



Saint-Pierre d'Oléron (France)
3-7 September 2013

Engineering with Membranes Towards a Sustainable Future

OVERVIEW

Time	TUESDAY Sep 3	WEDNESDAY Sep 4	THURSDAY Sep 5	FRIDAY Sep 6	Saturday Sep 7		
8:30		Conference Opening		Free time			
8:50			Session 2A Bioseparations and Food Applications		Session 2B Membranes for Gas Separation		
9:00		Plenary Session					
10:30		Coffee break (10:30-11:00)				<i>Optional tour (10:00-12:00)</i>	
10:40			Coffee break (10:40-11:10)				
11:00		Session 1A Membranes in Organic Solvents	Session 1B Functionalization and Modification of Membrane Materials		Session 3A Biological Interactions		Session 3B Ion Exchange – Ion Selective Membranes
11:10							
12:00		Lunch	Lunch		Lunch		
12:30						<i>Last shuttle bus (12:45)</i>	
13:30					Session 5A Water and Wastewater Sustainability (II)		Session 5B Advances in Membrane Distillation
14:00		Boat tour: Visit around Ford Boyard. Departure from the center by bike at 13:45– Boarding in Boyardville's harbour at 14:00 for departure at 14:15	Session 4A Water and Wastewater Sustainability	Session 4B Novel Processes			
15:20			Coffee break (15:30-16:00)				
15:30							
15:40							
16:00			Session 4A (cont.) Water and Wastewater Sustainability	Session 4B (cont.) Novel Processes	Session 6A Towards Zero Discharge Processes		
17:00	Registration	Coffee break (17:30-18:00)			Session 6B Materials: Cleaning, Ageing and Reuse		
17:30							
17:45			Poster Session I	Poster Session II	Closing and Awards		
18:00							
19:30		Eglade de Moules					
20:00	Welcome reception	Diner	Diner Paëlla and music	Cocktail and Gala Diner			



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PROGRAM

Tuesday :: September 3

Tuesday :: September 3	
17:00	Registration
20:00	<i>Welcome Reception</i>

Wednesday :: September 4

Wednesday :: September 4	
8:30	Opening Ceremony (Room Eric Tabarly) Chairs: Zhanfeng Cui and Corinne Cabassud
9:00	PL1: The path to sustainability: measuring progress R.C. Darton Univ. Oxford (United Kingdom)
9:45	PL2: Life cycle thinking approach for process design and operation E. Benetto Public Research Centre Henri Tudor (Luxembourg)
10:30	Coffee Break

Session 1A. Membranes in Organic Solvents Chairs: Andrew Livingston and Zhanfeng Cui (Room Eric Tabarly)		Session 1B. Functionalization and Modification of Membrane Materials Chairs: Suzana Nunes and Anthony Szymczyk (Room Florence Arthaud))	
11:00	K1: Membranes for Molecular Separations in Organic Solvents <u>A. Livingston</u> <i>Imperial College London, London (United Kingdom)</i>	11:00	K2: Functionalized isoporous membranes <u>S.P. Nunes</u> and K.V. Peinemann <i>King Abdullah Univ. of Science and Technology, Thuwal (Saudi Arabia)</i>
11:30	O1: Purification of electrochemical solvents using organic solvent nanofiltration: from lab to pilot P. Vandezande, C. Lynch, P. Cuperus, H. Beckers, B. Bongers and W. Porto-Carrero <i>Flemish Institute for Technological Research (VITO), Mol (Belgium), GKA Technologies Ltd, Dublin (Ireland) and SolSep BV, Apeldoorn (The Netherlands)</i>	11:30	O4: Surface modification of PVDF ultrafiltration membranes to improve their resistance to fouling J.Lora Garcia, F. López Pérez, <u>I. Png González</u> , D. García Sanoguera, M.D. Samper and M.C. Vincent Vela <i>Univ. Politècnica de València, Alicante (Spain)</i>
11:50	O2: Hybrid organic solvent nanofiltration membranes on ceramic and polymeric supports <u>H.M. van Veen</u> , J.P. Overbeek, M.M.A. van Tuel, F.P. Cuperus, I.M. Wienk, P.H.T. Ngamou, M. Creatore and J.F. Vente <i>Energy research Centre of the Netherlands, Petten, SolSep BV, Apeldoorn and Eindhoven Univ. of Technology, Eindhoven (The Netherlands)</i>	11:50	O5: Development of exopolysaccharide membranes for application in pervaporation processes <u>I.T. Meireles</u> , C. Portugal, J.G. Crespo, I.M. Coelho <i>Univ. Nova de Lisboa (Portugal)</i>
12:10	O3: Increasing the sustainability of active pharmaceutical ingredient (API) degenotoxification using organic solvent nanofiltration (OSN) membrane cascade <u>J.F. Kim</u> , G. Szekely, I.B. Valtcheva and A.G. Livingston <i>Imperial College London, London (United Kingdom)</i>	12:10	O6: Molecular simulations of fully aromatic polyamide membranes M. Ding, A. Ghoufi and <u>A. Szymczyk</u> <i>Univ. of Rennes, Rennes (France)</i>
12:30	Lunch		
13:45	Boat tour: Visit around Ford Boyard. Departure from the center by bike at 13:45– Boarding in Boyardville's harbour at 14:00 for departure at 14:15		
17:30	Coffee Break		
18:00	Poster Session I		
19:30	Eglade de moules		
20:30	Diner		

Thursday :: September 5

Session 2A . Bioseparations and Food Applications Chairs: Joao Crespo and Susana Luque (Room Eric Tabarly)		Session 2B. Membranes for Gas Separation Chairs: Eric Favre and Luísa Neves (Room Florence Arthaud)	
8:50	K3: Membrane bioseparations towards sustainable production <u>J. Crespo</u> <i>Univ. Nova de Lisboa, Caparica (Portugal)</i>	8:50	K4: Membranes and carbon capture processes <u>E. Favre</u> , B. Belaissaoui, E. Chabanon <i>Univ. of Lorraine, Lorraine (France)</i>
9:20	O7: Pilot scale investigations of membrane assisted recovery of antioxidants from aronia melanocarpa pomace from juice production including cost profile <u>M.C. Roda</u> , B. Norddahl, B. Hermansen and M.B. Jensen <i>Univ. of Southern Denmark, Odense (Denmark)</i>	9:20	O11: Effect of cross-linking on separation properties of poly(amidoamine) dendrimer/poly(vinyl alcohol) hybrid membranes for CO₂ separation <u>K. Yamazaki</u> , S. Duan, T. Saito, K. Ikeda, I. Taniguchi and T. Kai. <i>Research Institute of Innovative Technology for the Earth, Tokyo (Japan)</i>
9:40	O8: Pervaporative removal of acetone, butanol and ethanol from binary and quaternary aqueous model solutions <u>W. M. Kujawski</u> , J. K. Kujawski, J. Kujawa and A. Rozicka <i>Nicolaus Copernicus Univ., Toruń and Wrocław Univ. of Technology, Wrocław (Poland)</i>	9:40	O12: Carbon dioxide (CO₂) capture using mixed matrix membranes with ionic liquids (MMM-ILs) <u>L. Neves</u> , N. Nayak, H. Andrade, I. Coelho and J.G. Crespo <i>Univ. Nova de Lisboa, Caparica (Portugal)</i>
10:00	O9: Vapor phase membrane separation for recovery of bioalcohols as the bioorigin products <u>V.V. Teplyakov</u> , S.M. Matson, M.G. Shalygin and V.S. Khotimskiy <i>A.V. Topchiev Institute of Petrochemical Synthesis, Moscow (Russia)</i>	10:00	O13: Mixed matrix membranes for separation of higher hydrocarbons from methane <u>H. Mushardt</u> and T. Brinkmann <i>Institute of Polymer Research, Geesthacht (Germany)</i>
10:20	O10: Ultrafiltration of black tea liquor in diafiltration regime and recovery of valuable components <u>I. S. Argyle</u> , A. Pihlajamäki, C.J. Wright and M R Bird <i>Univ. of Bath (UK), Lappeenranta Univ. of Technology (Finland) and Univ. of Swansea (UK)</i>	10:20	O14: Gas permeation processes for H₂ recovery in fossil fuelled power plants and related systems <u>M. Grätz</u> , S. Shishatskiy and Brinkmann <i>Institute of Polymer Research, Geesthacht (Germany)</i>
10:40	Coffee Break		
Session 3A. Biological Interactions Chairs: Chistelle Guigui and Harvey Winters (Room Eric Tabarly)		Session 3B. Ion Exchange – Ion Selective Membranes Chairs: Gérald Pourcelly and Svetlozar Velizarov (Room Florence Arthaud)	
11:10	O15: The importance of transparent exopolymer particle (TEP) biopolymer precursors in initiating biofilm formation on reverse osmosis membranes <u>H. Winters</u> , A. G. Fane, G. L. Amy and S. Li <i>Singapore Membrane Technology Center (Singapore) and King Abdullah Univ. of Science and Technology (Saudi Arabia)</i>	11:10	O19: Mathematical modelling of over-limiting transfer in electro dialysis enhanced by electroconvection <u>M. K. Urtenov</u> , A. M. Uzdenova, V. V. Nikonenko, N. D. Pismenskaya, <u>G. Pourcelly</u> , P. Sistat and E. D. Belashova <i>Kuban State Univ., Krasnodar (Russia) and Univ. de Montpellier 2, Montpellier (France)</i>
11:30	O16: Impact of process parameters on biocake structuring dynamics <u>P. Loulergue</u> , <u>M. Weckert</u> , C. Guigui and C. Cabassud <i>Univ. of Toulouse, INRA and CNRS, Toulouse (France) and Technische Univ. Dresden, Dresden (Germany)</i>	11:30	O20: Evolution of ion-exchange membranes behaviour in full scale electro dialysis for food industry <u>W. Garcia-Vasquez</u> , L. Dammak, C. Larchet, V. Nikonenko and D. Grande <i>Institut de Chimie et des Matériaux Paris (France) and Kuban State Univ., Krasnodar (Russia)</i>
11:50	O17: Influence of surface microtopography of nanofiltration and reverse osmosis membranes on bacterial adhesion <u>A. Allen</u> , A. J. C. Semião, O. Habimana and E. Casey <i>Univ. College of Dublin (Ireland)</i>	11:50	O21: Sustainable remediation of trace hazardous ions by integrated ion-exchange membrane processing for safe water supply <u>M. Lopes</u> , R. Valério, J. Fradinho, A. Oehmen, M. Reis, J Crespo and <u>S. Velizarov</u> <i>Univ. Nova de Lisboa, Caparica (Portugal)</i>
12:10	O18: Biofouling development in point of use drinking water filtration systems <u>C. Chawla</u> , A. Zwijnenburg, A. Kemperman and K. Nijmeijer <i>Univ. of Twente and Wetsus, (The Netherlands)</i>	12:10	O22: Reuse of steelmaking industry process water by ion exchange and membrane technology <u>P. Gómez Leiva</u> , S. Luque, J.R. Álvarez, B.P. Vivas and V.M. Delmiro <i>Univ. of Oviedo, Oviedo (Spain) and ArcelorMittal, Asturias (Spain)</i>

12:30	Lunch	
Session 4A. Water and Wastewater Sustainability Chairs: Corinne Cabassud and Bing Wu (Room Eric Tabarly)		Session 4B. Novel Processes Chairs: Bert Hamelers and Tony Fane (Room Florence Arthaud)
14:00	K5: Towards sustainable use of energy in membrane processes for water production and treatment <u>Corinne Cabassud</u> <i>Univ. of Toulouse, Toulouse (France)</i>	14:00 K6: Salinity gradient energy <u>H.V.M. Hamelers</u> <i>Wetsus (The Netherlands)</i>
14:30	O23: Membrane treatment options for wastewater from cellulosic ethanol biorefineries <u>A. Luiz</u> , T. Handelsman, G. Barton, H. Coster and J. Kavanagh <i>Univ. of Sydney, Sydney (Australia)</i>	14:30 O31: Capacitive Blue Energy: a modified supercapacitor flow cell (MSFC) <u>B. Bastos Sales</u> , M. Saakes, B. Hamelers, C. Buisman <i>Wetsus (The Netherlands)</i>
14:50	O24: Biological filtration as a sustainable membrane pre-treatment for drinking water <u>P.M. Huck</u> , S. Peldszus and C. Hallé <i>Univ. of Waterloo, Ontario (Canada) and Norwegian Univ. of Science and Technology (Norway)</i>	14:50 O32: Salinity gradient energy extraction by using ion exchange membranes with capacitive technology <u>F. Liu</u> , C. J.N. Buisman and H.V.M. Hamelers <i>Wetsus, Leeuwarden and Wageningen Univ., Wageningen (The Netherlands)</i>
15:10	O25: Simultaneous removal of organic and inorganic pollutants from synthized wastewater by a novel thermophilic anaerobic membrane distillation bioreactor <u>R.Y. Horng</u> , M. C. Chang, H. Shao, B. L. Shiau and M. S. Huang <i>Industrial Technology Research Institute, Hsinchu (Taiwan)</i>	15:10 O33: Increasing the water output of humidity harvesting using water vapour selective membranes <u>D. Bergmair</u> , S.J. Metz, H.C. de Lange and A.A. van Steenhoven <i>Wetsus, Leeuwarden and Technische Univ. Eindhoven, Eindhoven (The Netherlands)</i>
15:30	Coffee Break	
16:00	O26: The potential roles of granular activated carbon in anaerobic fluidized membrane bioreactors: effect on membrane fouling and membrane integrity <u>B. Wu</u> , P.C.Y. Wong and A.G. Fane <i>Nanyang Technological Univ. (Singapore)</i>	16:00 O34: Ceramic hollow fibre membrane intensified reactant distribution in catalytic membrane reactor <u>L. Meng</u> , H. Jiang and W. Jin <i>Nanjing Univ. of Technology, Nanjing (P. R. China)</i>
16:20	O27: Two-stage anaerobic membrane bioreactor: evaluation of mixed liquor characteristics and filtration resistance mechanisms V. T. Mota; F. S. Santos and <u>M. C. S. Amaral</u> <i>Univ. Federal de Minas Gerais, Minas Gerais (Brazil)</i>	16:20 O35: Single-step fabrication of triple-layer ceramic hollow fibers for micro-tubular solid oxide fuel cells T. Li, <u>Z. Wu</u> and K. Li <i>Imperial College London, London (UK)</i>
16:40	O28: Model for predicting transmembrane pressure jump for various membrane bioreactors <u>H. Kaneko</u> and K. Funatsu <i>Univ. of Tokio, Tokio (Japan)</i>	16:40 O36: Separation processes using nanoporous ceramic membranes <u>M. Weyd</u> , H. Richter and I. Voigt <i>Fraunhofer Institute for Ceramic Technologies and Systems, Hermsdorf (Germany)</i>
17:00	O29: The impact of carbamazepine on characteristic of sludge and supernatant of membrane bioreactor treating municipal wastewater for water reuse <u>C. Li</u> , C. Guigui and C. Cabassud <i>Univ. de Toulouse, LISBP-INSA, INRA, and CNRS, Toulouse (France)</i>	17:00 O37: Layer-by-Layer assembly of polytectoyle multilayers on polyethersulfone hollow fibres L. Peters, L.W. Ostendorf, <u>J.E. Wong</u> and M. Wessling <i>Aachen Univ., Aachen (Germany)</i>
17:20	O30: Pore size optimization of MBR-membrane considering permresistance and rejection rate <u>S. Mori</u> <i>Kubota Corporation (Japan)</i>	17:20 O38: Connecting neural networks through microporous membranes J.H. George, D. Nagel, E.J. Hill, Y.M. El-Sherbini, M. Coleman, Z.F. Cui and <u>H. Ye</u> <i>Univ. of Oxford, Oxford and Aston Univ., Birmingham (UK)</i>
18:00	Poster Session II	
20:00	Diner "soirée Paëlla" and music	

Friday :: September 6

*Free time to enjoy the different free activities at the centre:
Swimming pool, biking, tennis, walk in the area, petanque, volley-ball
Possibilities for other fee-based activities (horse riding, archery, catamaran)*

12:00	Lunch	
Session 5A. Water and Wastewater Sustainability (II) Chairs: TorOve Leiknes and Yinhua Wan (Room Eric Tabarly)		Session 5B. Advances in Membrane Distillation Chairs: Stéphanie Laborie and Wojciech Kujawski (Room Florence Arthaud)
13:30	K7: Forward osmosis: Towards a Sustainable Future T. Fane and R. Wang <i>Nanyang Technical University (Singapore)</i>	(Cancelled)
14:00	O39: How to tackle current limitations of forward osmosis? G. Blandin, A. Verliefe and P. Le-Clech <i>Univ. of New South Wales (Australia) and Ghent Univ. (Belgium)</i>	14:00 O43: Novel polytetrafluoroethylene tubular membranes for membrane distillation A. Bottino, G. Capannelli, A. Comite, C. Costa, J.I. Calvo and R. Saele <i>Univ. of Genoa, Genova (Italy), Univ. of Valladolid, Valladolid (Spain) and Prince of Songkla Univ., Pattani (Thailand)</i>
14:20	O40: Fertiliser drawn forward osmosis desalination: a more sustainable membrane solution S. Phuntsho, H.K. Shon and R. Ben Aim <i>Univ. of Technology, Sydney (Australia)</i>	14:20 O44: Fouling behaviour of superhydrophobic PVDF membranes in membrane distillation S. Meng, Y. Ye, J. Mansouri and V. Chen <i>Univ. of New South Wales (Australia) and Cooperative Research Centre for Polymers (Australia)</i>
14:40	O41: Membrane fouling and microbial toxicity in the FO-MBR using a micellar draw solution M.S. Nawaz, F. Parveen, S.J. Khan, G. Gadelha, N.P. Hankins, R. Wang and C.Y. Tang <i>National Univ. of Sciences and Technology (Pakistan), Univ. of Oxford (UK) and Nanyang Technological Univ. (Singapore)</i>	14:40 O45: Engineering superhydrophobic surface on poly(vinylidene fluoride) nanofiber membranes for direct contact membrane distillation Y. Liao, R. Wang, A.G. Fane <i>Nanyang Technological Univ. (Singapore)</i>
15:00	O42: Integral membranes from superabsorbent cryogels decorated with silver nanoparticles for point-of-use water disinfection in a disaster relief S-L. Loo, A.G. Fane, T-T. Lim, W.B. Krantz and X. Hu <i>Nanyang Technological Univ. (Singapore) and Univ. of Colorado (USA)</i>	15:00 O46: Vacuum membrane distillation for the removal of arsenic D.T. Dao, S. Laborie and C. Cabassud <i>Univ. of Toulouse, INRA and CNRS in Toulouse (France) and USTH, Hanoi (Vietnam)</i>
15:20	Coffee Break	
Session 6A. Towards Zero Discharge Processes Chairs: José R. Álvarez and Roger Ben Aim (Room Eric Tabarly)		Session 6B. Materials: Cleaning, Ageing and Reuse Chairs: Maxime Pontie and Juana Benavente (Room Florence Arthaud)
15:40	O47: A membrane enhanced recycling aquaculture system (RAS) for a more sustainable design and operation T. Leiknes, A. Buran Holan and P-A Wold <i>NTNU, Trondheim (Norway)</i>	15:40 O52: Modification of membranes surfaces by theophylline 1 derivative coating M.I. Vázquez, V. Romero, J. Hierrezuelo, J. M. López-Romero and J. Benavente <i>Univ. of Málaga, Malaga (Spain)</i>

16:00	O48: Thermosensitivities polymer enhanced microfiltration (TEMF): a new process for the removal of aluminium from wastewater <i>A. Graillot, C. Cojocariu, D. Bouyer, S. Mauchauffee, S. Monge, J-J. Robin and C. Faur Univ. of Montpellier, Institut Charles Gerhardt Montpellier and Centre de Recherche de Maisons-Laffitte, Chemin de la Digue (France)</i>	16:00	O53: Multiscale study of a new process for hydroxypropylcellulose membrane elaboration without organic solvent <i>A. Hanafia, D. Bouyer, C. Pochat-Bohatier, A. Deratani, D. Quemener, P. Guenoun and C. Faur Univ. of Montpellier 2, Montpellier and IRAMIS/LIONS, Gif-sur-Yvette Cedex (France)</i>
16:20	O49: Heavy metal removal from acid process waters with membrane technology <i>E. Piedra, J.R. Álvarez, B.P.Vivas, V. Boy, M. Mänttari and S. Luque Univ. of Oviedo, Oviedo and ArcelorMittal, Asturias (Spain) and Lappeenranta Univ. of Technology, Lappeenranta (Finland)</i>	16:20	O54: Biodegradable films based on a new microbial polysaccharide for food applications <i>A.R.V. Ferreira, C.A.V. Torres, F. Freitas, M. Reis, V. D. Alves and I.M. Coelho Univ. Nova de Lisboa and Univ. Técnica de Lisboa (Portugal)</i>
16:40	O50: In-situ characterization of concentrated layer at nanometer length scale by SAXS during ultrasonic-assisted cross-flow ultrafiltration <i>Y. Jin, N. Hengl, S. Baup, F. Pignon, N. Gondrexon, A. Magnin, M. Sztucki, T. Narayanan, L. Michot and B. Cabane Institut National Polytechnique, Grenoble, European Synchrotron Radiation Facility, Grenoble, Nancy Univ., Vandoeuvre and Laboratoire PMMH, Paris (France)</i>	16:40	O55: Ethanol as a method of disinfecting nanofiltration membranes <i>R. Heffernan, P. Desmond, H. Cao, A.J.C. Semiao, O. Habimana, A. Safari and E. Casey Univ. College Dublin, Dublin (Ireland)</i>
17:00	O51: Vinyltrimethoxysilane (VTMS) modified silicalite-1/PDMS hybrid pervaporation membrane and its performance in removal of organics from water <i>Z. Zhu, Y. Su, J. Luo and Y. Wan Chinese Academy of Sciences, Beijing (China)</i>	17:00	O56: Ageing of PES ultrafiltration membranes under long-term exposures to alkaline and acidic cleaning <i>F.E. Antón, D. Vázquez, J. Carmona, J.I. Calvo, L. Palacio, P. Prádanos, A. Hernández, J.R. Álvarez and S. Luque Univ. of Oviedo, Oviedo and Univ. of Valladolid, Valladolid (Spain)</i>
17:20		17:20	O57: Old RO/NF modules behaviour: solutions of reuse <i>M. Pontie, O. Kama, M. Rabiller-Baudry and P. Le Clech GEPEA, Saint-Nazaire (France), Institut des Sciences Chimiques de Rennes (France) and Univ. of New South Wales (Australia)</i>
17:45	Closing ceremony (Room Eric Tabarly)		
20:00	Cocktail and Gala Diner		

Saturday :: September 7

10:00	Optional Tour Guided tour of the oyster-farming with oyster tasting
12:30	Lunch (optional picnic box)
12:45	Departure of the last shuttle bus to La Rochelle



Engineering with Membranes Towards a Sustainable Future

Saint-Pierre d'Oléron (France)
3-7 September 2013

POSTER SESSION I

(Wednesday :: September 4 18:00)

Advances in the sustainability of membrane materials and modules: Characterization, performance, cleaning and ageing

P1	Novel method for preparation of cellulose ultrafiltration membranes with improved properties. D. Nevstrueva, A. Pihlajamäki and M. Mänttari. <i>Lappeenranta Univ. of Technology, Lappeenranta (Finland)</i>
P2	Heterogeneous distribution of the fixed charge density through the skin layer of NF membranes: impact on salt rejection performances L. Paugam and A. Szymczyk <i>Univ.de Rennes 1, Rennes (France)</i>
P3	Electrokinetic analysis of membrane surfaces from streaming current measurements I.E. Mouhoumed, A. Szymczyk and Y.H. La <i>Univ.de Rennes 1, Rennes (France)</i>
P4	Effect of NPOE plasticizer on the behaviour of CTA-based polymer inclusion membranes V. Romero, M.I. Vázquez, E. Anticó, C. Fontàs and J. Benavente <i>Univ. de Málaga, Málaga and Univ. de Girona, Girona (Spain)</i>
P5	Development of Palladium-Alumina membranes for gas separation T. Bisoto, A. L. Schio, C. Baldasso, M. Godinho, V. Santos, C. P. Bergmann and M. Zeni <i>Univ. of Caxias do Sul, Caxias do Sul, and Federal Univ. of Rio Grande do Sul, Porto Alegre (Brazil)</i>
P6	Effect of gas permeation temperature on γ-alumina ceramic membranes E. Gobina and M. N. Kajama <i>The Robert Gordon Univ., Aberdeen (United Kingdom)</i>

P7	<p>Synthesis and gas transport properties of new fluorinated poly(arylene ether) based on decafluorobiphenyl and 1,3-dihydroxybenzene</p> <p>N. Belov, I. Tkachenko, V. Shevchenko and Y. Yampolskii <i>A.V. Topchiev Institute of Petrochemical Synthesis, Moscow (Russia) and Institute of Macromolecular Chemistry, Kiev (Ukraine)</i></p>
P8	<p>Gas separation membranes based on polybenzimidazole/polyaniline blends</p> <p>J. Peter, G. Verena, E. Konyushenko and M. Trchová <i>Institute of Macromolecular Chemistry, Prague (Czech Republic)</i></p>
P9	<p>Characterization of fluid dynamics and mass transfer in reverse electro dialysis for energy generation</p> <p>S. Pawlowski, P. Sístat, J. Crespo and S. Velizarov <i>Univ. Nova de Lisboa, Caparica (Portugal) and Institut Européen des Membranes, Univ. Montpellier II, Montpellier (France)</i></p>
P10	<p>Anti-microbial approach onto ionic membranes</p> <p>M. Pontié <i>Angers Univ., Angers (France)</i></p>
P11	<p>Effect of acidic and alkaline cleaning solutions on the ageing of nanofiltration membranes</p> <p>D. Vázquez, E. Antón, J.R. Álvarez and S. Luque <i>Univ. of Oviedo, Oviedo (Spain)</i></p>
P12	<p>Ageing effect in chlorinated polyethylene membrane for MBR by chemical cleaning</p> <p>P.R. da Costa, A. R. Alkmim, M. C. S. Amaral, L.S. França Neta, V. M. J. Santiago and A. C. Cerqueira <i>Federal Univ. of Minas Gerais, Federal Center of Technological Education of Minas Gerais and Research Center of PETROBRAS, Minas Gerais (Brazil)</i></p>
P13	<p>Towards a potential solution for the ageing and fouling of supported PTMSP-silica membranes for bio-alcohol recovery</p> <p>M. Dubreuil, P. Vandezande, W. Van Hecke, C. Dotremont <i>Flemish Institute for Technological Research (VITO), Mol (Belgium)</i></p>
P14	<p>Tubular membrane module equipped with air injection tube</p> <p>M. J. Park and K. Y. Chung <i>Seoul National Univ. of Science & Technology, Seoul (Korea)</i></p>
P15	<p>Preparation of superabsorbent cryogels with tailored properties as integral membranes for emergency water treatment</p> <p>S.-L. Loo, W.B. Krantz, T.-T. Lim, A. Fane and X. Hu <i>Singapore Membrane Technology Centre, Nanyang Technological Univ. (Singapore)</i></p>
P16	<p>An analysis on the absorption, absorption and diffusion of small molecules in PDMS</p> <p>Z. Cui, J. Wang, D. Hughes and W. Wang <i>Oxford Univ., Oxford (UK), Zyoxel Limited, Oxford (UK) and Tianjin Weikai Bioeng Limited, Tianjin (China)</i></p>



Saint-Pierre d'Oléron (France)
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Engineering with Membranes Towards a Sustainable Future

POSTER SESSION II

(Thursday:: September 5 18:00)

Membrane applications for more sustainable processing and effluent treatment

P17	<p>Specificities of electrodialysis applied to the treatment of ampholyte solutions <u>E. Belashova</u>, G. Pourcelly, P. Sizat and S. Lacour <i>Institut Européen des Membranes, Univ.Montpellier II, Montpellier (France)</i></p>
P18	<p>Evaluation of membrane microfiltration fouling in landfill leachate treatment C. Pertile, C. Baldasso, <u>M. Zeni</u> and I. C.Tessaro <i>Federal Univ. of Rio Grande do Sul and Caxias do Sul Univ., Porto Alegre (Brazil)</i></p>
P19	<p>Performance evaluation of composite membranes in the separation of emulsions sunflower oil/water D.S. Biron, C.P. Bergmann, <u>M. Zeni</u> and V. dos Santos <i>Univ. of Caxias do Sul, Caxias do Sul, and Federal Univ. of Rio Grande do Sul, Porto Alegre (Brazil)</i></p>
P20	<p>Use of NF97 and NF99HF nanofiltration membranes to reduce aniline concentration in wastewater <u>A. M. Hidalgo</u>, G. León, M. Gómez, M.D. Murcia, J.L. Gómez and M.D. Bernal <i>Univ. of Murcia, Murcia and Univ. of Cartagena, Cartagena (Spain)</i></p>
P21	<p>Removal of 4-chloro-2-methyl-phenol from aqueous solutions by nanofiltration and reverse osmosis <u>A. M. Hidalgo</u>, G. León, M. Gómez, M.D. Murcia, E. Gómez and P. Penalva <i>Univ. of Murcia, Murcia and Univ. of Cartagena, Cartagena (Spain)</i></p>
P22	<p>A combined RO/electro-oxidation process for removal of antineoplastic drugs from water streams P. Oliveira, <u>S. Velizarov</u>, J. Crespo, C. Portugal and J. Crespo <i>Univ. Nova de Lisboa, Caparica (Portugal)</i></p>

p23	<p>Removal of haze from high solids content black tea streams using microfiltration</p> <p><u>I. S. Argyle</u>, M. R. Bird <i>Univ. of Bath, Bath (United Kingdom)</i></p>
p24	<p>Applying UV photolysis to overcome nanofiltration drawbacks for drinking water treatment</p> <p><u>S. Sanches</u>, C. Nunes, A. Penetra, A. Rodrigues, V. V. Cardoso, E. Rodrigues, M. J. Benoliel, M. T. B. Crespo, V. J. Pereira, J. G. Crespo <i>iBET, Oeiras, Lab. de Energia e Geologia Nacional, Lisboa, Empresa Portuguesa das Águas Livres, Lisboa, and Univ. Nova de Lisboa, Caparica, (Portugal)</i></p>
p25	<p>The application of filterability as a parameter to evaluate the biological sludge quality in a MBR used for treating refinery effluent</p> <p>P.R. da Costa, A. R. Alkmim, <u>M. C. S. Amaral</u>, L.S. França Neta, V. M. J. Santiago and A. C. Cerqueira <i>Federal Univ. of Minas Gerais, Federal Center of Technological Education of Minas Gerais and Research Center of PETROBRAS, Minas Gerais (Brazil)</i></p>
p26	<p>Nanofiltration as post-treatment of MBR treating landfill leachate</p> <p><u>W.G. Moravia</u>; <u>M.C.S. Amaral</u>; L.C. Lange; , M.R. Zico; , T.L. Santos and N.C. Magalhães <i>Federal Univ. of Minas Gerais, Minas Gerais (Brazil)</i></p>
p27	<p>Production of microcapsules entrapping lemon essential oil by premix membrane emulsification and spray drying</p> <p><u>J. Carmona</u>, S. de Lamo, M. Ferrando, J. Ferré and C. Güell <i>Univ. Rovira i Virgili, Tarragona (Spain)</i></p>
p28	<p>Carbonic anhydrase immobilization to TiO₂ nano-particles and TiO₂ functionalized membrane for CO₂ capture</p> <p>G.Dong, C. Malassigné and <u>V. Chen</u> <i>UNESCO Centre for Membrane Science and Technology, The Univ. of New South Wales, Sydney (Australia) and Univ. de Nantes, Nantes (France)</i></p>
p29	<p>TiO₂ functionalized bio-catalytic PVDF membrane and application in Bisphenol-A degradation</p> <p>J.Hou, G.Dong, Y. Ye and <u>V.Chen</u> <i>UNESCO Centre for Membrane Science and Technology, The Univ. of New South Wales, Sydney (Australia)</i></p>
p30	<p>Adsorption combined with ultrafiltration as a pretreatment to sea water reverse osmosis</p> <p><u>M. Monnot</u>, S. Laborie, C. Cabassud <i>Univ. de Toulouse, LISBP-INSA, INRA, and CNRS, Toulouse (France)</i></p>
p31	<p>Ammonium recovery using ion-selective membranes</p> <p><u>A.Casadellà</u>, K. Nijmeijer, O. Schaetzle and K. Loos <i>Wetsus, Centre of Excellence for Sustainable Water Technology, Leeuwarden, Univ. of Twente, Enschede, and Univ. of Groningen, Groningen (The Netherlands)</i></p>