



DECHEMA



## PRAXISforum

27 – 28 Apr 2016

Frankfurt/Main, Germany



# Future Production Concepts in Chemical Industry

The flagship event for industry delegates and solution providers.

[www.dechema.de/FutureProduction](http://www.dechema.de/FutureProduction)

## The DECHEMA PRAXISforum

In the last years chemical and pharmaceutical industry companies are working on two major production concepts to further improve their production of chemicals, drugs, materials or biotechnology products: continuous-flow and modularized production. The general goal of these activities is to produce faster, with a higher quality and in a less wasteful manner.

Due to globalized and volatile markets, reduction of time-to-market is as essential as safe, resource-efficient and flexible production. The chemical industry is facing an increasing demand from fast growing and vibrant markets as China, India or Brazil (maybe not as strong as expected, but still reasonable) and a trend to customized specialty and fine chemicals. This leads to high product varieties which are produced either in small amounts or in over hundred tons per year.

But what are the advantages and disadvantages of continuous production processes and modularized production systems? Are these production concepts really helpful for the whole industry, or are they only fit to the production of bulk chemicals? Could the chemical and pharmaceutical industry adapt models of automotive industry supply chains by applying these concepts? And finally, will it be the future standard in chemical process industry?

All these questions will be discussed at the DECHEMA PRAXISforum “Future Production Concepts in Chemical Industry”.

The PRAXISforum brings together industry experts in continuous processing and modularized plant systems and suppliers to discuss and exchange ideas, best practices and lessons learned from last year’s implementation and development projects. At the same time participants can present their needs and future requirements in direct exchange with suppliers of technologies, services and products. As well as a forum for the networking of experts who deal with similar issues both across all industries and along the value chain, the PRAXISforum acts as a B2B platform.

### Are you an industry or SME delegate?

Visit the PRAXISforum and discuss your problems, ideas and solutions with experts on future production concepts!

### Are you a “Solution Provider”?

Be part of the exhibition. This is a great way to personally get in touch with your target group and to understand a customer’s needs from their perspective. The number of exhibitors is strictly limited!

**We look forward to welcoming you in Frankfurt/Main!**



**Wednesday, 27 April 2016**

Time	Topic	Speaker
9:30	<b>Registration, Opening of exhibition</b>	
11:00	<b>Opening and welcome address</b>	A. Förster / Head of Research Management and Conferences DECHEMA e.V., Germany
11:10	<i>Impulse</i> <b>Multi-stage continuous processing to APIs - what have we learnt along the way?</b> <ul style="list-style-type: none"> <li>• What have we done over the last 15 years?</li> <li>• Example of our workflow</li> <li>• How we chose molecules as candidates for continuous processing?</li> <li>• Project examples</li> </ul>	M. Berry / Director of Chemistry, Second Generation Processes, R&D GlaxoSmithKline, United Kingdom
12:00	<i>Impulse</i> <b>Transformable Production Concepts: Flexible, Mobile, Decentralized, Modular, Fast</b> <ul style="list-style-type: none"> <li>• Challenges for the Process Industry</li> <li>• Vision, Discussion and Evaluation of Transformable Production</li> <li>• Logistics, Supply Chain Management and Business Models of Transformable Production</li> </ul>	S. Lier / Head of Working Group Transformable Production and Logistics concepts Ruhr University Bochum, Germany
12:45	<b>Lunch and networking at exhibition floor, Interactive discussion @ „topic tables“</b>	

Time	Topic	Speaker
14:15	<b>Realizing the Future with Small Scale Modular Plants for Continuous Manufacturing</b> <ul style="list-style-type: none"> <li>• An overview of current small scale modular plants will be given</li> <li>• The potentials and barriers for small scale modular plants</li> <li>• Are modular plants disruptive enough to make the change?</li> </ul>	J. ter Harmsel / Managing Director Zeton B.V., The Netherlands
14:45	<b>Viability of Flow Processing as a Manufacturing Platform - Trends and Prospects from a Pharmaceutical Industry Perspective</b> <ul style="list-style-type: none"> <li>• The historical context</li> <li>• Current strategy and approach</li> <li>• Illustrative examples and benefits</li> <li>• Outlook</li> </ul>	H.-J. Federsel / Senior Principal Scientist, Chemical Development AstraZeneca, United Kingdom

## Wednesday, 27 April 2016

Time	Topic	Speaker
15:15	<p><i>Tandem talk</i></p> <p><b>Towards modularization and standardization of chemical production units: status quo, development needs, and current activities</b></p> <ul style="list-style-type: none"> <li>• Due to changing market requirements in chemical industry process &amp; production technology needs to be adapted. New technology trends (Industry 4.0) will be an important enabler to reach this goal.</li> <li>• Modularization &amp; standardization is one technology driven approach that is followed by the German chemical companies</li> <li>• The status quo of current development in that field is presented as well as there will future needs be discussed from an industry point of view</li> </ul>	<p>D. Schmalz / Head of Process Technologies - Engineering Merck, Germany</p> <p>F. Stenger / Group Head Chemical Reaction Technology Evonik, Germany</p> <p><i>Co-Authors: A. Brodhagen (BASF SE), A. Schweiger (INVITE), T. Bieringer (BTS), Ch. Dreiser (Clariant)</i></p>
15:55	<p><b>Interactive networking and discussion @ „topic tables“, Exhibition Walkthrough</b></p>	

Time	Topic	Speaker
17:20	<p><b>Pre-Competitive Process Development @ INVITE</b></p> <ul style="list-style-type: none"> <li>• Trends in Pharmaceutical Production</li> <li>• Factory of the Future?</li> <li>• Modularization through Standardization</li> </ul>	<p>A. Schweiger / CEO INVITE, Germany</p>
17:50	<p><b>Implementation of continuous flow processes in cGMP environments</b></p> <ul style="list-style-type: none"> <li>• today's role of pharmaceutical contract manufacturers</li> <li>• linking process understanding, process control and product quality to continuous manufacturing (with examples)</li> <li>• implementing continuous analytics</li> </ul>	<p>P. Pöchlauer / Innovation Manager Patheon, Austria</p>
18:20	<p><b>Chemical Process Development and Small-scale Production in Multipurpose Plants with Modular Equipment</b></p> <ul style="list-style-type: none"> <li>• Continuous flow processes</li> <li>• Modular setup of equipment and plants</li> <li>• Process development for entire life cycle</li> <li>• Equipment toolbox with consistent scale-up</li> </ul>	<p>N. Kockmann / Lehrstuhl für Apparatedesign TU Dortmund, Germany</p>
18:50	<p><b>Networking Dinner at exhibition floor, Interactive networking and discussion @ „topic tables“</b></p>	
22:00	<p><b>End of first PRAXISforum day</b></p>	

## Thursday, 28 April 2016

8:45 Re-Opening exhibition

Time	Topic	Speaker
09:30	<b>Small-scale flexible plants - drivers, business models, technology and future directions</b> <ul style="list-style-type: none"> <li>• more following soon</li> </ul>	M. de Graaff / Senior Business Developer TNO, The Netherlands
10:00	<b>Flow Chemistry! A modular production concept for specialty chemistry business</b> <ul style="list-style-type: none"> <li>• How can you approach a flow chemistry introduction in a multipurpose production environment?</li> <li>• Building up a platform technology for the development of new processes is the key for new success stories</li> <li>• The future will expand the modular concept to down streaming units</li> </ul>	S. Härtner / Senior Development Manager Merck, Germany
10:30	<b>Continuous Flow Reactors: An Opportunity for Discovery, Process Development &amp; Production?</b> <ul style="list-style-type: none"> <li>• Overview of flow reactor use within discovery, process R&amp;D and material manufacturing</li> <li>• Opportunities &amp; drivers at each scale</li> <li>• Advanced ceramics as a reactor material</li> <li>• Case studies of industrial applications</li> </ul>	C. Willes / CEO Chemtrix, The Netherlands
11:00	<b>Interactive networking and discussion @ „topic tables“, Exhibition Walkthrough</b>	

Time	Topic	Speaker
12:15	<b>Migration strategies in R&amp;D</b> <ul style="list-style-type: none"> <li>• Migration from R&amp;D units via pilot-scale to production scale</li> <li>• Cellular design, manufacturing and automation of research plants</li> <li>• Mobile Package Pilot Plants designed for scale-up and on-site production</li> <li>• Decentralized robotic platform for formulation research prepared for Industry 4.0</li> </ul>	A. Müller / Leader Project Management hte, Germany

## Thursday, 28 April 2016

Time	Topic	Speaker
12:45	<b>Continuous liquid – liquid extraction / separation with CINC centrifugal extractors</b> <ul style="list-style-type: none"> <li>• Turning Batch into continuous processes</li> <li>• Lab scale piloting</li> <li>• Scale up</li> <li>• Start up</li> </ul>	M. Vornefeld / CEO CINC, Germany
13:15	<b>Working title: „Micro4Chemistry“</b> <ul style="list-style-type: none"> <li>• more following soon</li> </ul>	P. Löb / Deputy Head of Division Energy and Chemical Technology Fraunhofer ICT-IMM, Germany
13:45	<b>Lunch at exhibition floor, interactive networking and discussion @ „topic tables“, informal drinks</b>	
15:00	<b>End of PRAXISforum</b>	



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## Topic tables

At the topic tables you can discuss specific questions, developments, challenges and their solutions with our speakers. In every break you can find the experts from the prior session at an indicated topic table within the exhibition area. Are you just getting started with future production concepts? You want to discuss your question in a smaller group? You don't agree with the statement given by the speaker? - Make your way to our topic tables!

### Topic table hours:

27 Apr 2016: 12:45 – 14:15, 15:55 - 17:20 and 18:50 – 20:00

28 Apr 2016: 11:00 – 12:15 and 13:45 – 15:00



## Exhibition

The exhibition, which is an integral part of the PRAXISforum, offers a unique opportunity to promote your technologies, products and services.

**Are you a “solution provider” in the field of continuous processing and manufacturing or modularized plant systems and would like to actively contribute to this PRAXISforum?**

Book your exhibition package now and benefit from exclusive networking opportunities, meet existing and prospective customers and build new business relationships.

As stand space is limited, the distribution is based on the principle “First come, first served”.

## Registration

Tickets	Members <sup>1</sup>	Regular
Full ticket 2-days <sup>2</sup>	<b>675 EUR</b>	<b>690 EUR</b>

All prices are quoted excl. 19% VAT

Please register online via our PRAXISforum website: [www.dechema.de/praxisforum](http://www.dechema.de/praxisforum).

<sup>1</sup>) DECHEMA personal members

<sup>2</sup>) Registration fees incl. full entrance to all presentations and exhibition, food and beverages (incl. networking dinner on 28 April 2016)

## Venue

DECHEMA-House  
Theodor-Heuss-Allee 25  
D-60486 Frankfurt/Main  
Germany

## Accommodation

We reserved a contingent of rooms at the following hotels.  
Please book yourself using the mentioned booking code.

### Maritim Hotel Frankfurt (2 min walk from venue)

Theodor-Heuss-Allee 3  
D-60486 Frankfurt am Main  
Tel.: +49 69 75 78-1130  
E-Mail: [reservierung.fra@maritim.de](mailto:reservierung.fra@maritim.de)

Single room: around 100 EUR (incl. breakfast and internet)  
Booking code: please contact the event office for the Maritim booking code

### Mercure Hotel (10 min walk from venue)

Voltastr. 29  
D-60486 Frankfurt am Main  
Phone: +49 69 7926 0  
E-Mail: [H1204@accor.com](mailto:H1204@accor.com)

Single room: 101,60 EUR (incl. breakfast and WiFi)  
Booking code: DECHEMA

### Any questions?

**Dr. Björn Mathes**  
Head of PRAXISforums

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## How to get to DECHEMA



### By public transport

From Frankfurt Airport

- approx. 20 min. by taxi
- S-Bahn: S 8, S 9 (line 8 or 9) to the main station (Hauptbahnhof), change to S 3, S 4, S 5 or S-6 (platform 104, underground) to the station Messe, exit Theodor-Heuss-Allee / Festhalle

From the main railway station (Hauptbahnhof)

- approx. 20 min. walk
- approx. 10 min. by taxi
- S-Bahn: S 3, S 4, S 5 or S 6 (platform 104, underground) to the station Messe, Exit Theodor-Heuss-Allee / Festhalle
- Underground: line U 4 (line 4) direction Bockenheimer Warte to the station Messe, Exit Festhalle and 10 min. walk
- tram/streetcar line 16 or 17 to the stop Varrentrappstraße and 10 min. walk

### By car

Via Autobahn/Westkreuz to Frankfurt Stadtmitte, turn right at first traffic light after the railway bridge

From the city centre in direction Messe (exhibition grounds), on the Theodor-Heuss-Allee first left-hand turn-off lane before the railway bridge

Entrance Varrentrappstraße

**The area of DECHEMA is part of the low emission zone (Umweltzone) in Frankfurt. Only vehicles displaying an appropriate badge on their windscreen will be allowed to enter the low emission zone.**

**Information: [www.umweltzone.frankfurt.de](http://www.umweltzone.frankfurt.de)**



**DECHEMA**



**Don't hesitate to contact us for further information!**

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