 630 a. c. Ghent was during the middle-ages one of the most important towns in Europe. It was known for its rich merchants and the stubbornness of its townsfolk, rising against virtually any ruler in its history. Nowadays, Ghent remains an important city in Belgium, embracing its past, being firmly set in the present and looking towards the future, of which the university is a good example.