

**CAPEC-PROCESS Industrial Consortium
Annual Meeting 2011
Technical Program**

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7-9 June 2011

Tuesday 7 June 2011

- Morning **At CAPEC-PROCESS, KT, DTU (Building 227, 2nd floor)**
Participants arriving in the morning of Tuesday 7 June are welcome to travel with us by bus from DTU, Lyngby, to Hotel Comwell Borupgaard
- 14:00 **Bus leaving from DTU, building 227**
- 15:00 **Arrival at Comwell Borupgaard**
Hotel check-in will take place first. Please note that except for the charges for the room (including breakfast, lunch and dinner), all other charges (telephone, mini-bar, etc.) will need to be settled by the participants.

Free internet connection in all rooms and the conference room.
- 17:00-22:00 **Social Event – LOUISIANA Museum of Modern Art (www.louisiana.dk)**
16:30: Bus from Hotel Comwell Borupgaard to LOUISIANA
17:00-18:00: Guided tours
18:00-22:00: Get-together-reception at LOUISIANA

We have arranged an informal get-together in “Bådehuset” at LOUISIANA where we can meet all participants and have good discussions. There will be food and beverage (wine, cold drinks, and coffee/tea) available.
22:00: Bus returns to Hotel Comwell Borupgaard

Wednesday 8 June 2011 (Day 1 of Technical Program)

08:15 - 08:30	Welcome & Introduction (RaG)
08:30 - 08:45	<i>Lars Wiebe, Danisco</i> – CAPEC Advisory Board - Introduction
08:45 - 09:15	<i>Rafiqul Gani/John Woodley</i> – Overview CAPEC & PROCESS
	Session 1: PhD Projects – Modelling Phenomena (RaG)
09:15 - 09:35	<i>Carlos Axel Díaz Tovar</i> – Lipid Processing Technology: Shifting from waste streams to high-value commercial by-products (3 rd year)
09:35 - 09:55	<i>Noor Asma Fazli Bin Abdul Samad</i> – Systematic Modeling and Crystal Size Distribution Control for Batch Crystallization Processes (3 rd year)
09:55 - 10:15	<i>Azizul Azri Bin Mustaffa</i> - Development and Analysis of Original UNIFAC-CI Models for Predictions of VLE and SLE Systems (2 nd year)
10:15 - 10:30	Discussion
10:30 - 11:00	Break
	Session 2: PhD Projects – Process-Product Modelling/Design (GSI)
11:00 - 11:20	<i>Martina Heitzig</i> - A computer-aided modelling framework for model development and application – pharmacokinetic modelling case study (3 rd year)
11:20 - 11:40	<i>Rita Lencastre Fernandes</i> - Heterogeneous Microbial Populations: using flow cytometric data for building dynamic distributed models (2 nd year)
11:40 - 12:00	<i>Paloma de Gracia Andrade Santacoloma</i> - Mathematical modeling for production of chiral amines in the context of multi-enzyme in-pot processes (3 rd year)
12:00 - 12:20	<i>Naweed Al-Haque</i> - Controlled Substrate Supply in Biocatalytic Reactions (2 nd year)
12:20 - 12:30	Discussion
12:30 - 13:30	Lunch
	Session 3: PhD Projects – Process Analysis & Intensification (JW)
13:30 - 13:50	<i>Wenjing Fu</i> - Process Design of Chemo-enzymatic Synthesis Cascades (3 rd year)
13:50 - 14:10	<i>Philip Lutze</i> - Phenomena-based Process Synthesis/Design to Achieve Process Intensification (3 rd year)
14:10 - 14:30	<i>Alicia Román-Martinez</i> - Model-Based Framework for intensification of enzymatic processes (3 rd year)
14:30 - 14:50	<i>Klaus Reinholdt Nyhuus Hansen</i> - Robust Market Launch Planning for a Multi-Echelon Pharmaceutical Supply Chain (2 nd year)
14:50 - 15:00	Discussion
15:00 - 15:30	Break
	Session 4: PhD Projects – Experimental Studies (KVG)
15:30 - 15:50	<i>Mads Orla Albæk</i> - Investigation of the efficiency of alternative enzyme production technologies (2 nd year)
15:50 - 16:10	<i>Albert Emili Cervera Padrell</i> - Continuous Production of Active Pharmaceutical Ingredients (3 rd year)
16:10 - 16:30	<i>Yuan Xu</i> - Development of Process Technology for Two-stage Enzymatic FAEE-biodiesel Production (2 nd year)
16:30 - 16:40	<i>Krist V. Gernaey</i> - Poster review
16:40 - 18:30	Poster Presentation & Discussion
	For a list of posters, see the attached sheet of active projects.
19:30	CAPEC-PROCESS Industrial Consortium Annual Meeting Dinner

Thursday 9 June 2011 (Day 2 of Technical Program)

Session 5: Invited Member Company Sessions (JA)

- 08:30 - 09:10 Member company invited lecture: *Dr.-Ing. Konrad Triebeneck*, Bayer Technology Services, Germany - Industrial application of CAPE-Tools: Everyday job or daily challenge?
- 09:10 - 09:40 Invited lecture (academia): *Asc. Prof. Kyle V. Camarda*, University of Kansas, USA – Simultaneous Design of Ionic Liquids and Azeotropic Separation Processes
- 09:40 - 10:10 Invited lecture (academia): *Prof. Ian Cameron*, Univ. of Queensland, Australia - Function, Form and Failure: Improving design and operational performance in complex systems
- 10:10-10:30 *Asc. Prof. Krist V. Gernaey* - Microreactors for bioprocess development?

10:30 - 11:00 Break

Session 6: CAPEC-PROCESS Faculty (KVG)

- 11:00 - 11:25 *Ass. Prof. Jakob K. Huusom* – Research plans on process monitoring and control
- 11:25 - 11:50 *Asc. Prof. Gürkan Sin* - MultiMod - Multiscale Modeling of Chemical and Biochemical Systems
- 11:50 - 12:15 *Prof. John Woodley* - F3 Factory

12:15 - 13:15 Lunch

Session 7: CAPEC-PROCESS Post Doc Research (GSI)

- 13:15 - 13:35 *Elisa Conte* - A framework for APIs solubility modeling
- 13:35 - 13:55 *Pär Tufvesson* – The engineering toolbox applied to transaminase process development: thermodynamics and economics as decision making tools
- 13:55 - 14:15 *Miguel Mauricio Iglesias* - Modelling and control of heat-integrated distillation columns: An industrial case study
- 14:15 - 14:35 *Chiara Piccolo* - Design of reacting systems with phase transfer catalysis
- 14:35 - 14:55 *Asc. Prof. Jens Abildskov* – Molecular Thermodynamics of Mixed Solvent Solubility

- 14:55 - 15:00 Closing announcements by *Rafiqul Gani*

15:00 Meeting Close / Farewell

- 15:15 Bus transportation from Comwell Borupgaard to DTU, building 227, Lyngby

16:30 CAPEC-PROCESS Industrial Consortium Advisory Board Meeting & Dinner

CAPEC-PROCESS Industrial Consortium - Poster Presentations 2011

No.	Personnel	Poster Title
P1	Nor Alafiza Yunus	Tailor-made Design of Chemical Blend Products: General Methodology and Problem Formulation
P2	Amol Hukkerikar	Model Based Integrated Product-Process Design: Retrofitting and Optimisation
P3	Alberto Quaglia	Incremental Refinement of Process Design
P4	Igor Mitrofanov	Systematic Design and Selection of Green Solvents for organic synthesis
P5	Anna Katrine Vangsgaard	Model based analysis of performance and stability of autotrophic nitrogen removal in a granular biofilm reactor
P6	Kresten Troelstrup Meisler	Multi-dimensional population balance models of crystallization processes
P7	Joana de Lima Ramos	Process considerations for biocatalytic production of chiral amines using ω -transaminases
P8	Andrijana Bolic	Uniform and reproducible stirring in a microbioreactor
P9	Watson Lima Afonso Neto	Strategies for integrated product removal applied to production of chiral amines
P10	Aleksandar Mitic	Operational aspects of continuous pharmaceutical production
P11	Kresimir Janes	Scale-up of biocatalytic cascade reactions: transaminase catalysed synthesis of chiral amines
P12	Rui Xue	Process development for multi-enzymatic synthesis of sialic acid
P13	Ulrich Krühne Vijaya Krishna Bodla	Computer Aided Design Considerations for an Integrated Process Including Fermentation, Thermal Treatment, Mixing and Product Separation
P14	Ricardo Morales Rodriguez	Integrated Modelling for Simulation and Design of Novel Enzymatic Processes
P15	Ulrika Törnvall	Stable biocatalysts for industrial production of chemicals
P16	Oscar Andres Prado Rubio	High frequency backshock effects on polysaccharides transmission during ultrafiltration
P17	Lida Simasatitkul	Design of fatty alcohol production plant from palm oil and waste cooking palm oil
P18	Preeyaporn Saengwirun	Econ Software
P19	ICAS Team (RaG, GSI, MAT, AMH, IGM)	ICAS: Integrated computer aided system – ICAS 14.0 - Latest Developments