



6th International Conference on
Organic Solvent Nanofiltration
Saint Petersburg
Russia, 04-06.06.2017

Conference program

Sunday (June 04, 2017)

17:30 Registration

18:30 Social program (meet at the lobby for boat trip) followed by welcome reception at the conference venue

Monday (June 05, 2017)

08:30 Welcome

Morning session

Session chair: Bart Van der Bruggen

08:50 1st Keynote lecture

Novel concepts in interfacial polymerization to prepare SRNF-membranes

I. Vankelecom, KU Leuven, Belgium

09:30 Widening the Applications of PIM-1 in OSN

M. Cook, Imperial College London, UK

09:50 Synthesis and study of organic solvent nanofiltration PDMS composite membranes for the retention of diluted solutes

D. Roizard, CNRS-University of Lorraine, France

10:10 New promising polymer for organic solvent nanofiltration: oxidized poly (arylene sulfide sulfone)

S. Yuan, KU Leuven, Belgium

10:30 **Coffee break**

10:50 Controlled positioning of MOFs and their role in interfacially polymerized thin-film nanocomposites

C. Van Goethem, KU Leuven, Belgium

11:10 Xylene Isomer Separation via Organic Solvent Reverse Osmosis

R. P. Lively, Georgia Institute of Technology, USA

11:30 Defect-free PIM-1-based hollow fiber membranes

M. L. Jue, Georgia Institute of Technology, USA

11:50 Burgeoning Glubbers - On solvent-induced changes in the properties of thin films

N. Benes, University of Twente, The Netherlands

12:10 EPON Resin 1031-based TFC-membranes via nucleophilic and anionic ring opening polymerization

I. Vankelecom, KU Leuven, Belgium

12:30 **Lunch break**

Afternoon session

Session chair: *Nieck Benes*

- 13:50** 2nd Keynote lecture
Stability, Selectivity or Permeance - Where to for OSN?
A. Livingstone, Imperial College London, UK
- 14:30** Organic solvent nanofiltration with copolymer functionalized γ -alumina membranes
M. Amirilargani, Delft University of Technology, The Netherlands
- 14:50** Polymer nanofilms with engineered microporosity by interfacial polymerisation for molecular separations in organic solvent
T. Liu, Imperial College London, UK
- 15:10** Cellulose - based membranes for organic solvent nanofiltration
A. Volkov, A.V.Topchiev Institute of Petrochemical Synthesis RAS, Russia
- 15:50** **Coffee break and Poster session**
- 16:10** Tannin-based thin-film composite membranes for solvent resistant nanofiltration
L. Pérez-Manríquez, King Abdullah University of Science and Technology, Saudi Arabia
- 16:30** PDMS organic solvent nanofiltration membranes on ceramic supports
H. van Veen, Energy research Centre of the Netherlands, The Netherlands
- 16:50** Sorption of single enantiomers and racemic mixture separation by chiral polymeric membranes
P. Izak, Institute of Chemical Process Fundamentals, AS CR v.v.i, Czech Republic
- 17:10** **End of 1st day of the conference**
- 18:00** **Departure from hotel (social program followed by conference dinner)**

Tuesday (June 06, 2017)

Morning session

Session chair: *Pieter Vandezande*

- 08:30** 3rd Keynote lecture
Tailored ceramic membranes fit for varied OSN applications, and promoting new insights in the OSN process
A. Buekenhoudt, VITO NV, Belgium
- 09:10** Transport phenomena through grafted ceramics
R.B. Merlet, Inorganic Membranes, MESA+ Institute for Nanotechnology, University of Twente, The Netherlands
- 09:30** Comparability of results from standardized experiments in OSN
A. Böcking, RWTH Aachen University AVT.CVT, German
- 09:50** A new tool for prediction of solvent permeance in organic solvent nanofiltration
R. van den Bongard, TU Dortmund University, Germany
- 10:10** Adaptation of the method of McCabe-Thiele to design and understand Organic Solvent Nanofiltration membrane cascades
A. Lejeune, Université de Rennes 1, Université Bretagne Loire, Institut des Sciences Chimiques de Rennes, France
- 10:30** **Coffee break**

- 10:50** Screening of membranes to treat ACN-based feeds in SRNF
M. Bastin, KU Leuven, Belgium
- 11:10** Improvement of olefin metathesis process thanks to organic solvent nanofiltration: a comparative study of membrane reactors and simulated membrane cascades
M. Rabiller-Baudry, Université de Rennes 1, Université Bretagne Loire, Institut des Sciences Chimiques de Rennes, France
- 11:30** Decolorization of Vegetable Oil: Process Development using Organic Solvent Nanofiltration
S. Postel, Evonik, Germany
- 11:50** Generalization of a heuristic for membrane selection
Y. Thiermeyer, Merck KGaA, Germany
- 12:10** Solvent recycle with imperfect membranes: A semi-continuous workaround for diafiltration
M. Schaepertoens, Department of Chemical Engineering, Imperial College London, UK
- 12:30 Lunch break**
- Afternoon session**
Session chair: Ryan Lively
- 13:50** 4th Keynote lecture
OSN - New Unit Operation on the Rise
C. Schnitzer, Evonik, Germany
- 14:30** Continuous Consecutive Reactions with Inter-Reaction Solvent Exchange via OSN Membrane Separation
L. Peeva, Imperial College London, UK
- 14:50** Fractionation and purification of lignin and lignin derived aromatics by organic solvent based membrane filtration
P. Vandezande, VITO NV, Belgium
- 15:10** Membrane-assisted Processing of Organometallic Catalysed Reactions: From Down-Stream to Continuous Processing
D. Ormerod, VITO NV, Belgium
- 15:30 Coffee break**
- 15:50** ExxonMobil research and engineering - corporate strategic research
B.A. McCool, Advanced Research Associate, USA
- 16:10** Recent industrial OSN units: From process idea to industrial implementation
M.-S. Haverkamp, BORSIG Membrane Technology GmbH, Germany
- 16:30** Reactions and recovery of homogeneous transition metal catalysts in a continuous miniplant process
J.M. Dreimann, TU Dortmund, Germany
- 16:50 Closure ceremony**

List of Posters

43. Novel high-performance nanofiltration membranes with full pH-stability

N. Daems, P.P. Pescarmona, I.F.J. Vankelecom

44. Solvents in membrane synthesis and their effect on SRNF performance: from conventional organic solvents to ionic liquids

H. Mariën, L. Bellings, S. Hermans, I.F.J. Vankelecom

45. Grignard functionalized titania: Toward a versatile platform of tailor-made ceramic membranes

M. Dorbec, J. Van Dijk, A. Buekenhoudt, D. Ormerod, P. Vandezande, K. Servaes, K. Wyns, V. Meynen

46. Energy efficient recovery of acetone from edible oils by organic solvent nanofiltration: From lab trials to on site piloting

S. Salvador Cob, P. Vandezande, H. Beckers, B. Driesten, E. Schweitzer, F.P. Cuperus, M. van Leeuwen, J.F. Jacobs, M. van Lieshout, K. Rietkerken

47. Evaluation of OSN as an alternative to preparative chromatography for the purification of a methylcyclopropene precursor

T. Vandermeersch, M. Sels, P. Goeminne, M. Verbeek, N. Vervoort, H. Vanbaelen

48. Simulation of membrane cascades for the separation of 2 solutes of intermediate retentions by organic solvent nanofiltration

A.Lejeune, T. Renouard, M. Rabiller-Baudry

49. Organically-modified ceramic membranes for solvent nanofiltration

M.W.J. Luiten-Olieman, C.R. Tanardi, A.F.M. Pinheiro, R.M. Merlet, A. Nijmeijer, L. Winnubst

50. Hydrophobic ceramic membranes for OSN and their characterization

C. Pflieger, C. Günther, A. Hoh, V. Prehn, P. Puhlfürß, H. Richter, I. Voigt, M. Weyd, A. Wolfram

51. Modelling of charged species transport in nanofiltration membranes with constant surface potential / charge density

I.I. Ryzhkov, A.V. Minakov, D.V. Lebedev, V.S. Solodovnichenko, V.V. Bykanova

52. OSN: Economic and energy evaluation of rhodium-based homogeneous catalyst recovery

J.N. van Rensburg, H.C.M. Vosloo, P. van der Gryp

53. Novel porous hyperbranched polyurethanes with adjustable separation properties for OSN process

I. Vorotyntsev, A. Akhmetshina, A. Yushkin, I. Davletbaeva

54. Modification of PAN membranes for improve their stability in aprotic solvents

A. Yushkin, D. Bakhtin, M. Efimov, L. Zemtsov, A. Volkov, V. Volkov

55. Comparison of electrical and nanofiltration transport properties of hydrophobic polymers with intrinsic microporosity

A. Yushkin, V. Sobolev, A. Szymczyk, A. Volkov

56. Preparation of chemical resistance nanofiltration membranes from solutions of cellulose in ionic liquids

T. Anokhina, T. Pleshivtseva, A. Yushkin, V. Ignatenko, S. Ilyin, S. Antonov, A. Volkov