



The Nordic Filtration Society

# 11<sup>th</sup> Nordic Filtration Symposium

August 25-26, 2008

*In*

*Copenhagen, Denmark*

**Venue:**

The Conference will be organized in collaboration with the Danish Society of Chemical Engineers (<http://www.ida.dk>) and will be held at the domicile of the Danish Society of Engineers at the harbour front in central Copenhagen. The building was completed in 1999 as the headquarter of the Danish Society of Engineers and has earned a reputation for its excellent facilities, as well as its outstanding location.

**Organising committee:**

Gunnar Jonsson, NoFS / K-gruppen (Chairman)

Peter Szabo, K-gruppen

Morten L. Christensen, NoFS

**Scientific programme of the Filtration Symposium:**

- **Filtration and Separation**
- **Membrane Filtration**
- **New Developments in Membrane Separation**

The scientific programme will consist of some 40 minutes keynote lectures and oral 25 minutes presentations.

## **Location:**

The address of the conference site is:

Ingeniørforeningen, IDA  
Kalvebod Brygge 31-33  
DK-1780 København V

The symposium will start Monday morning at 9.00 and end Tuesday afternoon at 17.00.

Sessions 1 and 2A are scheduled for the whole Monday and sessions 2B and 3 for the whole Tuesday.

*The final programme with time table will be given at the website <http://www.kgruppen.dk>*

## **Session 1 Filtration and Separation**

### ***Latest developments in Industrial filtration***

Jukka Koskela,  
Larox Corporation, P.O. Box 29, FIN-53101, Lappeenranta, Finland

### ***Hemicellulose extraction from barley husks by steam pre-treatment***

Tobias Persson, H. Krawczyk, E. Dinh and A.-S. Jönsson,  
Department of Chemical Engineering, Lund University

### ***Hemicellulose isolation from process water in a thermomechanical pulp mill***

T. Persson, E. Dinh, J.L. Ren and A.-S. Jönsson,  
Department of Chemical Engineering, Lund University

### ***Influence of hemicelluloses during precipitation of lignin from kraft black liquor***

H. Wallmo<sup>1</sup>, A.-S. Jönsson<sup>2</sup>, O. Wallberg<sup>2</sup>, K. Lindgren<sup>3</sup>, H. Theliander<sup>1</sup>

<sup>1</sup> Forest Products and Chemical Engineering, Department of Chemical and Biological Engineering, Chalmers University of Technology, SE-412 96, Gothenburg

<sup>2</sup> Department of Chemical Engineering, Lund University, SE-221 00 Lund, SWEDEN

<sup>3</sup> STFI-Packforsk, SE-114 86 Stockholm, SWEDEN

### ***New type of SiC ceramic dead end filter: The CoMeTas Aqua Solution™ filter***

Kenneth Højrup Johansen, CometAs A/S,

***Experimental study on dewatering of copper concentrate by a ceramic disc filter***Antti Häkkinen\*<sup>1</sup>, Mikko Huhtanen<sup>1</sup>, Bjarne Ekberg<sup>2</sup>, Juha Kallas<sup>1</sup><sup>1</sup> Department of Chemical Technology, Lappeenranta University of Technology, P.O. Box 20, FIN-53851, Lappeenranta, Finland<sup>2</sup> Larox Corporation, P.O. Box 29, FIN-53101, Lappeenranta, Finland***Filtration and compression of organic materials***Morten Lykkegaard Christensen and Kristian Keiding

Department of Biotechnology, Chemistry, and Environmental Engineering, Aalborg University, DK-9000 Aalborg, Denmark

***Compact filtration – A new process***Peter Stubbe and Preben Bøje Hansen

Food Production Engineering, DTU

Technical University of Denmark, DK-2800 Kgs. Lyngby, Denmark

***Numerical simulation of filtration and drying time distribution on ceramic disc filter plates***Mikko Huhtanen\*<sup>1</sup>, Antti Häkkinen<sup>1</sup>, Bjarne Ekberg<sup>2</sup>, Juha Kallas<sup>1</sup><sup>1</sup> Department of Chemical Technology, Lappeenranta University of Technology, P.O. Box 20, FIN-53851 Lappeenranta, Finland<sup>2</sup> Larox Corporation, P.O. Box 29, FIN-53101, Lappeenranta, Finland**Session 2A Membrane Filtration*****Applications and prospects of membrane technology in the bioethanol industry.***Frank Lipnizki, Mattias Nilsson

Alfa Laval Copenhagen A/S, Maskinvej 5, 2860 Søborg (Denmark).

***Ultrafiltration of kraft black liquor at temperatures above 100°C***Ola Wallberg and Ann-Sofi Jönsson,

Department of Chemical Engineering, Lund University

***Recent experiences with microfiltration for separation of casein and whey proteins from skim milk***Kasper Luxhøj and Niels Ottosen

DSS-Silkeborg, Bergsøesvej 17, DK-8600 Silkeborg

***Plate & frame membrane system for recovery and concentration of 2-keto-L-gulonate***Linmao Zhang<sup>1</sup>, Jiang Wei<sup>2\*</sup>, Song Wang<sup>3</sup><sup>1</sup> Northeast General Pharmaceutical Factory, Shenyang 110026, China<sup>2</sup> Alfa Laval Nakskov A/S, Stavangervej 10, DK-4900 Nakskov, Denmark<sup>3</sup> Alfa Laval (Shanghai) Technologies Co., Ltd. 98 Huai Hai Road M., Shanghai, China***General Assembly of The Nordic Filtration Society******Symposium Dinner***

## Session 2B Membrane Filtration

### *Nanofiltration in the pulp and paper industry*

Mika Mänttari, Department of Chemical Technology, Lappeenranta University of Technology, P.O. Box 20, FIN-53851, Lappeenranta, Finland

### *Nanofiltration at elevated temperatures: Influence of the combined effects of temperature, salts, pH and cleaning*

Mattias Nilsson, Department of Food Technology, Lund University

### *Optimization of operating parameters in ultrafiltration plants*

Anna-Karin Nordin and Ann-Sofi Jönsson,  
Department of Chemical Engineering, Lund University

### *Electrokinetic characterization of whey protein separation*

Kristian Keiding, Anders Stougård og Morten L. Christensen  
Department of Biotechnology, Chemistry, and Environmental Engineering, Aalborg University ,  
DK-9000 Aalborg, Denmark

## Session 3 New Developments in Membrane Separation

### *Dynamics of the ultrafiltration process*

Gunnar Jonsson  
Department of Chemical and Biochemical Engineering, DTU  
Technical University of Denmark, DK-2800 Kgs. Lyngby, Denmark

### *A vibrating membrane bioreactor (VMBR): Macromolecular transmission – influence of extracellular polymeric substances*

Søren Prip Beier, Gunnar Jonsson  
CAPEC, Department of Chemical and Biochemical Engineering,  
Technical University of Denmark, DK-2800 Kgs. Lyngby, Denmark

### *Composition and application of a CoMem Silicon Carbide based ceramic membrane*

Thomas Eilkær Hansen, Cometax A/S

### *The best of two worlds - The Alfa Laval MBR*

Ivar Madsen  
Membrane Technology, Alfa Laval Copenhagen A/S  
Maskinvej 5, DK-2860 Søborg, Denmark

### *Combining Membrane Separation and Fermentation Processes for improved performance*

Rype, J.-U.<sup>a</sup>, Garde, A.<sup>a</sup>, Vrang, A.<sup>b</sup>, Madsen, S.<sup>b</sup>, Jonsson, G.<sup>c</sup>

<sup>a</sup>Jurag Separation a/s, Gydevang 4A, DK-3450 Allerød, Denmark

<sup>b</sup>Bioneer a/s, Kogle Allé 2, DK-2970 Hørsholm, Denmark

<sup>c</sup> Department of Chemical Engineering, Tech. University of Denmark, DK-2800 Kgs. Lyngby, Denmark

***Concentration of birch sap using MF, RO and DCMD***

Knud Christensen, Martin Valgren, Lars Toft Madsen, Kasper Hansen,  
Institute for chemical engineering, biotechnology and environmental technology, University of  
Southern Denmark, Campusvej 55, DK 5230 Odense M, Denmark.

***Power production by pressure retarded osmosis***

Werner Kofod Nielsen<sup>1</sup>, Stein Erik Skilhagen<sup>1</sup>, Jon Dugstad<sup>1</sup>, Torleif Holt<sup>2</sup>

<sup>1</sup>Statkraft Development AS, NO-0216 Oslo, Norway

<sup>2</sup>SINTEF, N-7465 Trondheim, Norway

***Biomimetic Water Filtration***

Claus Helix Nielsen

AQUAporin A/S, Diplomvej 377, DK2800 Lyngby

***Capture of CO<sub>2</sub> from high pressure natural gas with facilitated blend membrane***

Liyuan Deng, May-Britt Hägg,

Department of Chemical Engineering, Norwegian University of Science and Technology (NTNU),  
NO-7491 Trondheim, Norway

***Round Table discussion on New Developments in Membrane Separation: Challenges and Opportunities.***

Accommodation is scarce in Copenhagen during summer months, but the organizers have been in contact with 3 hotels, where rooms are still available

It is therefore highly advisable that you make a hotel reservation at your earliest convenience since we cannot guarantee available rooms. The payment for the hotel will be made directly to the hotel at the departure.

The below listed hotels are all situated within a walking distance from the conference site.

### ***Copenhagen Island***

Address: Kalvebod Brygge 53, DK-1560 Copenhagen V

Phone: (+45) 33 38 96 00

Please book by e-mail: [copenhagenisland@arp-hansen.dk](mailto:copenhagenisland@arp-hansen.dk) and refer to booking number 866073

Price: 1055 DKK(single room); breakfast 135 DKK

The hotel is new and modern; walking distance: 5 minutes

### ***Hotel Cabinn City***

Address: Mitchellsgade 14, DK-1568 Copenhagen V

Phone: (+45) 33 46 16 16

Please book by e-mail: [city@cabinn.com](mailto:city@cabinn.com) and refer to booking number 257650

Price: 545 DKK( single room); breakfast 50 DKK

The hotel is new and modern; walking distance: 5 minutes

### ***Scandic Hotel Webers***

Address: Vesterbrogade 11 B, DK-1620 Copenhagen V

Phone: (+45) 33 31 14 32

Please book by e-mail: [webers@scandic-hotels.com](mailto:webers@scandic-hotels.com)

Price: 1580 DKK, provided you make your reservation min. 7 days prior to arrival.

Price: 1890 DKK

The hotel has recently been modernized; walking distance: 15 minutes

### ***Registration:***

The number of participants is limited by the size of the IDA Conference room; it is therefore advisable to register early. Advance registration takes place by sending the enclosed registration form preferably by email to the conference secretariat. When received by the secretariat they will send out an invoice for the registration fee with information for the money transfer.

### **Registration fee (includes lunches, coffee breaks and abstract proceedings):**

<i>Participation both days</i>	<i>1800 DKK</i>
<i>Participation 1 day only</i>	<i>1000 DKK</i>
<i>Reduced conference fee for students:</i>	<i>1000 DKK</i>
<i>Symposium dinner Monday evening 25.8:</i>	<i>400 DKK</i>

## Registration Form

(Danish participants may register on [www.ida.dk](http://www.ida.dk))

### 11<sup>th</sup> Nordic Filtration Symposium Copenhagen, August 25-26, 2008

Family name: .....

First Name: .....

Job title: .....

Organisation/company: .....

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For Danish Participants: EAN-number .....

Mailing address: .....

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Phone: .....

E-mail: .....

- Registration for both days (August 25-26): Price 1800 DKK
- Registration for the first day only (August 25.): Price 1000 DKK
- Registration for the second day only (August 26): Price 1000 DKK
- Reduced conference fee for students (25.-26. august): Price 1000 DKK
- I would like to participate in the Symposium Dinner Monday evening: Price 400 DKK

**For registration: Please mail this form to [ida@ida.dk](mailto:ida@ida.dk)**

For **hotel reservation**: Please note p. 6 in the program

Address: **Conference Secretariat:**  
Kemiingeniørgruppen,  
IDA  
Kalvebod Brygge 31-33  
DK-1780 København V