

BioProScale Symposium

Inhomogeneities in large-scale bioreactors

Description – scaling – control

**24 to 27 November 2009
Berlin – Germany**

- **Mixing in large-scale bioreactors**
- **Cell physiology in large scale bioprocesses**
- **Sensors and sampling in large scale bioprocesses**
- **Computational tools
(softsensors, 2D and 3D modeling,
software for scale-up/scale-down)**
- **Small-scale laboratory simulators
of the large scale**

Language: English

**Institute for Biotechnology and Fermentation in Berlin (IfGB)
Seestrasse 13, 13353 Berlin, Germany**

IfGB



**Institute
for Biotechnology and
Fermentation in Berlin**



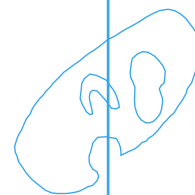
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cooperation
with**



Bioproscale Symposium – first announcement

Inhomogeneities in large-scale bioreactors

Description – scaling – control



■ Organizers

Technische Universität Berlin, Department of Bioprocess Technology, and Institute for Biotechnology and Fermentation in Berlin (IfGB) in cooperation with BioProScale

■ Conference days

November 24 – 27, 2009

■ Opening session and welcome reception

November 24, 2009

■ Location

Berlin, Germany

■ Target groups

Producers of biogas and enzymes, antibiotic production, bioprocess development, pharmaceutical bioprocesses, brewery processes – experts from research & development and industrial practice

■ Aim

Large scale bioprocesses are non-homogenous systems which are generally characterized by lower biomass yield and different metabolic rates if compared to small scale laboratory processes. Various approaches have been undertaken in the past to characterize large scale bioreactors, to understand the biology of large-scale systems, to develop 2D and 3D computational models and tools to simulate such processes in laboratory scale.

The aim of this symposium is to bring stakeholders which work with different large-scale bioprocesses (e.g. biogas, brewing, enzymes and metabolite production, pharma) together to discuss their experiences and research needs.

■ Contact

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■ Exhibition and sponsoring

For accompanying exhibition and sponsoring opportunities please contact
IfGB, Olaf Hendel, hendel@vlb-berlin.org

■ Keynote presenters

Alvin Nienow (Emeritus Professor of Biochemical Engineering, The University of Birmingham, UK):
Mixing in large scale bioprocesses

Sven-Olof Enfors (School of Biotechnology, Royal Institute of Technology KTH, Stockholm, Sweden):
Cell physiology in large scale bioprocesses

Matthias Reuss (Univ. Stuttgart, DE):
Modeling the heterogeneity of microbial metabolism in large scale bioreactors

■ Confirmed presentations

Henk Noorman (Corporate Scientist Bioprocess Technology, DSM, The Netherlands):
Large-scale bioprocesses in the enzyme producing industries - state of the art and needs.

Frank Delvigne (Centre Wallon de Biologie Industrielle, Unité de BioIndustrie, Gembloux, Belgium):
Bioprocess scale up – tracking the informations relevant for up-scaling by GFP reporter strains.

Chris Hewitt (Department of Chemical Engineering, Loughborough University, United Kingdom):
Bioprocessing of stem cells for Regenerative Medicine purposes – Scale-up or Scale-out.

Nathalie Gorret (INSA – Dept. de Genie Biochimique et Alimentaire, Toulouse, France):
New insights in biological dynamics and relaxation time to well-characterized environmental stress using innovative microbial and process engineering tools

Thomas Schweder (Ernst-Moritz-Arndt Universität Greifswald, Germany):
Transcriptomic and proteomic approaches for understanding and optimisation of bioprocesses.

Stephane Guillouet (INSA – Dept. de Genie Biochimique et Alimentaire, Toulouse, France):
Redesigning microbial processes to circumvent heterogeneities issues in large scale bioreactors: examples in *Saccharomyces cerevisiae*.

More information will be available soon!

Please check www.ifgb.de/bioproscale for regular updates.

