European Federation of Chemical Engineering

2nd Working Party on Polymer Reaction Engineering

Hamburg, May 24th to 26th 2013

Invitation

Dear company representatives, professors and PhD-students,

the 2nd Working Party on Polymer Reaction Engineering to be held in **Hamburg from May 24th to 26th** presents a platform for young and motivated scientists to exchange and discuss recent research and to get into contact with interesting companies and possible employers.

After the successful kick-off in Lyon, we were able to extend the scope of research fields, participating universities and industry representatives. Over 30 PhDs will present their research results in oral presentations and poster contributions covering all fields of Polymer Reaction Engineering:

- Emulsion polymerization
- Polymerization kinetics
- Modeling of polymerizations
- Reaction-plants
- Gas-phase polymerizations
- Polymer morphology

We are looking forward to seeing you in Hamburg

The organizing committee

Sponsors

SULZER

BASF The Chemical Company

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WILEY-VCH

Organizing Committee

Markus Busch (Chair of WPPRE, TU Darmstadt)
Werner Pauer (Secretary of WPPRE, University Hamburg)
Annelie Halfar (University Hamburg)
Claudia Schwartzkopff (TU Darmstadt)
Isabel Kadel (TU Darmstadt)

Contact

For further information please contact:
wppre@chemie.tu-darmstadt.de

Homepage

http://events.dechema.de/pre2013

TECHNISCHE UNIVERSITÄT DARMSTADT

UHH Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

European Federation of Chemical Engineering

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Hamburg, May 24th to 26th 2013

Program

Friday, 24th May

13:00-14:00 **Registration at the conference site**
Poster wall preparation

Session I
Chair: Annelie Halfar (University of Hamburg)

14:00-14:20 **Stefano Lazzari** (ETH Zürich)
Modeling Multiradicals in Bulk Crosslinking Copolymerisation

14:20-14:40 **Calista Preusser** (Queen's University)
Developing a Model for the Aqueous Phase Copolymerisation of Acrylic Acid and Acrylamide

14:40-15:00 **David Eckes** (TU Darmstadt)
Modelling the Microstructure of Ethylene Vinyl Acetate Copolymers considering Different Types of Short Chain Branches

15:00-15:20 **Shaghayegh Hamzehlou** (University of Basque Country)
Copolymerization of N-Butyl Acrylate and Styrene: Terminal vs. Penultimate Model and the Effect of Backbiting

15:20-16:30 **Coffee Break and Poster Session**

Session II
Chair: Thomas Kröner (University of Halle)

16:30-16:50 **Paul H. M. Van Steenberge** (Ghent University)
Efficient Stochastic Calculation of the Chemical Composition – Chain Length Distribution accounting for Possible Diffusional Limitations

16:50-17:10 **Nazila Yaghini** (University of Amsterdam)
2-D-Molecular Weight Distribution Modeling for Topological Scission

17:10-17:30 **Ágnes Bárkányi** (University of Pannonia)
Effects of Droplet Interactions on Polymer Properties in Suspension Polymerization of Vinyl Chloride. A Simulation Study.

17:30-17:50 **Arash Alizadeh** (University of Lyon I)
Modeling of Time Scale for Vaporization of Liquid Droplets during Condensed Mode Operation of Ethylene Polymerization in FBRs

19:00 **Dinner**
Ristorante Terzetto

The dinner is kindly sponsored by

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Saturday, 25th May

Session III

Chair: Tom Jansen (Eindhoven University of Technology)

08:00-08:20	**Kevin A. Payne** (Queen's University) *ARGET ATRP: A Systematic Investigation of Limitations at Low Copper Levels*
08:20-08:40	**Dambarudhar Parida** (University of Strasbourg) *Effect of Microreactor Geometry and Operating Parameters on ATRP Processes*
08:40-09:00	**Thomas Kröner** (University of Halle) *Model-based Transfer of Free Radical Copolymerisation from Batch to Continuous Operation*
09:00-09:20	**Dhiraj K. Garg** (University of Strasbourg) *Analytical Solution of FPR for Constant Volume, Isothermal, Well-mixed Batch Reactor and its Application*
09:20-10:30	**Coffee Break and Poster Session**

Session IV

Chair: Michal Vonka (Institute of Chemical Technology Prague)

10:30-10:50	**Jone Urrutia** (University of the Basque Country) *Fouling in Emulsion Polymerization Reactors*
10:50-11:10	**Amaia Agirre**(University of the Basque Country) *Continuous Production of Vinyl-Acetate – Veova 10*
11:10-11:30	**Tom Jansen** (Eindhoven University of Technology) *Mass Transfer and Particle Size Conservation in Miniemulsion Polymerization*
11:30-11:50	**Barthélémy Brunier** (University of Lyon) *Evaluation of Laponite Partitioning in Pickering Emulsion Polymerization*
12:00-13:30	**Lunch** Café SternChance

The lunch is kindly sponsored by

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Saturday, 25th May

Session V

Chair: Amaia Agirre (University of the Basque Country)

13:30-13:50 **Alexandr Zubov** (Institute of Chemical Technology Prague)
Meso-scale Modeling of Transport and Reaction in Reconstructed Porous Polyolefin Particles

13:50-14:10 **Richard Pokorný** (Institute of Chemical Technology Prague)
Mathematical Modelling of Heat Transfer in Polymer Foams: Morphology Optimization

14:10-14:30 **Andra Nistor** (Institute of Chemical Technology Prague)
Systematic Investigation of Micro-Cellular Polystyrene Foams Prepared with High-pressure CO_2

14:30-15:00 **Coffee Break and Poster Session**

Session VI

Chair: Claudia Schwartzkopff (TU Darmstadt)

15:00-15:20 **Joana Kettner** (University of Halle)
Influence of Temperature and Catalyst Injection Procedure on Gas-Phase Polymerization of Propylene

15:20-15:40 **Leonhard Mayrhofer** (Johannes Kepler University)
Investigation of Single Particle Gas-Phase Ethylene Homo-Polymerization with Ziegler-Natta Catalyst

15:40-16:00 **Thomas Hoechfurtner** (Johannes Kepler University)
Kinetic Studies of the Influence of Different Al-Alkyls on the Polymerization of Ethene with Ziegler-Natta catalyst

16:00-16:30 **Coffee Break and Poster Session**

16:30-16:40 **Wiley prize for best contribution**

16:40-17:15 **Miran Milosevic** (Sabic Europe)
Entering SABIC with Education in Chemical Engineering

17:15-18:15 **Labtour (optional)**

18:30 **Barbecue at the Institute**

The best contribution prize is kindly sponsored by

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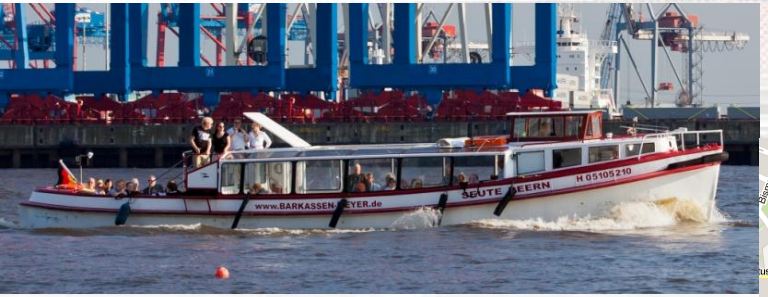
Sunday, 26th May

Meeting Point	10:45 at St. Pauli Landungsbrücken, Bridge 2
11:00-13:00	**Boat trip through Hamburg**
13:00-14:30	**Lunch** *Fischrestaurant Hoppe*
14:30	**Departure / Free time**



Boat trip and lunch are kindly sponsored by

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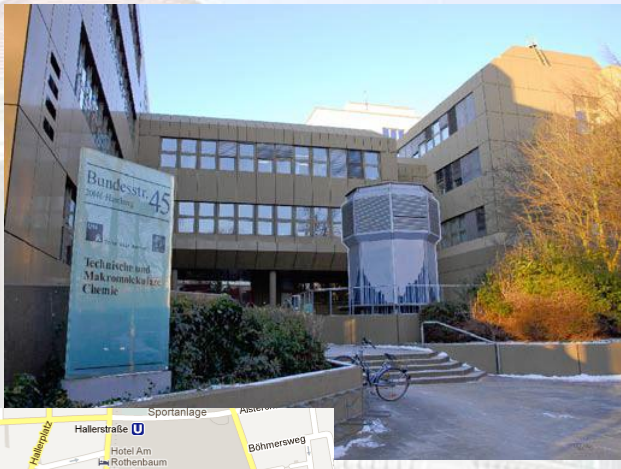
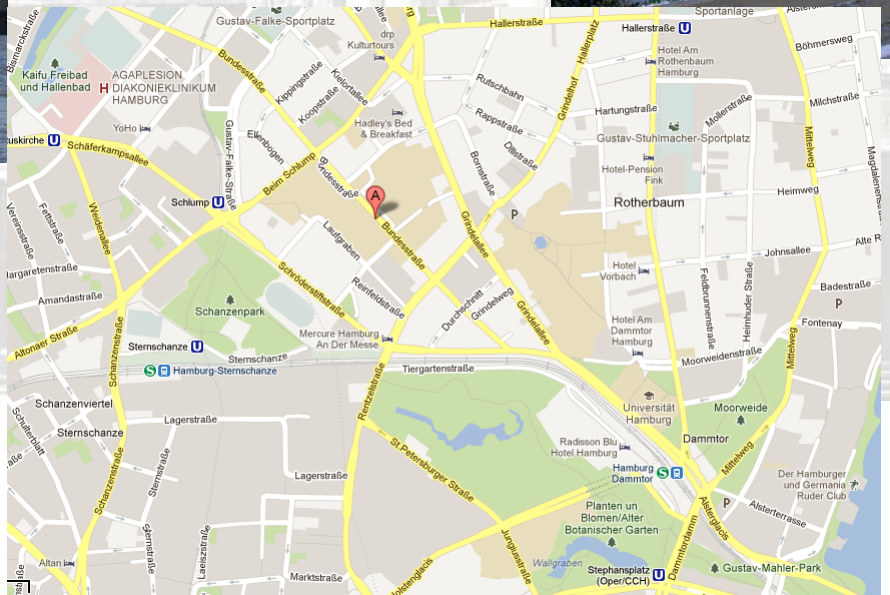
The Chemical Company

Conference site

Institut für Technische und Makromolekulare Chemie
Room 39
Bundesstr. 45
20146 Hamburg

From Hamburg central station, take the subway line U2 to Schlump. From there, it is about 5 minutes to walk.





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Posterlist:

1. **Advantages of Milli-Structured PTFE-Tubular Reactors for Continuous Emulsion Polymerization Reactors**
   Fabian Lüth, University Hamburg

2. **Suspension polymerization modelled by coupled CFD and population balances**
   Michal Vonka, Institute of Chemical Technology Prague

3. **Modeling of compartmentalization effects in technical high-pressure autoclaves**
   Sebastian Fries, TU Darmstadt

4. **A realistic model of topological scission in LDPE molecular weight distribution**
   Nazila Yaghini, University of Amsterdam

5. **Meso-scale Modeling of Transport and Reaction in Reconstructed Porous Polyolefin Particles**
   Alexandr Zubov, Institute of Chemical Technology Prague,

6. **A kinetic Monte Carlo methodology for tracking monomer sequences in copolymers**
   Paul H. M. Van Steenberge, Ghent University

7. **Modelling the Microstructure of Ethylene Vinyl Acetate Copolymers considering Different Types of Short Chain Branches**
   David Eckes, TU Darmstadt

8. **Modeling of Time Scale for Vaporization of Liquid Droplets during Condensed Mode Operation of Ethylene Polymerization in FBRs**
   Arash Alizadeh, University of Lyon I

9. **Modelling and Simulation of Droplet Interactions in Suspension Polymerization of Vinyl Chloride Using Population Balance Model**
   Ágnes Bárkányi, University of Pannonia, Hungary

10. **Micro- and nano-cellular polymer foams: preparation and heat transport modelling**
    Richard Pokorný and Andra Nistor, Institute of Chemical Technology Prague

11. **Developing a Model for the Aqueous Phase Copolymerisation of Acrylic Acid and Acrylamide**
    Calista Preusser, Queen's University, Canada

12. **Model-based Transfer of Free Radical Copolymerisation from Batch to Continous Operation**
    Thomas Kröner, University of Halle, Germany

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Posterlist:

13. **Crosslinking Copolymerization by Monte Carlo Simulation: Multiradical Consideration**
Shaghayegh Hamzehlou, University of the Basque Country, Spain

14. **Influence of Temperature and Catalyst Injection Procedure on Gas-Phase Polymerization of Propylene**
Joana Kettner, University of Halle, Germany

15. **Fouling in Emulsion Polymerization Reactors**
Jone Urrutia, University of the Basque Country, Spain

16. **Kinetic Studies of the Influence of different Al-Alkyls on the Polymerization of Ethene with Ziegler-Natta catalyst**
Thomas Höchfurtner, Johannes Kepler University, Austria

17. **Kinetic study of single particle gas-phase ethylene homo-polymerization with Ziegler- Natta catalyst**
Leonhard Mayrhofer, Johannes Kepler University, Austria

18. **Kinetics of Free-Radical Crosslinking Polymerization: a Comparative Experimental and Numerical Study**
Stefano Lazzari, ETH Zürich, Switzerland

19. **Analytical solution of FRP for constant volume, isothermal, well mixed batch reactor and its applications**
Dhiraj K. Garg, University of Strasbourg, France

20. **A Clean Synthetic Route to Medical Grade Biodegradable Polymers - Enzymatic Polymerization using Supercritical Dioxide as Reaction Medium**
Christian Schmidt, Clausthal University of Technology, Germany

21. **Continuous production of Vinyl Acetate-Veova 10**
Amaia Agirre, University of the Basque Country, Spain