

# Poster Programme

## Poster Session 1

Sunday 23<sup>rd</sup> September at 18:00-20:00 & Monday 24<sup>th</sup> September at 13:30-14:30, Benjamin Britten Lounge & Whittle Room

[P1.001]	<b>Pre-treatment of beverage production wastewater using a 5 nm TiO<sub>2</sub> ceramic ultrafiltration membrane</b> B.A. Agana*, D. Reeve, J.D. Orbell, <i>Victoria University, Australia</i>
[P1.002]	<b>Inorganic membranes for separative techniques</b> N.A. Agoudjil <sup>1</sup> *, N.L. Lamrani <sup>1</sup> , N.B. Benmouhoub <sup>1</sup> , T.B. Benkacem <sup>1</sup> , A.L. Larbot <sup>1,2</sup> , <sup>1</sup> Faculte de chimie USTHB, Algeria, <sup>2</sup> CNRS, France
[P1.003]	<b>Effect of block copolymer length on the gas transport properties of HFA copolyamides</b> J.L. Santiago-Garcia, M.I. Loria-Bastarrachea, M. Aguilar-Vega*, <i>Centro de Investigacion Cientifica de Yucatan A.C., Mexico</i>
[P1.004]	<b>Aeration for fouling control in submerged membrane bioreactors for wastewater treatment: Shear simulation and experimental validation</b> E. Braak <sup>1</sup> , S. Schetrite <sup>1</sup> , D. Anne-Archard <sup>2</sup> , C. Albasi <sup>1</sup> *, M. Alliet <sup>1</sup> , <sup>1</sup> Laboratoire de Génie Chimique, France, <sup>2</sup> Institut de Mécanique des Fluides de Toulouse, France
[P1.005]	<b>Fabrication and characterization of organic pervaporation membranes to recover ethyl acetate of aqueous solutions</b> J. García-Ivars, M.I. Alcaina-Miranda*, M.I. Iborra-Clar, A. Iborra-Clar, <i>Universidad Politécnica de Valencia, Spain</i>
[P1.006]	<b>Polymer inclusion membranes: Concept and applications</b> M.I.G.S. Almeida*, R.W. Cattrall, S.D. Kolev, <i>The University of Melbourne, Australia</i>
[P1.007]	<b>Preparation and characterization of polysulfone based hemodialysis membranes with improved biocompatibility through alpha-lipoic acid immobilization</b> F.Y. Mahlicli, S.A. Altinkaya*, <i>Izmir Institute of Technology, Turkey</i>
[P1.008]	<b>Relationship between physical and chemical characteristics of a mbr mixed liquor: Influence of the EPS on the filtration resistance and other physical parameters</b> E. Zuriaga-Agustí, A. Bes Piá, J.A. Mendoza-Roca, S. Álvarez-Blanco*, <i>Universidad Politécnica de Valencia, Spain</i>
[P1.009]	<b>Cleaning and ageing of ultrafiltration membranes</b> F.E. Antón*, J.R. Álvarez, S. Luque, <i>University of Oviedo, Spain</i>
[P1.010]	<b>Anion-exchange membrane's scaling by CaSO<sub>4</sub></b> M. Asraf-Snir*, J. Gilron, Y. Oren, <i>Ben-Gurion University of the Negev, Israel</i>
[P1.011]	<b>Influence of extractant and modifier on the demulsification of surfactant liquid membranes</b> L.C. Nascimento, L.D.S. Andrade, C. Konzen, J.C. Balarini*, T.L.S. Miranda, A. Salum, <i>Universidade Federal de Minas Gerais, Brazil</i>
[P1.012]	<b>Removal of cobalt from a synthetic sulphuric liquor rich in nickel by liquid surfactant membranes</b> E.M.R. Araújo, J.C. Balarini*, C. Konzen, T.L.S. Miranda, A. Salum, <i>Universidade Federal de Minas Gerais, Brazil</i>
[P1.013]	<b>Evaluation of membranes transport properties for PEMFC: A new approach</b> A. Brunetti <sup>1</sup> , E. Fontananova <sup>1</sup> , A. Donnadio <sup>1</sup> , M. Casciola <sup>3</sup> , M.L. Di Vona <sup>4</sup> , G. Barbieri <sup>1</sup> *, <sup>1</sup> CNR, Italy, <sup>2</sup> The University of Calabria, Italy, <sup>3</sup> The University of Perugia, Italy, <sup>4</sup> The University of Rome "Tor Vergata", Italy
[P1.014]	<b>Synthesis of FAU-type zeolite membrane for gas separation</b> T. Poerio <sup>1</sup> , E. Drioli <sup>1,2</sup> , G. Barbieri <sup>1</sup> *, A. Brunetti <sup>1</sup> , M. Cersosimo <sup>1</sup> , C. Algieri <sup>1</sup> , <sup>1</sup> ITM-CNR, Italy, <sup>2</sup> UNICAL, Italy
[P1.015]	<b>Innovative plasma polymerized membranes based on phosphonic acid groups for fuel cell</b> J. Bassil*, S. Roualdès, <i>Université Montpellier 2, France</i>
[P1.016]	<b>Ultrafiltration hollow fiber membrane bioreactor (mbr) treating oil refinery wastewater</b> C.G. Veronese <sup>1</sup> , L.L. Beal <sup>1</sup> *, V.M.J. Santiago <sup>2</sup> , A.P. Torres <sup>2</sup> , A.C. Cerqueira <sup>2</sup> , <sup>1</sup> University of Caxias do Sul, Brazil, <sup>2</sup> PETROBRAS Research and Development Center, Brazil
[P1.017]	<b>Effect of ald sio<sub>2</sub> surface coverage of a nanoporous alumina membrane on electrical and transport parameters</b> V. Romero <sup>1</sup> , J. Benavente <sup>1</sup> *, V. Vega <sup>2</sup> , J. García <sup>2</sup> , R. Zierold <sup>3</sup> , K. Nielsch <sup>3</sup> , V.M. Prida <sup>2</sup> , B. Hernando <sup>2</sup> , <sup>1</sup> Universidad de Málaga, Spain, <sup>2</sup> Universidad de Oviedo, Spain, <sup>3</sup> Universität Hamburg, Germany
[P1.018]	<b>PEBAX<sup>®</sup>-based composite hollow fibre membranes for gas separation</b> F. Tasselli, F. Bazzarelli, P. Bernardo*, J.C. Jansen, G. Clarizia, <i>Institute on Membrane Technology, Italy</i>
[P1.019]	<b>Simultaneous cultivation and pre-harvesting of microalgae in a lab-scale membrane photobioreactor (MPBR)</b> M.R. Bilad*, V. Discart, D. Vandamme, I. Foubert, K. Muylaert, I.F.J. Vankelecom, <i>KU Leuven, Belgium</i>
[P1.020]	<b>Electromembrane processing for the recovery of low-molecular weight bioactive compounds from model solutions</b> M. Bober*, J.G. Crespo, S. Velizarov, <i>Universidade Nova de Lisboa, Portugal</i>
[P1.021]	<b>Correlation of gas diffusivity and local chain mobility in polycarbonate/POSS nanocomposites as determined by broadband dielectric relaxation spectroscopy</b> M. Boehning*, N. Hao, A. Schoenhals, <i>BAM Federal Institute for Materials Research and Testing, Germany</i>
[P1.022]	<b>Kinetic analysis of gas sorption and gas induced dilation and relaxation behaviour of PIM-1 compared to other glassy polymers</b> M. Boehnig* <sup>1</sup> , O. Hoelck <sup>1,2</sup> , <sup>1</sup> BAM Federal Institute for Materials Research and Testing, Germany, <sup>2</sup> Fraunhofer IZM, Germany
[P1.023]	<b>CAPWA, water and energy recovery from flue gasses</b> M.E. Boerrigter* <sup>1</sup> , A.J.B. Kemperman <sup>1</sup> , L. Daal <sup>2</sup> , Z. Borneman <sup>1</sup> , <sup>1</sup> University of Twente, The Netherlands, <sup>2</sup> KEMA corporate, The Netherlands
[P1.024]	<b>Optimized hydrodynamics for membrane bioreactors with newtonian and non-newtonian fluids</b> L. Al-Shamary, H. Prieske, M. Kraume, L. Böhm*, <i>Technische Universität Berlin, Germany</i>
[P1.025]	<b>Plasminogen purification with affinity membranes for ophthalmology applications</b> C. Boi*, C. Castro, M. Mosconi, G.C. Sarti, <i>Università di Bologna, Italy</i>
[P1.026]	<b>Experimental study of binary mixture permeation of hydrogen and helium in nanocomposite MFI-alumina membrane for tritium processes</b> O. Borisevich* <sup>1</sup> , D. Demange <sup>1</sup> , M. Simplício <sup>1</sup> , M. Pera-Titus <sup>2</sup> , C.H. Nicolas <sup>2</sup> , <sup>1</sup> Karlsruhe Institute of Technology, Germany, <sup>2</sup> University of Lyon, France
[P1.027]	<b>A simple in vitro methodology for classifying dialysis membranes</b> A. Boschetti-de-Fierro*, M. Voigt, M. Storr, B. Krause, <i>Gambro Dialysatoren GmbH, Germany</i>

[P1.028]	<b>Development of nanocellulose/polypyrrole composites towards blood purification</b> D.O. Carlsson*, G. Nyström, N. Ferraz, L. Nyholm, A. Mihranyan, M. Strømme, <i>Uppsala University, Sweden</i>
[P1.029]	<b>In situ antibody recovery with pulsed diafiltration</b> F. Carstensen*, S. Berkus, K. Meier, J. Büchs, M. Wessling, <i>RWTH Aachen University, Germany</i>
[P1.030]	<b>Preparation of nano-emulsions using SPG membrane emulsification - application to vitamin E encapsulation</b> A. Laouini, H. Fessi, C. Charcosset*, <i>University Claude Bernard Lyon1, France</i>
[P1.031]	<b>Physicochemical properties of phospholipid bilayers modified by cucurbitacin E</b> L. Habib <sup>1,2</sup> , N. Khreich <sup>2</sup> , A. Jreij <sup>2</sup> , H. Greige <sup>2</sup> , C. Charcosset* <sup>1</sup> , <sup>1</sup> Université Claude Bernard Lyon 1, France, <sup>2</sup> Lebanese University, Lebanon
[P1.032]	<b>Dpermeation by zeolite NaA membranes</b> R.F. Zhou <sup>1</sup> , N. Hu <sup>1</sup> , X.W. Wu <sup>1</sup> , T. Gui <sup>1</sup> , X.S. Chen* <sup>1</sup> , H. Kita <sup>1</sup> , <sup>1</sup> Jiangxi Normal University, China, <sup>2</sup> Yamaguchi University, Japan
[P1.033]	<b>Preparation and characterization of hydrophobic composite inorganic membranes for gas and vapour</b> A. Bottino, G. Capannelli, A. Comite*, F. Ferrari, A. Garofalo, <i>University of Genoa, Italy</i>
[P1.034]	<b>Comparing performance of solid polymer electrolytes based on poly(vinylidene fluoride – trifluoroethylene) obtained by different processing techniques</b> C.M. Costa* <sup>1</sup> , M.M. Silva <sup>2</sup> , J.L. Gomez Ribelles <sup>3,4</sup> , S. Lanceros-Méndez <sup>1</sup> , <sup>1</sup> Universidade do Minho, Portugal, <sup>2</sup> Universidad Politécnica de Valencia, Spain, <sup>3</sup> CIBER en Bioingeniería, Spain
[P1.035]	<b>New copolymers for solid alkaline fuel cell membranes</b> G. Couture* <sup>1</sup> , S. Roualdes <sup>2</sup> , B. Ameduri <sup>1</sup> , <sup>1</sup> Institut Charles Gerhardt, France, <sup>2</sup> Institut Européen des Membranes, France
[P1.036]	<b>Modeling the permeability of gases in humidified ionomeric membranes</b> L. Del Bene <sup>1</sup> , M. Minelli <sup>2</sup> , M.G. De Angelis* <sup>1</sup> , M. Giacinti Baschetti <sup>1</sup> , <sup>1</sup> Università di Bologna, Italy, <sup>2</sup> CIRI-MAM, Italy
[P1.037]	<b>Sorption of CO2/CH4 mixtures in PIM-1 and PTMSP membranes: Experimental data at 35°C and modeling</b> O. Vopicka <sup>1</sup> , M.G. De Angelis* <sup>1</sup> , G.C. Sarti <sup>1</sup> , N. Du <sup>2</sup> , N. Li <sup>2</sup> , M.D. Guiver <sup>2</sup> , <sup>1</sup> Università di Bologna, Italy, <sup>2</sup> National Research Council of Canada, Canada
[P1.038]	<b>Sorption and diffusion of gases and vapors in poly (exo,endo-3,4-bis(trimethylsilyl)tricyclononene)</b> O. Vopicka <sup>1</sup> , M.G. De Angelis* <sup>1</sup> , G.C. Sarti <sup>1</sup> , Y. Yampolskii <sup>2</sup> , E. Finkelshtein <sup>2</sup> , M. Bermeshev <sup>2</sup> , <sup>1</sup> Università di Bologna, Italy, <sup>2</sup> Russian Academy of Sciences, Russia
[P1.039]	<b>Carbon dioxide separation from CO2/N2 and CO2/CH4 mixtures in dynamic flow system using supported ionic liquid membranes</b> B. Debski*, I. Cichowska-Kopczynska, M. Joskowska, R. Aranowski, <i>Gdansk University of Technology, Poland</i>
[P1.040]	<b>Ageing of hollow fiber membranes in polyvinylidene fluoride (PVDF) used in water treatment</b> J. Delattre* <sup>1,2</sup> , B. Rabaud <sup>2</sup> , A. Bréhant <sup>2</sup> , K. Glucina <sup>2</sup> , C. Sollogoub <sup>1</sup> , F. Thominet <sup>1</sup> , <sup>1</sup> Laboratoire Procédés et Ingénierie en Mécanique et Matériaux, France, <sup>2</sup> CIRSEE, France
[P1.041]	<b>Filtration of pharmaceutical polysaccharides: From the mass transfer to the industrial development</b> C. Delcroix* <sup>1</sup> , J.P. Bonnet <sup>1</sup> , M. Etienne <sup>2</sup> , P. Moulin <sup>1</sup> , <sup>1</sup> Aix-Marseille Université, France, <sup>2</sup> SANOFI, France
[P1.042]	<b>Preparation and gas separation properties of polyphenylsulfone(PPSF)/polyetherimide(PEI)/silica nanocomposite membranes</b> S. Deniz* <sup>1</sup> , S. Oksak <sup>1</sup> , E. Okumus <sup>2</sup> , <sup>1</sup> Yildiz Technical University, Turkey, <sup>2</sup> TUBITAK, Turkey
[P1.043]	<b>sulfonated PEEK blend membranes prepared with PPSF and PEI for gas separation</b> S. Deniz* <sup>1</sup> , S. Oksak <sup>1</sup> , E. Okumus <sup>1</sup> , <sup>1</sup> Yildiz Technical University, Turkey, <sup>2</sup> TUBITAK, Turkey
[P1.044]	<b>Performances of anaerobic membrane bioreactors treating thin stillage from bioethanol plants at different sludge retention times</b> A. Grelot <sup>1</sup> , R.K. Dereli* <sup>1</sup> , F.P. van der Zee <sup>1</sup> , J.G.M. van der Lubbe <sup>1</sup> , B. Heffernan <sup>1</sup> , <sup>1</sup> Veolia Environment Research & Innovation, France, <sup>2</sup> Delft University of Technology, The Netherlands, <sup>3</sup> Biothane Systems International, The Netherlands
[P1.045]	<b>Nitrogen and oxygen sorption in poly(2-methyl-5-vinyl tetrazole)</b> G. Dibrov*, A. Malakhov, A. Volkov, V. Volkov, A.V. Topchiev Institute of Petrochemical Synthesis, Russia
[P1.046]	<b>High-flux composite PTMSP membranes with long-term stable characteristics at elevated temperatures and pressures</b> G. Dibrov*, E. Novitskii, V. Vasilevskii, S. Bazhenov, V. Volkov, A.V. Topchiev Institute of Petrochemical Synthesis, Russia
[P1.047]	<b>Filtration properties of activated sludge filter cakes</b> D. Dominiak*, T. Jæger, K. Keiding, <i>Grundfos Holding A/S, Denmark</i>
[P1.048]	<b>Simulation of MEG packed distillation column using an equilibrium stage model-case study on operating parameters of Farsa petrochemical company -iran</b> N. Kasiri, Y. Dorj*, <i>Iran University of Science and Technology, Iran</i>
[P1.049]	<b>Accelerated ageing of crosslinked polyamide membranes</b> M. El Mansour* <sup>2</sup> , A. Ettori <sup>1,3</sup> , S. Luque <sup>2</sup> , J.R. Álvarez <sup>2</sup> , C. Causserand <sup>3</sup> , P. Aimar <sup>3</sup> , <sup>1</sup> VEOLIA Environment Research and Innovation, France, <sup>2</sup> University of Oviedo, Spain, <sup>3</sup> CNRS, France
[P1.050]	<b>Facilitated transport of UO22+ ions through supported liquid membranes (SLMs)Parameters and mechanism on the transport process</b> T. Eljaddi* <sup>1</sup> , O. Kamal <sup>1,2</sup> , A. Benjjar <sup>1</sup> , N. Sefiani <sup>1</sup> , M. Hlaïbi <sup>1,2</sup> , <sup>1</sup> Université Hassan II, Morocco, <sup>2</sup> Université de Rouen, France
[P1.051]	<b>Polysulfone and polyimide hollow fiber gas separation membrane preparation and module manufacturing</b> M. Etxeberria*, P. Corengia, S. Miguel, J. Zúñiga, E. Fernández-Gesalaga, P. Jiménez, <i>Tecnalia, Spain</i>
[P1.052]	<b>Bioflocculation of sewage in high loaded membrane bioreactors</b> L. Faust* <sup>1</sup> , H. Temmink <sup>1</sup> , A. Zwijnenburg <sup>1</sup> , H.H.M. Rijnaarts <sup>1</sup> , <sup>1</sup> Wetsus, The Netherlands, <sup>2</sup> Wageningen University, The Netherlands
[P1.053]	<b>Optimization of PIM-membranes for separation of CO2</b> G. Bengtson, S. Neumann, V. Filiz*, <i>Helmholtz-Zentrum Geesthacht, Germany</i>
[P1.054]	<b>Ex-situ characterization of stabilized sulfonated aromatic polymer (SAP) membranes for applications in PEMFCs</b> E. Fontananova*, A. Brunetti, E. Drioli, G. Barbieri, <i>CNR, Italy</i>
[P1.055]	<b>A novel membrane-based approach for the remote screening of as in waters</b> C. Fontàs* <sup>1</sup> , A. Batalla <sup>1</sup> , E. Anticó <sup>1</sup> , S.D. Kolev <sup>2</sup> , A. Illa <sup>3</sup> , <sup>1</sup> University of Girona, Spain, <sup>2</sup> The University of Melbourne, Australia, <sup>3</sup> Ingesco, Spain
[P1.056]	<b>Development of polymer inclusion membranes for the extraction of antibiotics from environmental waters</b> A. Garcia, A. Alvarez, V. Matamoros, V. Salvadó, C. Fontàs*, <i>University of Girona, Spain</i>
[P1.057]	<b>Boron removal from seawater by supported liquid membranes using cyphos IL 104 as a carrier</b> A. Fortuny*, M.T. Coll, A.M. Sastre, <i>Universitat Politecnica de Catalunya, Spain</i>

[P1.058]	<b>Treating ground water contaminated with high perchlorate concentrations by an ion exchange membrane bioreactor</b> S. Fox*, Z. Ronen, Y. Oren, J. Gilron, <i>Ben Gurion University of the Negev, Israel</i>
[P1.059]	<b>Comparison of approaches for evaluation of Flory-Huggins interaction parameters in polymer + liquid systems</b> A. Randová, L. Bartovská, S. Hovorka, K. Friess*, <i>Institute of Chemical Technology in Prague, Czech Republic</i>
[P1.060]	<b>Permeation and sorption of gases in mixed matrix membranes based on hyperbranched polyimides and hollow silica microspheres</b> M. Lanc, K. Friess*, V. Hnyek, P. Sysel, M. Celisova, F. Stepanek, <i>Institute of Chemical Technology Prague, Czech Republic</i>
[P1.061]	<b>Multicomponent gas and vapour sorption in high free volume polymers</b> K. Friess*, D. Radotinsky <sup>1</sup> , J.C. Jansen <sup>2</sup> , P.M. Budd <sup>3</sup> , N.B. McKeown <sup>4</sup> , K. Pilnacek <sup>1</sup> , <sup>1</sup> <i>Institute of Chemical Technology Prague, Czech Republic</i> , <sup>2</sup> <i>CNR, Italy</i> , <sup>3</sup> <i>The University of Manchester, UK</i> , <sup>4</sup> <i>Cardiff University, UK</i>
[P1.062]	<b>A pilot study for cosmetic wastewater treatment using a submerged flat sheet membrane bioreactor</b> I. Friha*, F. Feki, F. Karray, S. Sayadi, <i>Centre of Biotechnology of Sfax, Tunisia</i>
[P1.063]	<b>About aging of thin-film composite membranes</b> D. Fritsch, <i>Fraunhofer IAP, Germany</i>
[P1.064]	<b>Study of the correlations between filtration variables, sludge properties and operational conditions via statistical analysis in a MBR pilot plant</b> S. Gabarrón Fernández*, M. Dalmau Figueras <sup>1</sup> , J. Moreno Domingo <sup>1</sup> , H. Monclús Sales <sup>2,3</sup> , I. Rodríguez-Roda Layret <sup>2</sup> , J. Comas Matas <sup>1</sup> , <sup>1</sup> <i>LEQUIA, Spain</i> , <sup>2</sup> <i>ICRA, Spain</i> , <sup>3</sup> <i>OHL Medio Ambiente INIMA, Spain</i>
[P1.065]	<b>Influence of the ionic composition on the demineralisation of saccharide solutions by electrodialysis</b> S. Galier*, M. Courtin <sup>1,2</sup> , H. Roux-de Balmann <sup>1,2</sup> , <sup>1</sup> <i>Université de Toulouse, France</i> , <sup>2</sup> <i>CNRS, France</i>
[P1.066]	<b>Fractionation of the two major whey proteins in an electrophoretic membrane contactor</b> S. Galier*, H. Roux-de Balmann <sup>1,2</sup> , <sup>1</sup> <i>Université de Toulouse, France</i> , <sup>2</sup> <i>CNRS, France</i>
[P1.067]	<b>Degradation of ion-exchange membranes used in electrodialysis</b> W. Garcia-Vasquez*, L. Dammak <sup>1</sup> , C. Larchet <sup>1</sup> , V. Nikonenko <sup>2</sup> , D. Grande <sup>1</sup> , <sup>1</sup> <i>Institut de Chimie et Matériaux Paris Est, France</i> , <sup>2</sup> <i>Kuban State University, Russia</i>
[P1.068]	<b>Ex-situ ageing of ion exchange membranes: The effect of cleaning agents in electrodialysis</b> W. Garcia-Vasquez*, L. Dammak, C. Larchet, <i>Institut de Chimie et des Matériaux Paris-Est, France</i>
[P1.069]	<b>Gas permeation in perfluorosulphonated membranes: Influence of temperature and relative humidity</b> M. Giacinti Baschetti*, M. Minelli, J. Catalano, G.C. Sarti, <i>University of Bologna, Italy</i>
[P1.070]	<b>Study of transport properties of matrimid polyimide: Effect of thermal history and of physical aging</b> L. Ansaloni, M. Giacinti Baschetti*, M. Minelli, G.C. Sarti, <i>University of Bologna, Italy</i>
[P1.071]	<b>Comparison and optimization of multiphasic bioreactive system based on membrane technology for the production of high added value water unstable intermediate reaction</b> R. Mazzei, E. Drioli, L. Giorno*, <i>Institute on Membrane Technology, Italy</i>
[P1.072]	<b>Highly water selective mixed matrix blend membranes of poly(vinyl alcohol)-poly(vinyl pyrrolidone) incorporating phosphomolybdic acid for application in pervaporation assisted esterification of acetic acid with ethanol</b> G.S. Gokavi*, M.G. Mali, U.V. Desai, T.M. Aminabhavi, <i>Shivaji University, India</i>
[P1.073]	<b>Three years of evolution of an ultrafiltration hollow fiber membrane from an experimental membrane bioreactor</b> J. Arévalo, E. Marín, L.M. Ruíz, J. Pérez, M.A. Gómez*, <i>University of Granada, Spain</i>
[P1.074]	<b>Synthesis and characterization of chitosan membranes for application in PEMFC</b> R.G. González*, C.A. Cortés <sup>2</sup> , K. Hernández <sup>1,2</sup> , P. Sifuentes <sup>1,2</sup> , <sup>1</sup> <i>ESIQIE-IPN, Mexico</i> , <sup>2</sup> <i>CIITEC-IPN, Mexico</i>
[P1.075]	<b>Nano-thin membrane with immobilized microorganisms as a system for anti-tumor factor production</b> L.H. Granicka*, M. Borkowska <sup>1</sup> , M. Lyzniak <sup>2</sup> , A. Grzeczakowicz <sup>1</sup> , R. Stachowiak <sup>3</sup> , M. Szklarczyk <sup>3</sup> , <sup>1</sup> <i>Polish Academy of Science, Poland</i> , <sup>2</sup> <i>Institute of Hematology and Transfusion Medicine, Poland</i> , <sup>3</sup> <i>University of Warsaw, Poland</i>
[P1.077]	<b>Preliminary study of oncologic ward wastewater treatment by membrane bioreactor</b> P. Hamon*, P. Moulin <sup>1</sup> , L. Ercolei <sup>2</sup> , B. Lacarelle <sup>1</sup> , B. Marrot <sup>1</sup> , <sup>1</sup> <i>Aix-Marseille University, France</i> , <sup>2</sup> <i>SEM, France</i>
[P1.078]	<b>Facilitated transport of Zn<sup>2+</sup>, Ni<sup>2+</sup> and Co<sup>2+</sup> by liquid membrane using a tertio amine as carrier</b> F. Hassaine-Sadi*, M. Graiche, A. Boudaa, <i>University of Sciences and Technology Houari Boumediene, Algeria</i>
[P1.079]	<b>Novel composite proton exchange membrane materials for intermediate temperature fuel cells</b> M. Hattenberger*, S. Sharma <sup>1</sup> , W. Bujalski <sup>1</sup> , B. Pollet <sup>1</sup> , V. Self <sup>2</sup> , J. Richmond <sup>2</sup> , <sup>1</sup> <i>University of Birmingham, UK</i> , <sup>2</sup> <i>Tata Motors European Technical Centre, UK</i>
[P1.080]	<b>New polymer grafted membrane for facilitated transport of hexavalent chromium. Influence of temperature and transport mechanism</b> A. Benjjar <sup>1</sup> , T. Eljaddi <sup>1</sup> , O. Kamal <sup>1,2</sup> , K. Touaj <sup>1</sup> , L. Lebrun <sup>1,2</sup> , M. Hlaïbi*, <sup>1</sup> <i>Université Hassan II, Morocco</i> , <sup>2</sup> <i>Université de Rouen, France</i>
[P1.081]	<b>Flexible nanocomposite membrane of bacterial cellulose/polyaniline</b> M. Park, J. Cheng, S. Shin, S. Ahn, H.J. Kim, J. Hyun*, <i>Seoul National University, Republic of Korea</i>
[P1.082]	<b>Drug release from electrospun poly(lactic acid) membranes and their cell viability in vitro test</b> A.P.S. Immich*, M. Lis <sup>2</sup> , L.H. Catalani <sup>1</sup> , R.L. Boemo <sup>3</sup> , J.A. Tornero <sup>2</sup> , <sup>1</sup> <i>University of São Paulo, Brazil</i> , <sup>2</sup> <i>Polytechnic University of Catalonia, Spain</i> , <sup>3</sup> <i>Autonomous University of Barcelona, Spain</i>
[P1.083]	<b>CO<sub>2</sub> selective membrane materials on the basis of poly(vinyltrimethylsilane)-graft-poly(ethylene glycol)</b> I. Ivanova*, D. Roizard <sup>2</sup> , D. Barth <sup>2</sup> , S. Shishatskiy <sup>3</sup> , V. Khotimskiy <sup>1</sup> , <sup>1</sup> <i>RAS, Russia</i> , <sup>2</sup> <i>ENSIC, France</i> , <sup>3</sup> <i>Helmholtz-Zentrum, Geesthacht, Germany</i>
[P1.084]	<b>Model development to access the ageing of polymeric membranes due to chemical cleaning</b> S.Z. Abdullah, P.R. Bérubé, S. Jankhah*, <i>University of British Columbia, Canada</i>
[P1.085]	<b>Physical ageing study of post-treated pim-1 membranes: Effect on gas transport properties</b> P. Bernardo <sup>1</sup> , F. Bazzarelli <sup>1</sup> , J.C. Jansen*, G. Clarizia <sup>1</sup> , F. Tasselli <sup>1</sup> , C.R. Mason <sup>2</sup> , <sup>1</sup> <i>CNR, Italy</i> , <sup>2</sup> <i>University of Manchester, UK</i> , <sup>3</sup> <i>Institute of Chemical Technology, Czech Republic</i> , <sup>4</sup> <i>A.V. Topchiev Institute of Petrochemical Synthesis, Russia</i> , <sup>5</sup> <i>N.N. Semenov Institute of Chemical Physics, Russian Academy of Sciences, Russia</i>
[P1.086]	<b>Separation of volatile organic compounds from air by PEBAX<sup>®</sup>/room temperature ionic liquid gel membranes</b> V. Jarmarová*, J.C. Jansen <sup>2</sup> , F. Bazzarelli <sup>2</sup> , P. Bernardo <sup>2</sup> , G. Clarizia <sup>2</sup> , K. Pilnacek <sup>3</sup> , <sup>1</sup> <i>Institute of Chemical Process Fundamentals of the ASCR v.v.i., Czech Republic</i> , <sup>2</sup> <i>CNR, Italy</i> , <sup>3</sup> <i>Institute of Chemical Technology Prague, Czech Republic</i> , <sup>4</sup> <i>Research Institute of Inorganic Chemistry, Czech Republic</i>

[P1.087]	<b>Different supported liquid membranes for facilitated transport of <math>\text{VO}_2^+</math> ions influence of temperature factor and transport mechanism</b> O. Kamal <sup>1,2</sup> , T. Eljaddi <sup>1</sup> , A. Benjjar <sup>1</sup> , L. Lebrun <sup>1,2</sup> , M. Hlaïbi <sup>1,2</sup> , <sup>1</sup> Université Hassan II, Morocco, <sup>2</sup> Université de Rouen, France
[P1.088]	<b>Influence of electrical field and electrocoagulation on the performance of submerged membrane bioreactors</b> S. Bayar, H. Arslan, A. Karagunduz*, Gebze Institute of Technology, Turkey
[P1.089]	<b>Development of crosslinked sodium-alginate membranes using polystyrene sulfonic acid-co-maleic acid for pervaporation dehydration of isopropanol</b> M.Y. Kariduraganavar*, P.S. Rachipudi, Karnatak University, India
[P1.090]	<b>Less calcium carbonate fouling in the pre-dialyzer ultrafilter using a new dialysis fluid containing citrate</b> D. Karlsson*, P.O. Borgqvist, M. Nilsson, G.I. Bertinsson, Gambro R&D, Sweden
[P1.091]	<b>Electric field induces alignment of actin filaments</b> H. Kaur <sup>1</sup> , S. Kumar <sup>2</sup> , L.M. Bharadwaj <sup>2</sup> , <sup>1</sup> Sri Guru Granth Sahib World University, India, <sup>2</sup> Central Scientific Instruments Organisation, India
[P1.092]	<b>A simple closed-loop membrane cascade system for purification of Active Pharmaceutical Ingredients (API)</b> J.F. Kim*, A. Freitas Da Silva, P.R.J. Gaffney, A.G. Livingston, Imperial College London, UK
[P1.093]	<b>Sulfonated poly(arylene ether ketone) membranes bearing proton conducting cross-linker for fuel cell application</b> S. Zhou, D. Kim*, S.Y. Han, Sungkyunkwan University, Republic of Korea
[P1.094]	<b>Sulfonated peek/mesoporous benzene-silica composite membranes operable at low humidity</b> X. Lei, D. Kim*, J. Park, Sungkyunkwan University, Republic of Korea
[P1.095]	<b>Terminally-crosslinked block copolymer as a novel polymer electrolyte for both PEMFC and DMFC application</b> R.L. Thankamony, T.H. Kim*, University of Incheon, Republic of Korea
[P1.096]	<b>Effect of initial <math>\alpha</math>-phase content on permeability of silicon carbide membrane supports</b> Y.W. Kim <sup>1</sup> , J.H. Eom <sup>1</sup> , I.H. Song <sup>2</sup> , <sup>1</sup> University of Seoul, Republic of Korea, <sup>2</sup> Korea Institute of Materials Science, Republic of Korea
[P1.097]	<b>Preparation and characterization of novel titania-modified ceramic membranes</b> D.E. Koutsonikolas <sup>1</sup> , G. Pantoleontos <sup>2</sup> , S.P. Kaldis <sup>1</sup> , V.T. Zaspalis <sup>1,3</sup> , G.P. Sakellariopoulos <sup>3</sup> , <sup>1</sup> CPERI, CERTH, Greece, <sup>2</sup> UOWM, Greece, <sup>3</sup> AUTH, Greece
[P1.098]	<b>Temperature control system for measuring planar lipid bilayer properties</b> P. Kramar*, A. Polak, D. Miklavčič, University of Ljubljana, Slovenia
[P1.099]	<b>Preparation and properties of organic-inorganic hybrid facilitated olefin separation membranes via sol-gel method</b> K. Kuraoka*, S. Matsuura, K. Ueda, Kobe University, Japan
[P1.100]	<b>Study of thin films containing polyelectrolyte and block copolymer for nano-filtration using in microfluidics</b> S.H. Lee*, K.M. Jang, S.Y. Yang, Chungnam National University, Republic of Korea
[P1.101]	<b>Does reduction of SMPs by addition of inorganic coagulant lead to a better biofim-MBR performance?</b> I.I. Ivanovic, T.O.L. Leiknes*, Norwegian University of Science and Technology, Norway
[P1.103]	<b>Single-step fabrication of triple-layer ceramic hollow fibers for micro-tubular solid oxide fuel cells</b> T. Li*, Z. Wu, B. Kingsbury, K. Li, Imperial College London, UK
[P1.104]	<b>Synthesis and permeation properties of small-pore titanosilicate AM-3 membranes</b> S.P. Cardoso, P.F. Lito*, J. Rocha, Z. Lin, C.M. Silva, University of Aveiro, Portugal
[P1.105]	<b>The impact of the recirculation on the increased efficiency of municipal wastewater loaded with oils and fats during the treatment in membrane bioreactor</b> E. Łobos-Moysa, Silesian University of Technology, Poland
[P1.106]	<b>Characterisation of (bio)fouling on used reverse osmosis membranes</b> M. Raulio <sup>1</sup> , R. Juvonen <sup>1</sup> , H.L. Alakomi <sup>1</sup> , J. Ekman <sup>2</sup> , M. Hesampour <sup>2</sup> , T. Lundin <sup>2</sup> , <sup>1</sup> VTT Technical Research Centre of Finland, Finland, <sup>2</sup> Kemira Espoo Research Centre, Finland
[P1.107]	<b>Treatment of landfill leachate in membranes bioreactor with yeast (<i>Saccharomyces cerevisiae</i>)</b> G.C.B. Brito, M.C.S. Amaral, L.C. Lange, R.C.A. Pereira, V.L. Santos, M. Machado*, Federal University of Minas Gerais, Brazil
[P1.108]	<b>Preparation of TiO<sub>2</sub> membranes on Silicon Carbide supports for water filtration applications</b> C.D. Madhusoodana <sup>1</sup> , S.P. Manjunath <sup>2</sup> , R.N. Das <sup>1</sup> , <sup>1</sup> Ceramic Technological Institute, India, <sup>2</sup> Siddaganga Institute of Technology, India
[P1.109]	<b>Wastewater particle size distribution variation in a real membrane bioreactor plant</b> J.J. Garcia-Mesa, J. Martín-Pascual*, M.M. Muñoz, F. Delgado-Ramos, E. Hontoria, J.M. Poyatos, University of Granada, Spain
[P1.110]	<b>Toward therapeutic plasmids purification by hydrophobic interaction membrane chromatography</b> M. Mateus*, L. Raiado-Pereira, D.M.F. Prazeres, Instituto Superior Técnico, Portugal
[P1.111]	<b>Transport properties and submolecular organization in high permeable 1,2-disubstituted polyacetylenes</b> S.M. Matson <sup>1</sup> , E.G. Litvinova <sup>1</sup> , E.Y. Sultanov <sup>1</sup> , A.A. Ezhov <sup>2</sup> , V.S. Khotimskiy <sup>1</sup> , <sup>1</sup> RAS, Russia, <sup>2</sup> Moscow State University, Russia
[P1.112]	<b>Pervaporation - the way to efficient hybrid processes</b> E. Maus, Sulzer Chemtech AG, Switzerland
[P1.113]	<b>The multiple benefits of high concentration electrolyte in chemisorption using a micro-porous hollow fibre membrane contactor (hfmc)</b> A. McLeod*, B. Jefferson, E.J. McAdam, Cranfield University, UK
[P1.114]	<b>Highly functionalized and partially fluorinated block copolymers for MTPEM application</b> J. Meier-Haack*, C. Vogel, W. Butwilowski, K. Schlenstedt, Leibniz-Institut fuer Polymerforschung Dresden e.V., Germany
[P1.115]	<b>Effect of molecular structure and acidic strength on proton conductivity and water retention capability</b> J. Meier-Haack <sup>1</sup> , A. Poetschke <sup>2</sup> , C. Vogel <sup>1</sup> , <sup>1</sup> Leibniz-Institut fuer Polymerforschung Dresden e.V., Germany, <sup>2</sup> Wacker Chemie AG, Germany
[P1.116]	<b>Novel calix[4]arene functionalized diglycolamides for separation of actinides: Supported liquid membrane studies</b> S.A. Ansari <sup>1</sup> , P.K. Mohapatra <sup>1</sup> , W. Verboom <sup>2</sup> , M. Iqbal <sup>1</sup> , <sup>1</sup> Bhabha Atomic Research Centre, India, <sup>2</sup> University of Twente, The Netherlands
[P1.117]	<b>Comparative evaluation of two calix-crown-6 compounds for Cesium transport from acidic feed solutions</b> P.K. Mohapatra*, D.R. Raut, M.K. Choudhary, S.K. Nayak, Bhabha Atomic Research Centre, India

[P1.118]	<b>Platinum-incorporated perfluorinated ionomer as solid polymer electrolyte in electric double layer capacitors</b> P.C. Lee <sup>1</sup> , J.S. Oh <sup>2</sup> , T. Hwang <sup>2</sup> , S.K. Jeoung <sup>1</sup> , J.D. Nam <sup>*2</sup> , <sup>1</sup> Korea Automotive Technology Institute, Republic of Korea, <sup>2</sup> Sungkyunkwan University, Republic of Korea
[P1.119]	<b>Influence of preparing method on the properties of sulfonated poly(arylene ether sulfone)/modified phosphotungstic acid composite proton exchange membranes</b> S.Y. Nam <sup>*1</sup> , D.J. Kim <sup>1</sup> , H.Y. Hwang <sup>2</sup> , S.Y. Ha <sup>3</sup> , <sup>1</sup> Gyeongsang National University, Republic of Korea, <sup>2</sup> Aekyung Petrochemical Co. Ltd., Republic of Korea, <sup>3</sup> Airrane Co. Ltd., Republic of Korea
[P1.120]	<b>Study on the effect of operating conditions on the performance of polysulfone hollow fiber membrane for gas separation</b> S.Y. Nam <sup>*1</sup> , D.J. Kim <sup>1</sup> , H.Y. Hwang <sup>2</sup> , J.M. Lee <sup>1,2</sup> , S.Y. Ha <sup>3</sup> , <sup>1</sup> Gyeongsang National University, Republic of Korea, <sup>2</sup> Aekyung Petrochemical Co. Ltd., Republic of Korea, <sup>3</sup> Airrane Co. Ltd., Republic of Korea
[P1.121]	<b>Separation and concentration of SF<sub>6</sub> from N<sub>2</sub>/SF<sub>6</sub> gas mixtures</b> S.E. Nam <sup>*</sup> , A. Park, B.S. Kim, Y.I. Park, Korea Research Institute of Chemical Technology, Republic of Korea
[P1.122]	<b>Analysis of surface modification effect of polymer membranes on the interaction with blood components and microorganisms</b> V.G. Nazarov <sup>*1</sup> , A.V. Tarasov <sup>1</sup> , <sup>1</sup> The Moscow State Ivan Fyedorov University of Printing Arts, Russia, <sup>2</sup> The research-and-production enterprise "Technofilter", Russia
[P1.123]	<b>Feasibility study of gas separation membranes for biohydrogen separation</b> N. Nemestóthy <sup>*</sup> , P. Bakonyi, G. Tóth, K. Bélafi-Bakó, University of Pannonia, Hungary
[P1.124]	<b>Predicting the fate of emerging trace organic contaminants of concern during MBR treatment based on their molecular properties</b> K.C. Wijekoon, L.D. Nghiem <sup>*</sup> , F.I. Hai, J. Kang, W.E. Price, University of Wollongong, Australia
[P1.125]	<b>Microporous poly(vinylidene fluoride – trifluoroethylene) / zeolite membranes for lithium-ion battery applications</b> J. Nunes-Pereira <sup>*</sup> , A.C. Lopes, C.M. Costa, M.M. Silva, S. Lanceros-Méndez, Universidade do Minho, Portugal
[P1.126]	<b>Application of lipid membranes for triggered-drug delivery using an alternating magnetic field</b> E. Bringas <sup>1</sup> , I. Ortiz <sup>*1</sup> , P. Stroeve <sup>2</sup> , <sup>1</sup> University of Cantabria, Spain, <sup>2</sup> University of California-Davis, USA
[P1.127]	<b>Competitive transport of hydrochloric acid and zinc chloride through diffusion dialysis and electro dialysis membranes. Recovery of spent pickling solutions</b> I. Ortiz Gándara, M.F. San Román, I. Ortiz <sup>*</sup> , University of Cantabria, Spain
[P1.128]	<b>High performance micro-tubular solid oxide fuel cell fabricated using a novel co-extrusion/co-sintering technique</b> M.H.D. Othman <sup>*1</sup> , K. Li <sup>2</sup> , A.F. Ismail <sup>1</sup> , <sup>1</sup> Universiti Teknologi Malaysia, Malaysia, <sup>2</sup> Imperial College London, UK
[P1.129]	<b>Chronopotentiometric study of concentration polarization and water dissociation of cation exchange membranes</b> K. Oulmi <sup>*</sup> , K.E. Bouhidel, University of Batna, Algeria
[P1.130]	<b>Evaluation of the Na<sup>+</sup> transport properties through a cation exchange membrane by the electrochemical technics: Linear sweep voltammetry (LSV) and chronopotentiometry</b> K. Oulmi, University of Batna, Algeria
[P1.131]	<b>Noise spectra of K<sup>+</sup> and NH<sub>4</sub><sup>+</sup> ion transport at a cation exchange membrane interface</b> K. Oulmi <sup>*</sup> , K.E. Bouhidel, University of Batna, Algeria
[P1.132]	<b>Electric mass transport of K<sup>+</sup> and NH<sub>4</sub><sup>+</sup> through cation exchange membrane CMX in over limiting mode: The role played by dissociation of water</b> K. Oulmi, University of Batna, Algeria
[P1.133]	<b>Preparation and characterization of Pd-Ag alloy membranes via simultaneous plating by continuous addition of Ag to the electroless plating solution</b> D.A. Pacheco Tanaka <sup>*</sup> , E. Fernández, J. Zúñiga, M. Etxeberria, S. Miguel, P. Corengia, TECNALIA, Spain
[P1.134]	<b>Setting up of a method of pervaporation for improving alcohol-free beer</b> A. del Olmo, C.A. Blanco, L. Palacio <sup>*</sup> , P. Prádanos, A. Hernández, University of Valladolid, Spain
[P1.135]	<b>Study of hydraulic-electric plate-and-frame membrane process to purify protein</b> Y. Park, Daejin University, Republic of Korea
[P1.136]	<b>Oxygen separation of LSTF coated BSCF tube membrane</b> J.P. Kim, J.H. Park <sup>*</sup> , Korea Institute of Energy Research, Republic of Korea
[P1.137]	<b>Hydrogen permeation properties of V<sub>89.8</sub>Cr<sub>10</sub>Y<sub>0.2</sub> alloy membrane</b> S.I. Jeon, J.H. Park <sup>*</sup> , E. Magnone, Korea Institute of Energy Research, Republic of Korea
[P1.138]	<b>Nanocomposite membranes of silica and polysulfone for improved gas permeation</b> M.B. Patil <sup>*1</sup> , S.A. Al-Muhtaseb <sup>1</sup> , E. Sivaniah <sup>2</sup> , <sup>1</sup> Qatar University, Qatar, <sup>2</sup> University of Cambridge, UK
[P1.139]	<b>Sustainable energy generation by reverse electro dialysis</b> S. Pawlowski <sup>*</sup> , J.P.G. Crespo, S. Velizarov, REQUIMTE/CQFB, Portugal
[P1.140]	<b>The preparation and testing of a polymer inclusion membrane for mercury removal</b> P. Mornane, S.D. Kolev, R.W. Catrall, J.M. Perera <sup>*</sup> , The University of Melbourne, Australia
[P1.141]	<b>Respirometric operational issues related to mbr systems working at high sludge retention times</b> L.M. Ruiz, J.I. Pérez <sup>*</sup> , M.A. Gómez, University of Granada, Spain
[P1.142]	<b>MBR pilot plants operational problems during start up</b> J.I. Pérez <sup>*</sup> , L.M. Ruiz, J. Arévalo, J. Parada, B. Moreno, M.A. Gómez, University of Granada, Spain
[P1.143]	<b>Potassium permeable barrier membrane for in vivo application</b> T. Pieper <sup>*</sup> , M. Ulbricht, University of Duisburg-Essen, Germany
[P1.144]	<b>Determination of mixed gas permeability of high free volume polymers using direct mass spectrometric analysis of the gas compositions</b> K. Pilnacek <sup>*1</sup> , J.C. Jansen <sup>2</sup> , P. Bernardo <sup>2</sup> , G. Clarizia <sup>2</sup> , F. Bazzarelli <sup>2</sup> , F. Tasselli <sup>2</sup> , <sup>1</sup> Institute of Chemical Technology Prague, Czech Republic, <sup>2</sup> Institute on Membrane Technology, Italy, <sup>3</sup> University of Manchester, UK, <sup>4</sup> Cardiff University, UK
[P1.145]	<b>Assessment of the fate of emerging contaminants in the biomass concentrator reactor (BCR) during conventional aerobic and aerobic/anoxic waterwater treatment</b> W.E. Platten <sup>*1</sup> , P. Campo <sup>1</sup> , D. Scott <sup>1</sup> , T. Hidaka <sup>1</sup> , M.T. Suidan <sup>1</sup> , A.D. Venosa <sup>2</sup> , <sup>1</sup> University of Cincinnati, USA, <sup>2</sup> U.S. Environmental Protection Agency, USA
[P1.146]	<b>Ageing mechanism of polyethersulfone/polyvinylpyrrolidone membranes in contact with bleach water</b> R. Prulho <sup>*1,2</sup> , A. Rivaton <sup>1,2</sup> , S. Therias <sup>1,2</sup> , J.L. Gardette <sup>1,2</sup> , <sup>1</sup> Université Blaise Pascal, France, <sup>2</sup> CNRS, France

[P1.147]	<b>Coupling UF and micro-waves to accelerate ageing of PES membrane by sodium hypochlorite: A lab scale methodology allowing preparation of aged membrane similar to long term aged membrane obtained at industrial scale</b> C. Leperoux, M. Rabiller-Baudry*, <i>Université Rennes 1, France</i>
[P1.148]	<b>Ageing of polysulfone ultrafiltration membranes for drinking water production in contact with sodium hypochlorite or formulated detergents</b> C. Regula <sup>*2,1</sup> , E. Carretier <sup>1</sup> , Y. Wyart <sup>1</sup> , M. Sergent <sup>3</sup> , G. Gésan-Guizou <sup>4</sup> , A. Vincent <sup>2</sup> , <sup>1</sup> <i>Aix Marseille Université, France</i> , <sup>2</sup> <i>ECOLAB, France</i> , <sup>3</sup> <i>INRA, France</i> , <sup>4</sup> <i>Centre Interdisciplinaire de Nanoscience de Marseille, France</i>
[P1.149]	<b>Composite sPEEK membranes for vanadium redox batteries application</b> A. Saccà*, A. Carbone, R. Pedicini, I. Gatto, E. Passalacqua, <i>CNR, Italy</i>
[P1.150]	<b>Enhanced high-temperature polymer electrolyte membrane for fuel cells based on 1H-1,2,3-benzotriazole and sulfonated poly(vinyl alcohol)</b> M. Safak Boroglu <sup>*1</sup> , S. Unugur Celik <sup>2</sup> , A. Bozkurt <sup>2</sup> , I. Boz <sup>1</sup> , <sup>1</sup> <i>Istanbul University, Turkey</i> , <sup>2</sup> <i>Fatih University, Turkey</i>
[P1.151]	<b>Facilitated transport of Cu (II), Zn(II) and Cd(II) through supported liquid membrane mediated by try-n-butyl phosphate</b> I. Ait khaldoun, S. Iadaden, A. Sahmoune*, <i>Université Mouloud Mammeri de Tizi-Ouzou, Algeria</i>
[P1.152]	<b>Membrane performance of high-silica CHA-type zeolite membranes in vapor permeation for dehydration of hydrous 2-propanol.</b> K. Sato*, T. Kyotani, T. Kikuchi, <i>Mitsubishi Chemical Corporation, Japan</i>
[P1.153]	<b>Superparamagnetic nanocomposite PEO/PLLA-based fibrous membranes: Synthesis, characterization and evaluation in drug release applications</b> I. Savva <sup>*1</sup> , O.M. Marinica <sup>2</sup> , A. Taculescu <sup>3,2</sup> , L. Vekas <sup>3</sup> , T. Krasia-Christoforou <sup>1</sup> , <sup>1</sup> <i>University of Cyprus, Cyprus</i> , <sup>2</sup> <i>University "Politehnica" Timisoara, Romania</i> , <sup>3</sup> <i>Romanian Academy, Romania</i>
[P1.154]	<b>PEO/PLLA and PVP/PLLA-based magnetoresponsive nanocomposite membranes: Fabrication via electrospinning, characterization and evaluation in drug delivery</b> I. Savva <sup>*1</sup> , D. Constantinou <sup>1</sup> , L. Evaggelou <sup>1</sup> , O.M. Marinica <sup>2</sup> , A. Taculescu <sup>3,2</sup> , L. Vekas <sup>3</sup> , <sup>1</sup> <i>University of Cyprus, Cyprus</i> , <sup>2</sup> <i>University "Politehnica" Timisoara, Romania</i> , <sup>3</sup> <i>Romanian Academy, Romania</i>
[P1.155]	<b>Manufacturing, characterization and modification of BCFZ capillary membranes for oxygen separation</b> M. Zipperle <sup>1</sup> , J. Caro <sup>2</sup> , S. Schirmeister <sup>3</sup> , T. Schiestel <sup>*1</sup> , <sup>1</sup> <i>Fraunhofer Institute for Interfacial Engineering and Biotechnology, Germany</i> , <sup>2</sup> <i>University of Hannover, Germany</i> , <sup>3</sup> <i>Uhde GmbH, Germany</i>
[P1.156]	<b>Feasibility studies on enzymatic production of galacto-oligosaccharides from lactose and recovery of enzyme through ultrafiltration</b> P. Sen <sup>*1,2</sup> , S. Deb <sup>1</sup> , C. Bhattacharjee <sup>1</sup> , R. Chowdhury <sup>1</sup> , <sup>1</sup> <i>Jadavpur University, India</i> , <sup>2</sup> <i>Heritage Institute of Technology, India</i>
[P1.157]	<b>The recovery of lower alcohols from dilute aqueous solutions by vapor phase membrane separation method</b> A.V. Yakovlev, M.G. Shalygin*, S.M. Matson, E.G. Litvinova, V.S. Khotimsky, V.V. Tepliyakov, <i>RAS, Russia</i>
[P1.158]	<b>Facilitated transport of CO<sub>2</sub> through carboxymethyl chitosan(CMCS)/polyethylenimine(PEI) blend membrane</b> J.N. Shen*, Y.S. Chen, G.N. Zeng, J.H. Qiu, <i>Zhejiang University of Technology, China</i>
[P1.159]	<b>Curved polysulfone hollow fibers for gas separation</b> T.G. Skog*, M.B. Hägg, <i>NTNU, Norway</i>
[P1.160]	<b>Sludge residence time and membrane fouling: What is the connection?</b> R. Van den Broeck <sup>1</sup> , J. Van Dierdonck <sup>1</sup> , P. Nijskens <sup>2</sup> , C. Dotremont <sup>3</sup> , P. Krzeminski <sup>4</sup> , I. Smets <sup>*1</sup> , <sup>1</sup> <i>Katholieke Universiteit Leuven, Belgium</i> , <sup>2</sup> <i>Keppel Seghers, Belgium</i> , <sup>3</sup> <i>VITO, Belgium</i> , <sup>4</sup> <i>TU Delft, The Netherlands</i>
[P1.161]	<b>High performance gas separation membrane from a polymer of intrinsic microporosity by photochemical surface modification</b> Q. Song <sup>*1</sup> , S.K. Nataraj <sup>1</sup> , P. Zavala Rivera <sup>1</sup> , E. Sivaniah <sup>1</sup> , S.A. Al-Muhtaseb <sup>2</sup> , <sup>1</sup> <i>University of Cambridge, UK</i> , <sup>2</sup> <i>Qatar University, Qatar</i>
[P1.162]	<b>Influence of different proton conducting ionic liquids on various properties of nafion in the regard of HT-PEMFC application</b> R. Sood <sup>*1,2</sup> , C. Iojoiu <sup>1</sup> , E. Espuche <sup>2</sup> , G. Gebel <sup>3</sup> , S. Lyonard <sup>3</sup> , H. Mendil-Jakani <sup>3</sup> , <sup>1</sup> <i>Laboratoire d'Electrochimie et de Physicochimie des Matériaux et des Interfaces, France</i> , <sup>2</sup> <i>Université Lyon 1, France</i> , <sup>3</sup> <i>CEA, France</i>
[P1.163]	<b>Phosphonated graft copolyimide for direct methanol fuel cell</b> N. Srinate*, S. Thongyai, R.A. Weiss, P. Praserttham, <i>Chulalongkorn University, Thailand</i>
[P1.164]	<b>Novel hollow fiber membranes of poly(ε-caprolactone) and poly(lactic-co-glycolic acid) for blood vessel regeneration</b> N. Diban <sup>1,3</sup> , S. Haimi <sup>1,3</sup> , L. Bolhuis - Verteeg <sup>1</sup> , D. Stamatialis <sup>*1</sup> , <sup>1</sup> <i>University of Twente, The Netherlands</i> , <sup>2</sup> <i>University of Cantabria, Spain</i> , <sup>3</sup> <i>University of Tampere, Finland</i>
[P1.165]	<b>Metal ion charged mixed matrix membrane for selective adsorption of hemoglobin</b> K. Tetala, K. Skrzypek, D. Stamatialis*, <i>University of Twente, The Netherlands</i>
[P1.166]	<b>Modification of nanoporous inorganic membranes on the base of exfoliated graphite by direct gas-phase fluorination</b> E.A. Efimova <sup>1</sup> , D.A. Syrtsova <sup>*1</sup> , V.V. Tepliyakov <sup>1</sup> , S.G. Ionov <sup>2</sup> , A.P. Kharitonov <sup>1</sup> , <sup>1</sup> <i>RAS, Russia</i> , <sup>2</sup> <i>INUMIT Company, Russia</i>
[P1.167]	<b>New composite membranes based on ZIF-8 for gas separation</b> D.A. Syrtsova*, V.I. Isaeva, M. Barkova, V.V. Tepliyakov, L.M. Kustov, <i>RAS, Russia</i>
[P1.168]	<b>Performance of anaerobic membrane bioreactor for sewage sludge at ambient and mesophilic temperature</b> M. Takashima, <i>Fukui University of Technology, Japan</i>
[P1.169]	<b>liquid-membrane-gel extraction of metallic species (Cu<sup>2+</sup> and Zn<sup>2+</sup>)</b> N. Taoualit*, I. Abidet, D. Hadj-Boussaad, <i>University of Blida, Algeria</i>
[P1.170]	<b>Ion exchange membranes for the selective separation of monovalent cation</b> S. Tas <sup>*1</sup> , H. Miedema <sup>2</sup> , K. Nijmeijer <sup>1</sup> , <sup>1</sup> <i>University of Twente, The Netherlands</i> , <sup>2</sup> <i>Wetsus, Centre of Excellence for Sustainable Water Technology, The Netherlands</i>
[P1.171]	<b>CO<sub>2</sub> sorption and transport in copoly(ether-imide)s having poly(propylene oxide) segments at different temperatures and pressures</b> A. Tena <sup>*1,2</sup> , M. Minelli <sup>3</sup> , A.E. Lozano <sup>1</sup> , M.G. De Angelis <sup>4</sup> , A. Hernandez <sup>2</sup> , <sup>1</sup> <i>CSIC, Spain</i> , <sup>2</sup> <i>Universidad de Valladolid, Spain</i> , <sup>3</sup> <i>CIRI-MAM, Italy</i> , <sup>4</sup> <i>Università di Bologna, Italy</i>
[P1.172]	<b>Noble gases as diffusion probes for molecular-selective gas transfer through polymeric membranes</b> A. Golub, V. Tepliyakov*, <i>RAS, Russia</i>
[P1.173]	<b>Nanoporous aluminum oxide membranes for separation and biofunctionalization</b> A. Thormann <sup>*1</sup> , L. Berthold <sup>1</sup> , P. Göring <sup>2</sup> , M. Lelonek <sup>2</sup> , A. Heilmann <sup>1</sup> , <sup>1</sup> <i>Fraunhofer Institute for Mechanics of Materials, Germany</i> , <sup>2</sup> <i>SmartMembranes GmbH, Germany</i>

[P1.174]	<b>Effect of entrained glycols and higher hydrocarbons on the CO<sub>2</sub>-CH<sub>4</sub> separation performance of a PVAm/PVA blend composite membrane</b> M.W. Uddin*, M.B. Hägg, <i>Norwegian University of Science and Technology, Norway</i>
[P1.175]	<b>Gas permeation properties of 1-hexyl-3-methylimidazolium chloride supported liquid membranes</b> G. Zarca, I. Ortiz, A. Urriaga*, <i>University of Cantabria, Spain</i>
[P1.176]	<b>Hydrogen separation from multicomponent gas mixtures containing CO, N<sub>2</sub> and CO<sub>2</sub> using matrimid asymmetric hollow fiber membranes</b> O.C. David <sup>1</sup> , D. Gorri <sup>1</sup> , K. Nijmeijer <sup>2</sup> , I. Ortiz <sup>1</sup> , A. Urriaga* <sup>1</sup> , <sup>1</sup> <i>Universidad de Cantabria, Spain</i> , <sup>2</sup> <i>University of Twente, The Netherlands</i>
[P1.177]	<b>Free volume expansion and enhanced performance in pervaporation of supercritical carbon dioxide treated poly[1-(trimethylsilyl)-1-propyne] membranes</b> P. Vandezande* <sup>1</sup> , S. Claes <sup>1,2</sup> , S. Mullens <sup>1</sup> , M. Van Bael <sup>1,3</sup> , H. Maurer <sup>1,4</sup> , <sup>1</sup> <i>Flemish Institute for Technological Research, Belgium</i> , <sup>2</sup> <i>Xios Hogeschool, Belgium</i> , <sup>3</sup> <i>Hasselt University, Belgium</i> , <sup>4</sup> <i>Lund University, Sweden</i>
[P1.178]	<b>Batch recovery of acetonitrile/toluene mixture by hybrid distillation-pervaporation process</b> T. Ooms <sup>1</sup> , P. Vandezande* <sup>2</sup> , G. Van Baelen <sup>1</sup> , S. Vreysen <sup>1</sup> , B. Van der Bruggen <sup>3</sup> , G. Vermeulen <sup>4</sup> , <sup>1</sup> <i>K.H. Kempen University College, Belgium</i> , <sup>2</sup> <i>Flemish Institute for Technological Research, Belgium</i> , <sup>3</sup> <i>University of Leuven, Belgium</i> , <sup>4</sup> <i>De Neef Chemical Processing NV, Belgium</i>
[P1.179]	<b>Development and optimization of supported PTMSP-silica nanohybrid pervaporation membranes for alcohol/water separations</b> P. Vandezande* <sup>1</sup> , S. Claes <sup>1,2</sup> , M. Dubreuil <sup>1</sup> , C. Dotremont <sup>1</sup> , W. Van Hecke <sup>1</sup> , S. Mullens <sup>1</sup> , <sup>1</sup> <i>Flemish Institute for Technological Research, Belgium</i> , <sup>2</sup> <i>Xios Hogeschool, Belgium</i>
[P1.180]	<b>The potential of the HybSi ceramic membrane in process intensification</b> F.M. Velterop, <i>Pervatech, The Netherlands</i>
[P1.181]	<b>Correlation between fouling propensity of soluble extracellular polymeric substances, removal efficiencies and sludge metabolic activity altered by different stress conditions. Influence of sludge retention time</b> M. Villain*, B. Marrot, <i>Aix-Marseille University, France</i>
[P1.182]	<b>Novel design of cyclic membrane gas separation process</b> L. Wang*, J.P. Corriou, C. Castel, E. Favre, <i>CNRS, France</i>
[P1.183]	<b>Charge air separation for the reduction of marine diesel engine emissions by means of poly(vinyl trimethylsilane) membranes</b> J. Wind* <sup>1</sup> , S. Shishatskiy <sup>1</sup> , S. Rangou <sup>1</sup> , T. Brinkmann <sup>1</sup> , V. Abetz <sup>1</sup> , R. Pittermann <sup>2</sup> , <sup>1</sup> <i>Helmholtz-Zentrum Geesthacht, Germany</i> , <sup>2</sup> <i>WTZ Roßlau gGmbH, Germany</i>
[P1.184]	<b>MFI membranes for the separation of liquefied petroleum gas from methane</b> K. Neubauer <sup>1</sup> , S. Wohlrab* <sup>1</sup> , D. Paschek <sup>1</sup> , U. Lubenau <sup>3</sup> , <sup>1</sup> <i>University of Rostock, Germany</i> , <sup>2</sup> <i>DBI GUT, Germany</i>
[P1.185]	<b>On the role of MFI membranes during the shape preserving transformation of porous glass into MFI-type zeolite</b> T. Peppel <sup>1</sup> , S. Wohlrab* <sup>1</sup> , B. Paul <sup>2</sup> , R. Kraehnert <sup>2</sup> , D. Enke <sup>3</sup> , <sup>1</sup> <i>Leibniz Institute for Catalysis at the University of Rostock, Germany</i> , <sup>2</sup> <i>Technical University of Berlin, Germany</i> , <sup>3</sup> <i>University of Leipzig, Germany</i>
[P1.186]	<b>CO<sub>2</sub> separation membranes containing Cu-organic frameworks</b> J. Choi <sup>1</sup> , J. Won* <sup>1</sup> , Y. Kim <sup>2</sup> , S. Kim <sup>2</sup> , <sup>1</sup> <i>Sejong University, Republic of Korea</i> , <sup>2</sup> <i>Ewha University, Republic of Korea</i>
[P1.187]	<b>Poly(vinylidene fluoride) (PVDF) and nylon 66 (PA66) membranes applied the process of gas separation</b> J. Duarte <sup>1</sup> , C.C. Cherubini <sup>2</sup> , V. dos Santos <sup>1</sup> , A. Schneider <sup>2</sup> , M. Zeni* <sup>1</sup> , <sup>1</sup> <i>Caxias do Sul University, Brazil</i> , <sup>2</sup> <i>Region Joinville University, Brazil</i>
[P1.188]	<b>Characterization of ZrO<sub>2</sub>/α-alumina membranes prepared by sol-gel process</b> D.S. Biron <sup>1</sup> , I.S. Nunes <sup>1</sup> , P. Poletto <sup>1</sup> , V. dos Santos <sup>1</sup> , C.P. Bergmann <sup>2</sup> , M. Zeni* <sup>1</sup> , <sup>1</sup> <i>Caxias do Sul University, Brazil</i> , <sup>2</sup> <i>University Federal of Rio Grande do Sul, Brazil</i>

## Poster Session 2

Tuesday 25<sup>th</sup> September at 16:40-18:40, Benjamin Britten Lounge & Whittle Room

[P2.001]	<b>Utilization of soft dual coagulation for the synthesis of hydrophobic PVDF membrane for membrane gas absorption of CO<sub>2</sub></b> A.L. Ahmad* <sup>1</sup> , W.K.W. Ramli <sup>2</sup> , W.J.N. Fernando <sup>1</sup> , <sup>1</sup> <i>Universiti Sains Malaysia, Malaysia</i> , <sup>2</sup> <i>Universiti Malaysia Perlis, Malaysia</i>
[P2.002]	<b>Production of microemulsion by ceramic tube membrane equipped with static turbulence promoter</b> K. Albert* <sup>1</sup> , A. Koris <sup>1</sup> , G. Vatai <sup>1</sup> , E. Piacentini <sup>2</sup> , L. Giorno <sup>2</sup> , <sup>1</sup> <i>Corvinus University of Budapest, Hungary</i> , <sup>2</sup> <i>Istituto per la Tecnologia delle Membrane, Italy</i>
[P2.003]	<b>Concentration and purification of galactoglucomannans from wood pressurized hot water extraction liquors by high shear rate ultrafiltration</b> M. AlManasrah*, M. Kallioinen, M. Mänttari, <i>Lappeenranta University of Technology, Finland</i>
[P2.004]	<b>Characterization of polysulfone based hemodialysis membranes by afm</b> M. Uz, F.Y. Mahlicli, M. Polat, S.A. Altinkaya*, <i>Izmir Institute of Technology, Turkey</i>
[P2.005]	<b>Structural and surface modification of polymeric ultrafiltration membranes by alcohol pre-treatment and subsequent fouling implications</b> I.S. Argyle* <sup>1</sup> , A. Pihlajamäki <sup>2</sup> , M.R. Bird <sup>1</sup> , <sup>1</sup> <i>University of Bath, UK</i> , <sup>2</sup> <i>Lappeenranta University of Technology, Finland</i>
[P2.006]	<b>Hybrid desalination method: Application of forward osmosis in desalination</b> M. Aryafar*, S.A. Hosseini, A.O. Sharif, <i>University of Surrey, UK</i>
[P2.007]	<b>Pervaporative dehydration of bioethanol using silica and PVA membranes: Analysis of permeation performances and effect of volatile organic impurities</b> M. Moussa, V. Athès*, Y. Imbert, I. Souchon, O. Vitrac, M.L. Lameloise, <i>INRA, France</i>
[P2.008]	<b>Protein fouling of cellulose acetate microfiltration membranes modified by the deposition of amino acid L-DOPA</b> S. Azari* <sup>1</sup> , L. Zou <sup>1</sup> , Y. Mukai <sup>2</sup> , K. Takiguchi <sup>2</sup> , <sup>1</sup> <i>University of South Australia, Australia</i> , <sup>2</sup> <i>Nagoya University, Japan</i>
[P2.009]	<b>Syngas upgrading by high temperature WGS reaction in a single stage membrane reactor</b> A. Brunetti <sup>1,2</sup> , A. Caravella <sup>1</sup> , E. Drioli <sup>1,2</sup> , G. Barbieri* <sup>1</sup> , <sup>1</sup> <i>CNR, Italy</i> , <sup>2</sup> <i>The University of Calabria, Italy</i>
[P2.010]	<b>Seeding of porous alumina substrate with MFI zeolite nanocrystals using spin-coating technique</b> T. Baroud* <sup>1</sup> , E. Wang <sup>2</sup> , T. Laoui <sup>1</sup> , <sup>1</sup> <i>King Fahd University of Petroleum &amp; Minerals, Saudi Arabia</i> , <sup>2</sup> <i>Massachusetts Institute of Technology, USA</i>
[P2.011]	<b>High pressure regeneration of MDEA in membrane gas-liquid contactor</b> S. Bazhenov*, A. Lysenko, G. Dibrov, V. Vasilevsky, V. Khotimsky, A. Volkov, <i>A.V. Topchiev Institute of Petrochemical Synthesis, Russia</i>

[P2.012]	<b>Gas-water separation via PDMS silicone tubes – concepts for methane gas monitoring and recovery from natural gas hydrates</b> B. Beeskow-Strauch*, M. Zimmer, J.M. Schicks, J. Erzinger, <i>Helmholtz Centre Potsdam, Germany</i>
[P2.013]	<b>Post-combustion carbon dioxide capture using membrane processes: A sensitivity analysis</b> B. Belaïssaoui* <sup>1</sup> , D. Willson <sup>2</sup> , E. Favre <sup>1</sup> , <sup>1</sup> Nancy Université, France, <sup>2</sup> Stanbridge Capital, USA
[P2.014]	<b>Critical parameters of hydrodynamic flow of alcohols through the dense PTMSP/PVTMS membranes</b> A.A. Belogorlov* <sup>1,2</sup> , A.M. Grekhov <sup>1,2</sup> , Y.S. Eremin <sup>1</sup> , E.V. Pastukhova <sup>1</sup> , A.A. Yushkin <sup>2</sup> , A.V. Volkov <sup>2</sup> , <sup>1</sup> National Research Nuclear University MEPhI, Russia, <sup>2</sup> Russian Academy of Sciences, Russia
[P2.015]	<b>Infinite dilution sorption and thermodynamics of C<sub>15</sub>-C<sub>17</sub> n-alkanes in perfluorinated copolymer AF2400</b> N. Belov* <sup>1</sup> , A. Safronov <sup>2</sup> , Y. Yampolskii <sup>1</sup> , <sup>1</sup> A.V. Topchiev Institute of Petrochemical Synthesis, Russia, <sup>2</sup> Urals State University, Russia
[P2.016]	<b>Study of feed pressure role on swelling of osn dense membranes</b> H. Ben Soltane*, E. Favre, D. Roizard, <i>Reactions and Chemical Engineering Laboratory, France</i>
[P2.017]	<b>Use of XPS technique for studying chemical surface changes in modified membranes</b> M.V. Martínez de Yuso, E. Rodríguez Castellón, J. Benavente*, <i>Universidad de Málaga, Spain</i>
[P2.018]	<b>Use of membrane potential measurements for electrochemical characterization of different kinds of membranes</b> V. Romero, A. Muñoz, J. Benavente*, <i>Universidad de Málaga, Spain</i>
[P2.019]	<b>iPOSS nano ultra-thin hybrid polyhedral silsesquioxane-polyamide films with potentially unlimited dimensions</b> M. Dalwani <sup>1</sup> , J. Zheng <sup>1</sup> , M. Hempenius <sup>1</sup> , A. Hill <sup>2</sup> , M. Wessling <sup>1,3</sup> , N.E. Benes* <sup>1</sup> , <sup>1</sup> University of Twente, The Netherlands, <sup>2</sup> CSIRO, Australia, <sup>3</sup> RWTH Aachen University, Germany
[P2.020]	<b>Analysis of mass transfer and observed catalytic activities in the laboratory membrane contactors</b> G. Bercic*, M. Linec, J. Levec, <i>National Institute of Chemistry, Slovenia</i>
[P2.021]	<b>Novel PVDF Membranes for desalination by membrane distillation</b> A. Bottino* <sup>1</sup> , G. Capannelli <sup>1</sup> , A. Comite <sup>1</sup> , J.I. Calvo <sup>2</sup> , R. Saelee <sup>3</sup> , <sup>1</sup> University of Genoa, Italy, <sup>2</sup> University of Valladolid, Spain, <sup>3</sup> Prince of Songkla University, Thailand
[P2.022]	<b>Properties and membrane distillation performance of polypropylene porous membranes</b> A. Bottino* <sup>1</sup> , G. Capannelli <sup>1</sup> , A. Comite <sup>1</sup> , C. Costa <sup>1</sup> , A. Mescola <sup>1</sup> , J.I. Calvo <sup>2</sup> , <sup>1</sup> University of Genoa, Italy, <sup>2</sup> University of Valladolid, Spain
[P2.023]	<b>A new microbial polysaccharide membrane for ethanol dehydration by pervaporation</b> I.T. Meireles, C. Brazinha*, J.G. Crespo, I.M. Coelho, <i>Universidade Nova de Lisboa, Portugal</i>
[P2.024]	<b>A new method for permeability measurement of hydrophobic membranes used in Membrane Distillation</b> T.D. Dao, J.P. Mericq, S. Laborie, C. Cabassud*, <i>INSA de Toulouse, France</i>
[P2.025]	<b>Kinetics of the carbon dioxide absorption and desorption with amino acid salt solutions using hollow fiber membrane contactors</b> J. Cabral*, I. Pantateão, S. Rodrigues, M. Catarino, F. Magalhães, A. Mendes, <i>University of Porto, Portugal</i>
[P2.026]	<b>A comparative study on the formation of porous membranes with crystalline and amorphous glassy polymers</b> P. Campanelli*, E. Di Nicolò, A. Sanguineti, <i>Solvay Specialty Polimers, Italy</i>
[P2.027]	<b>Design 8unctionalis of membrane doehlert uranium for the preconcentration and determination by ICP-MS</b> A.M. Candela*, J. Coello, P. Masqué, C. Palet, <i>Universitat Autònoma de Barcelona, Spain</i>
[P2.028]	<b>Neck-size distributions of through-pores in polymer membranes</b> C. Agarwal <sup>1</sup> , A.K. Pandey <sup>1</sup> , D. Pattyn <sup>2</sup> , P. Ares <sup>3</sup> , A. Goswami <sup>1</sup> , A. Cano-Odena* <sup>2</sup> , <sup>1</sup> Bhabha Atomic Research Centre, India, <sup>2</sup> Porometer.com, Belgium, <sup>3</sup> Nanotec Electronica S.L, Spain
[P2.029]	<b>Novel liquid phase peptide synthesis (LPPS) technology: Elongation using organic solvent nanofiltration (OSN)</b> W.Q. Chen* <sup>2</sup> , M. Cristau <sup>1</sup> , M. Giraud <sup>1</sup> , A.G. Livingston <sup>2</sup> , <sup>1</sup> Lonza AG, Switzerland, <sup>2</sup> Imperial College London, UK
[P2.030]	<b>Nanofiltration of fatty acids and triglycerides</b> M. Civit*, J. Labanda, E. Rudé, A.R. Guastalli, J. Llorens, <i>University of Barcelona, Spain</i>
[P2.031]	<b>Postfunctionalisation of self-assembled block copolymer membranes</b> J.I. Clodt*, S. Rangou, V. Filiz, K. Buhr, A. Jung, J. Hahn, V. Abetz, <i>Helmholtz-Zentrum Geesthacht, Germany</i>
[P2.032]	<b>Solubility and diffusivity of liquids in polymers suitable for membrane separation processes: The cases of Matrimid® and PDMS</b> G. Cocchi*, C. Troiano, M.G. De Angelis, F. Doghieri, G.C. Sarti, <i>Università di Bologna, Italy</i>
[P2.033]	<b>Characterization of defectiveness of oxygen transport membranes deposited by low pressure plasma spraying – thin film processes</b> F. Azzurri <sup>1</sup> , G. Capannelli <sup>1</sup> , A. Comite* <sup>1</sup> , R. Damani <sup>2</sup> , F. Drago <sup>3</sup> , M. Gindrat <sup>4</sup> , <sup>1</sup> University of Genoa, Italy, <sup>2</sup> Sulzer Innotec, Switzerland, <sup>3</sup> RSE SpA, Italy, <sup>4</sup> Sulzer Metco AG, Switzerland, <sup>5</sup> Forschungszentrum Julich GmbH, Germany
[P2.034]	<b>Improving the hydraulic response of direct ultrafiltration of complex surface water through dynamic control of microcoagulation</b> O. Ferrer <sup>1</sup> , X. Serrallach <sup>1</sup> , C. Galvañ <sup>1</sup> , F. Hórvath <sup>2</sup> , J. Mesa <sup>3</sup> , X. Bernat <sup>1</sup> , J.L. Cortina* <sup>1,4</sup> , <sup>1</sup> CETAqua, Spain, <sup>2</sup> Pentair X-Flow, The Netherlands, <sup>3</sup> SGAB, Spain, <sup>4</sup> Universitat Politècnica de Catalunya, Spain
[P2.035]	<b>OSN as a useful tool in the development of a better process for the synthesis of macrocycles</b> A. Cupani* <sup>1,2</sup> , D. Ormerod <sup>3</sup> , A. Horvath <sup>1</sup> , A.G. Livingston <sup>2</sup> , <sup>1</sup> Janssen Pharmaceutica NV, Belgium, <sup>2</sup> Imperial College London, UK, <sup>3</sup> VITO, Belgium
[P2.036]	<b>NF and organic solvents:How pure can you get?</b> F.P. Cuperus*, I.M. Wienk, <i>SolSep BV, The Netherlands</i>
[P2.037]	<b>In-situ spectroscopic ellipsometry as a predictive tool for transport through zwitterionic membranes</b> J. de Grooth* <sup>1,2</sup> , W. Ogieglo <sup>1</sup> , M. Gironès <sup>1</sup> , D.C. Nijmeijer <sup>1</sup> , N.E. Benes <sup>1</sup> , <sup>1</sup> University of Twente, The Netherlands, <sup>2</sup> Pentair X-Flow, The Netherlands
[P2.038]	<b>Predictive modelling of combined influence of colloidal and organic fouling on rejection of trace organics in RO and FO/PRO</b> A.R.D. Verliefe <sup>1,2</sup> , M.M. Mxolisi <sup>1,3</sup> , T.O. Mahlangu <sup>1,3</sup> , E.R. Cornelissen <sup>4</sup> , A. D'Haese* <sup>1</sup> , P. Van der Meeren <sup>1</sup> , <sup>1</sup> Ghent University, Belgium, <sup>2</sup> Delft University of Technology, The Netherlands, <sup>3</sup> University of Johannesburg, South Africa, <sup>4</sup> KWR Watercycle Research Institute, The Netherlands
[P2.039]	<b>Characterization of PAA/PDDA-based stimuli responsive membranes</b> G. Diaconu* <sup>1</sup> , A. Gugliuzza <sup>2</sup> , T. Schäfer <sup>1,3</sup> , <sup>1</sup> University of the Basque Country, Spain, <sup>2</sup> CNR, Italy, <sup>3</sup> Basque Foundation for Science, Spain
[P2.040]	<b>Surface modification of polysulfone membranes: Effect of cross-linker chemistry on membrane performance and physical properties</b> D.S. Dlamini* <sup>1,2</sup> , J. Wang <sup>2</sup> , A.K. Mishra <sup>1</sup> , B.B. Mamba <sup>1</sup> , E.M.V. Hoek <sup>2</sup> , <sup>1</sup> University of Johannesburg, South Africa, <sup>2</sup> University of California Los Angeles, USA



[P2.041]	<b>Nanocomposite membranes with Pd and Ag nanoparticles. A new material for catalytic membranes development</b> B. Domènech <sup>*1</sup> , M. Muñoz <sup>1</sup> , D.N. Muraviev <sup>1</sup> , J. Macanás <sup>2</sup> , <sup>1</sup> Universitat Autònoma de Barcelona, Spain, <sup>2</sup> Universitat Politècnica de Catalunya, Spain
[P2.042]	<b>Modeling, simulation and functionalization of hollow fiber membrane contactors for dispersion-free liquid-liquid extraction</b> M. Younas <sup>1</sup> , S. Gul <sup>1</sup> , S. Druon Bocquet <sup>*2</sup> , J. Sanchez <sup>2</sup> , <sup>1</sup> University of Engineering and Technology, Pakistan, <sup>2</sup> Université de Montpellier II, France
[P2.043]	<b>Design and performance of HTI's thin film composite membrane for forward osmosis and pressure retarded osmosis applications</b> I. Farr <sup>*</sup> , U. Bharwada, T. Gullinkala, <i>Hydration Technology Innovations, USA</i>
[P2.044]	<b>Composite polymeric membrane with entrapped TiO<sub>2</sub> nano-sized particles for water treatment: functionalization through a structural and functional characterization</b> J.P. Mericq, J. Mendret, S. Brosillon, C. Faur <sup>*</sup> , <i>Institut Européen des Membranes, France</i>
[P2.045]	<b>Elaboration of porous PVA membrane by TIPS-LCST process without using organic solvent</b> O. M'barki <sup>1</sup> , D. Bouyer <sup>1</sup> , C. Faur <sup>*1</sup> , A. Deratani <sup>1</sup> , P. Guenoun <sup>2</sup> , C. Pochat-Bohatier <sup>1</sup> , <sup>1</sup> I.E.M. Montpellier, France, <sup>2</sup> C.E.A. Saclay, France
[P2.046]	<b>Membrane processes applied to carbon capture in coal-fired power plants: From modelling to multi-stage design</b> D. Bocciardo, M.C. Ferrari <sup>*</sup> , S. Brandani, <i>University of Edinburgh, UK</i>
[P2.047]	<b>Performance of hybrid membrane – solvent configurations for pre – combustion carbon capture in IGCC power plants</b> Z.K. Kapetaki, D.B. Bocciardo, M.C. Ferrari <sup>*</sup> , H.A. Ahn, S.B. Brandani, <i>University of Edinburgh, UK</i>
[P2.048]	<b>Selective extraction of mercaptans from hydrocarbons mixtures using ionic liquids in membrane contactors</b> A.R. Ferreira <sup>*1,2</sup> , L.A. Neves <sup>2</sup> , F.M. Lopes <sup>3</sup> , I.M. Coelho <sup>2</sup> , J.A.P. Coutinho <sup>1</sup> , J.G. Crespo <sup>3</sup> , <sup>1</sup> Universidade de Aveiro, Portugal, <sup>2</sup> Universidade Nova de Lisboa, Portugal, <sup>3</sup> Galp Energia, Portugal
[P2.049]	<b>Preparation of novel ionic liquid loaded polymeric microspheres by membrane emulsification process</b> A. Figoli <sup>*</sup> , D. Shanthana Lakshmi, E. Piacentini, L. Giorno, E. Drioli, <i>CNR, Italy</i>
[P2.050]	<b>Neural networks approach for characterization of non-isothermal thermoplastic membrane</b> S.H.A. Fini <sup>*1</sup> , F. Erchiqui <sup>1,2</sup> , M. Farzaneh <sup>1</sup> , <sup>1</sup> University of Quebec at Chicoutimi, Canada, <sup>2</sup> University of Quebec at Abitibi-Temiscamingue, Canada
[P2.051]	<b>New anion-exchange membranes for the selective transport of platinum</b> C. Fontas <sup>*1</sup> , L. Casanovas <sup>1</sup> , A.K. Pandey <sup>2</sup> , <sup>1</sup> University of Girona, Spain, <sup>2</sup> Bhabha Atomic Research Centre, India
[P2.052]	<b>Bioamphiphile-based biomimetic lipid membranes for water purification</b> Y. Kaufman <sup>1</sup> , S. Greenberg <sup>1</sup> , C. Linder <sup>1</sup> , J. Gilron <sup>1</sup> , V. Freger <sup>*2</sup> , <sup>1</sup> Ben-Gurion University of the Negev, Israel, <sup>2</sup> Technion – Israel Institute of Technology, Israel
[P2.053]	<b>A microfluidic cell for NF/RO filtration: Design and Applications</b> Y. Kaufman <sup>1</sup> , R. Kasher <sup>1</sup> , R.G.H. Lammertink <sup>2</sup> , V. Freger <sup>*3</sup> , <sup>1</sup> Ben-Gurion University of the Negev, Israel, <sup>2</sup> University of Twente, The Netherlands, <sup>3</sup> Technion – Israel Institute of Technology, Israel
[P2.054]	<b>Optimization of RED test cell for PVA based ion-exchange membranes</b> S. Fujii <sup>*</sup> , K. Takeichi, M. Higa, <i>Yamaguchi University, Japan</i>
[P2.055]	<b>Smart porous polymer membrane valves by integration of nanoparticle heaters</b> A. Gajda <sup>*</sup> , M. Ulbricht, <i>Universität Duisburg-Essen, Germany</i>
[P2.056]	<b>Preparation of tuned morphology wall polysulfone microcapsules containing vanillin</b> C. Panisello, R. Garcia-Valls <sup>*</sup> , <i>Universitat Rovira I Virgili, Spain</i>
[P2.057]	<b>Preparation of hydrophilic and cationic poly (etherimide) membranes with controlled pore size</b> S. Gassara <sup>*1,2</sup> , W. Chinpá <sup>3</sup> , D. Quémener <sup>1</sup> , R. Ben Amar <sup>2</sup> , A. Deratani <sup>1</sup> , <sup>1</sup> Institut Européen des Membranes, France, <sup>2</sup> Faculté des Sciences de Sfax, Tunisia, <sup>3</sup> Prince of Songkla University, Thailand
[P2.058]	<b>TGA-GC/MS – an adjuvant tool for analysis of polymer membranes designed for fuel cell use</b> W. Germer <sup>*1</sup> , J. Leppin <sup>1</sup> , C. Nunes Kirchner <sup>1</sup> , D. Henkensmeier <sup>2</sup> , A. Dyck <sup>1</sup> , <sup>1</sup> Forschungszentrum für Energietechnologie, Germany, <sup>2</sup> KIST, Republic of Korea
[P2.059]	<b>Novel catalytic membrane micro-reactors for CO<sub>2</sub> capture via pre-combustion decarbonization route</b> A. Gil <sup>*</sup> , Z. Wu, D. Chadwick, K. Li, <i>Imperial College London, UK</i>
[P2.060]	<b>Comparison of ceramic, polymeric and stainless steel microfiltration membranes for the fractionation of whey and casein proteins from skim milk</b> O. Glagovskaia <sup>*</sup> , F. Janakievski, K. De Silva, <i>CSIRO, Australia</i>
[P2.061]	<b>Characterization of methanol selective membranes</b> E. Gonzalez Diaz, <i>Sulzer Chemtech AG, Switzerland</i>
[P2.062]	<b>Protein and protein-polysaccharide complexes to stabilize O/W emulsions produced by premix membrane emulsification</b> R. Berendsen, C. Güell <sup>*</sup> , M. Ferrando, <i>Universitat Rovira I Virgili, Spain</i>
[P2.063]	<b>A bioinspired procedure to fabricate 3D well-ordered polymeric porous membranes</b> A. Gugliuzza, <i>CNR, Italy</i>
[P2.064]	<b>Ion exchange membranes for reverse electrodialysis</b> E. Guler <sup>*1,2</sup> , K. Nijmeijer <sup>1</sup> , M. Saakes <sup>2</sup> , <sup>1</sup> University of Twente, The Netherlands, <sup>2</sup> Wetsus, The Netherlands
[P2.065]	<b>PSf/vanillin capsules for textile application</b> B. Peña, A. Mamuye, T. Gumí <sup>*</sup> , <i>Universitat Rovira I Virgili, Spain</i>
[P2.066]	<b>Celluloseacetate membranes with an internal structure for pressure retarded osmosis</b> C. Hänel <sup>*</sup> , L. Öxler, K. Roelofs, E. Walitzka, T. Schiestel, <i>Fraunhofer Institute for Interfacial Engineering and Biotechnology, Germany</i>
[P2.067]	<b>Recovery of ionic liquids from chemical extraction process of lignocelluloses</b> C. Hänel <sup>*</sup> , T. Schiestel, <i>Fraunhofer Institute for Interfacial Engineering and Biotechnology, Germany</i>
[P2.068]	<b>Ultrafiltration as pre-treatment technology at the green biorefinery upper unit</b> J. Ecker <sup>1</sup> , T. Raab <sup>2</sup> , M. Harasek <sup>*1</sup> , <sup>1</sup> University of Technology Vienna, Austria, <sup>2</sup> School of Engineering and Environmental Sciences, Austria
[P2.069]	<b>Comparison of nanofiltration and ion exchange downstream technology for the usage at the green biorefinery upper unit</b> J. Ecker <sup>1</sup> , M. Schaffnberger <sup>2</sup> , R. Essl <sup>3</sup> , T. Raab <sup>4</sup> , M. Harasek <sup>*1</sup> , <sup>1</sup> University of Technology Vienna, Austria, <sup>2</sup> Joanneum Research Forschungsgesellschaft mbH, Austria, <sup>3</sup> gruene-bioraffinerie.at GmbH, Austria, <sup>4</sup> School of Engineering and Environmental Sciences, Austria

[P2.070]	<b>Membrane gas permeation in the production of renewable gaseous fuels</b> A. Makaruk, M. Miltner, M. Harasek*, <i>Vienna University of Technology, Austria</i>
[P2.071]	<b>Influencing the pervaporative recovery of n-butanol by using ionic liquids</b> S. Heitmann <sup>*1</sup> , L.K. Buning-Weddewer <sup>1</sup> , A. Lennert <sup>2</sup> , P. Lutze <sup>1</sup> , A. Górák <sup>1</sup> , <sup>1</sup> <i>TU Dortmund University, Germany</i> , <sup>2</sup> <i>Merck KGaA, Darmstadt, Germany</i>
[P2.072]	<b>Development of solvent resistant nanofiltration membranes using poly(ether ether ketone)</b> K. Hendrix*, G. Koeckelberghs, I.F.J. Vankelecom, <i>KU Leuven, Belgium</i>
[P2.073]	<b>Cross-linked PSf membranes for SRNF application</b> I. Struzynska-Piron <sup>1</sup> , J. Locquief <sup>2</sup> , L. Vanmaele <sup>2</sup> , I. Vankelecom <sup>1</sup> , S. Hermans <sup>*1</sup> , <sup>1</sup> <i>KU Leuven, Belgium</i> , <sup>2</sup> <i>Agfa-Gevaert N.V., Belgium</i>
[P2.074]	<b>Towards high performing solvent resistant nanofiltration (SRNF) membranes via interfacial 10unctionalised</b> S. Hermans*, I. Vankelecom, <i>KU Leuven, Belgium</i>
[P2.075]	<b>Improving the permeation properties by plasma surface modification</b> A. Tena <sup>2</sup> , L. Palacio <sup>1</sup> , P. Prádanos <sup>1</sup> , A.E. Lozano <sup>2</sup> , A. Marcos-Fernández <sup>2</sup> , A. Hernández <sup>*1</sup> , <sup>1</sup> <i>University of Valladolid, Spain</i> , <sup>2</sup> <i>Consejo Superior de Investigaciones Científicas, Spain</i>
[P2.076]	<b>Influence of low and high molecular weight additives in the synthesis of sRNF-membranes via phase inversion</b> A.K. Holda*, I.F.J. Vankelecom, <i>KU Leuven, Belgium</i>
[P2.077]	<b>Influence of polymer molecular weight and purity of polymers in the synthesis of SRNF-membranes via phase inversion</b> A.K. Holda*, I. Struzynska-Piron, K. Hendrix, I.F.J. Vankelecom, <i>KU Leuven, Belgium</i>
[P2.078]	<b>Improving hollow fiber membranes CO<sub>2</sub> separation performance with strategic additives</b> T. Hu*, G. Dong, H. Li, V. Chen, <i>The University of New South Wales, Australia</i>
[P2.079]	<b>Effect of 10unctionalised catalyst on structure and performance of carbon membranes</b> A. Zaharopoulou, S. Yannopoulos, T. Ioannides*, <i>Foundation for Research &amp; Technology-Hellas, Greece</i>
[P2.080]	<b>Operational performances of state of the art PVDF hollow fiber membrane based on the stretching technology for surface water treatment</b> H.J. Jang*, J.H. Kim, M.S. Park, N.S. Gil, J.W. Jang, J.H. Min, <i>Econity Co., Ltd., Republic of Korea</i>
[P2.081]	<b>Concentration of the dilute tannin solution using forward osmosis process</b> E. Järvelä*, J. Ihalainen, V. Grönberg, A.S. Jääskeläinen, <i>VTT Technical Research Centre of Finland, Finland</i>
[P2.082]	<b>Prediction model of transmembrane pressure jump for membrane bioreactor using physical and statistical approaches</b> H. Kaneko*, K. Funatsu, <i>The University of Tokyo, Japan</i>
[P2.083]	<b>Cross-flow membrane separation process of starch nanocrystals: Application to the production of bio-based product and improvements</b> Y. Jin <sup>*1</sup> , A. Romdhane <sup>2</sup> , N. Hengl <sup>1</sup> , S. Baup <sup>1</sup> , F. Pignon <sup>1</sup> , A. Guillet <sup>2</sup> , <sup>1</sup> <i>Université Joseph Fourier Grenoble I, France</i> , <sup>2</sup> <i>Laboratory of Pulp and Paper Sciences, France</i>
[P2.084]	<b>Comparison of the use of different cleaning agents in cleaning of a polysulphone membrane fouled with birch extract</b> M. Kallioinen*, L. Retsja, T. Nevalainen, M. Mänttari, <i>Lappeenranta University of Technology, Finland</i>
[P2.085]	<b>Reclamation of ethanalamine used in post-combustion CO<sub>2</sub> capture with membrane technologies</b> L.F. Dumeé, C.A. Scholes, G. Stevens, S.E. Kentish*, <i>The University of Melbourne, Australia</i>
[P2.086]	<b>A novel hybrid process for seawater desalination</b> D.Y. Kim*, B. Gu, E.H. Park, D.R. Yang, <i>Korea University, Republic of Korea</i>
[P2.087]	<b>Optimization of VMD process as draw solution recovery unit in FO process</b> D.Y. Kim*, B. Gu, E.H. Park, D.R. Yang, <i>Korea University, Republic of Korea</i>
[P2.088]	<b>Adsorption to improve filtration performance in treatment of wood-based hydrolysates</b> E. Koivula <sup>*1</sup> , M. Kallioinen <sup>1</sup> , T. Sainio <sup>1</sup> , S. Luque <sup>2</sup> , M. Mänttari <sup>1</sup> , <sup>1</sup> <i>Lappeenranta University of Technology, Finland</i> , <sup>2</sup> <i>University of Oviedo, Spain</i>
[P2.089]	<b>Organic solvent nanofiltration – the efficient approach for natural products processing</b> V. Koleva <sup>*1,2</sup> , E. Simeonov <sup>2</sup> , A. Boam <sup>1</sup> , <sup>1</sup> <i>Evonik – Membrane Extraction Technology, UK</i> , <sup>2</sup> <i>University of Chemical Technology and Metallurgy, Bulgaria</i>
[P2.090]	<b>Effect of immobilized α-amylase on concentration polarization decrease in ultrafiltration of starch solutions</b> K.Y. Guzykevych, V.V. Konovalova*, A.F. Burban, <i>National University of Kyiv-Mohyla Academy, Ukraine</i>
[P2.091]	<b>Behavior of thin SPEEK layer in pressurized carbon dioxide and water</b> B. Koziara*, K. Nijmeijer, N.E. Benes, <i>University of Twente, The Netherlands</i>
[P2.092]	<b>Impact of various 10unctionalised methods on membrane performance during isolation of hemicelluloses extracted from wheat bran</b> H. Krawczyk*, A. Arkell, A.S. Jönsson, <i>Lund University, Sweden</i>
[P2.093]	<b>A shortcut method for faster determination of permeability coefficient from time lag experiments</b> B. Kruczek <sup>*1</sup> , M. Al-Ismaily <sup>1</sup> , J.G. Wijmans <sup>2</sup> , <sup>1</sup> <i>University of Ottawa, Canada</i> , <sup>2</sup> <i>Membrane Technology and Research, Inc., USA</i>
[P2.094]	<b>Transport and equilibrium properties of sulfonic ion-exchange membranes</b> W. Kujawski <sup>*1</sup> , K. Jarzynka <sup>1</sup> , T.Q. Nguyen <sup>2</sup> , C. Chappéy <sup>2</sup> , S. Marais <sup>2</sup> , K. Fatyeyeva <sup>2</sup> , <sup>1</sup> <i>NCU, Poland</i> , <sup>2</sup> <i>Université de Rouen, France</i>
[P2.095]	<b>Separation of hemicelluloses from NNGL extract using ultrafiltration</b> H. Kyllönen <sup>*1</sup> , A. Luce <sup>2</sup> , A. Grönroos <sup>1</sup> , A. van Heiningen <sup>3</sup> , <sup>1</sup> <i>VTT, Finland</i> , <sup>2</sup> <i>FBRI, USA</i> , <sup>3</sup> <i>University of Maine, USA</i>
[P2.096]	<b>Impact of UV graft 10unctionalised on stabilized palladium nanoparticles for catalytic reactions</b> C. Emin <sup>1,2</sup> , J.C. Remigy <sup>1,2</sup> , J.F. Lahitte <sup>*1,2</sup> , <sup>1</sup> <i>Université de Toulouse, France</i> , <sup>2</sup> <i>CNRS, France</i>
[P2.097]	<b>Dynamic mechanical behaviour of thermally rearranged polymer membranes</b> M.J. Lee*, H.J. Jo, J.Y. Soo, K.D. Suh, Y.M. Lee, <i>Hanyang University, Republic of Korea</i>
[P2.098]	<b>Coupling powdered activated carbon (PAC) adsorption with membrane bioreactor (MBR) treatment for enhanced removal of trace organics</b> L.N. Nguyen, F.I. Hai*, L.D. Nghiem, J. Kang, W.E. Price, <i>University of Wollongong, Australia</i>
[P2.099]	<b>Real time, in-situ monitoring of surface and structural properties of thin film polymeric membranes using electrical impedance spectroscopy</b> A. Antony <sup>1</sup> , T. Chilcott <sup>2</sup> , H. Coster <sup>2</sup> , G. Leslie <sup>*1</sup> , <sup>1</sup> <i>University of New South Wales, Australia</i> , <sup>2</sup> <i>University of Sydney, Australia</i>

[P2.100]	<b>Preparation and characterisation of ferrosulfate oxide filled PVDF hybrid membrane for removal of dissolved oxygen in water</b> T. Li, P. Yu, Y. Luo, H. Li*, <i>Wuhan University, China</i>
[P2.101]	<b>Multi-permselective membranes prepared by interfacial functionalised for CO<sub>2</sub> separation</b> S. Li*, Z. Wang, X. Yu, J. Wang, S. Wang, <i>Tianjin University, China</i>
[P2.102]	<b>Improved flux via localized heating of PDMS membranes containing gold nanoparticles</b> Y.B. Li*, I. Vankelecom, T. Verbiest, <i>Katholieke Universiteit, Belgium</i>
[P2.103]	<b>Stability of Pebax® or Polyactive® blended with low molecular weight PEG as materials for CO<sub>2</sub> selective membranes</b> J. Lillepää*, S. Shishatskiy, J. Wind, <i>Helmholtz-Zentrum Geesthacht, Germany</i>
[P2.104]	<b>Surface characterization of RO membranes scaling in low-level radioactive liquid waste treatment</b> J.C.T. Lin*, Y.H. Ku <sup>2</sup> , C.F. Wang <sup>2</sup> , <sup>1</sup> <i>Chung Yuan Christian University, Taiwan</i> , <sup>2</sup> <i>National Tsing Hua University, Taiwan</i>
[P2.105]	<b>The antifouling properties of PVA/PVAm modified polyester membrane</b> L.K. Sun, L.F. Liu*, F.L. Yang, <i>Dalian University of Technology, China</i>
[P2.106]	<b>Preparation of highly conductive cathodic membrane with Graphene (Oxide) /Ppy and the membrane antifouling property in filtrating yeast suspensions in EMBR</b> F. Zhao, L.F. Liu*, F.L. Yang, <i>Dalian University of Technology, China</i>
[P2.107]	<b>Membrane modification using polydopamine and/or PDA coated TiO<sub>2</sub> nano particles for wastewater treatment</b> B. Shao, L.F. Liu*, F.L. Yang, D.N. Shan, H. Yuan, <i>Dalian University of Technology, China</i>
[P2.108]	<b>Effects of ATRP grafted PMMA-co-PSBMA-TiO<sub>2</sub> nano-particles on the property and performance of PVDF microfiltration membranes</b> H.P. Chen, L.F. Liu*, F.L. Yang, <i>Dalian University of Technology, China</i>
[P2.109]	<b>A novel method of combining in situ polymerisation and non-solvent assisted thermally induced micro-phase separation to improve membrane hydrophilicity</b> F. Liu*, M.M. Tao, L.X. Xue, <i>Chinese Academy of Sciences, China</i>
[P2.110]	<b>The impact of the membrane on effectiveness of combined system photocatalysis and nanofiltration during removal of mycoestrogens from water</b> M. Dudziak, E. Łobos-Moysa*, <i>Silesian University of Technology, Poland</i>
[P2.111]	<b>Free standing polymer-ionic liquid membrane system for CO<sub>2</sub> separation</b> S.C. Lu*, A.L. Khan, I.F.V. Vankelecom, <i>University of Leuven, Belgium</i>
[P2.112]	<b>Assessment of surface charge for polymer hollow fibre membranes</b> T. Luxbacher, <i>Anton Paar GmbH, Austria</i>
[P2.113]	<b>Preparation and characterization of PVA-based charge mosaic membranes</b> T. Maeda*, A. Jikihara, M. Higa, <i>Yamaguchi University, Japan</i>
[P2.114]	<b>Enhanced electrodialysis process: Using pulsed electric field for desalinating from brackish water</b> P. Malek*, J.M. Ortiz <sup>1</sup> , B.S. Richards <sup>1</sup> , A.I. Schäfer <sup>1</sup> , <sup>1</sup> <i>University of Edinburgh, UK</i> , <sup>2</sup> <i>Universidad de Alicante, Spain</i> , <sup>3</sup> <i>Heriot-Watt University, UK</i>
[P2.115]	<b>Factors affecting the performances of forward osmosis desalination process</b> S. Sahebi*, S.P. Phuntsho, H.S. Shon, F.L. Lotfi, J.K. Kim, <i>UTS, Australia</i>
[P2.116]	<b>In-module chemical modification and assessment of polyethersulfone capillary ultrafiltration membranes</b> K.P. Matabola*, R.M. Moutloali, <i>MINTEK Nanotechnology Innovation Centre, South Africa</i>
[P2.117]	<b>Effect of flow configuration on the performance of gas-liquid membrane contactor</b> M. Mavroudi*, S.P. Kaldis <sup>1</sup> , G.P. Sakellariopoulos <sup>2</sup> , <sup>1</sup> <i>Chemical Process Engineering Research Institute, Greece</i> , <sup>2</sup> <i>AUTH, Greece</i>
[P2.118]	<b>Development of a new state of the art sterile filtration membrane and device</b> D. Melzner*, T. Loewe, B. Hansmann, V. Thom, <i>Sartorius Stedim Biotech GmbH, Germany</i>
[P2.119]	<b>The application of flory-huggins-thermodynamics for industrial membrane manufacture via evaporative casting</b> M. Metzger*, S. Barbe <sup>1</sup> , A. Reiche <sup>1</sup> , D. Melzner <sup>1</sup> , T. Scheper <sup>1</sup> , <sup>1</sup> <i>Sartorius-Stedim Biotech GmbH, Germany</i> , <sup>2</sup> <i>Leibniz-University Hannover, Germany</i>
[P2.120]	<b>The effect of biofouling on taste of permeate water in reverse osmosis membranes</b> A. Sharif, O. Mohammed*, <i>NATA group, Iraq</i>
[P2.121]	<b>Liposome derived membrane adsorber for purification of nucleic acids</b> M.E. Monteiro*, L. Raiado-Pereira, D.M.F. Prazeres, M. Mateus, <i>Instituto Superior Técnico, Portugal</i>
[P2.122]	<b>Eausmose project – desalination by reverse osmosis and batteryless solar energy: Design for a 1m<sup>3</sup> per day delivery</b> A. Soric <sup>1</sup> , R. Cesaro <sup>1</sup> , P. Perez <sup>2</sup> , E. Guiol <sup>3</sup> , P. Moulin*, <sup>1</sup> <i>Université Paul Cézanne Aix Marseille, France</i> , <sup>2</sup> <i>EDF, France</i> , <sup>3</sup> <i>SEM, France</i>
[P2.123]	<b>NF membranes characterisation: Relating performance (flux and rejection) with surface properties (contact angle and surface free energy)</b> T. Nada*, T. Hodgkiess, <i>University of Glasgow, UK</i>
[P2.124]	<b>Characterization and comparison of hydrogels anchored with a tridentate, tetradentate and pentadentate chelators</b> F.M. Nave*, A. Thompson, <i>Prairie View A&amp;M University, USA</i>
[P2.125]	<b>Quantifying sorption on membrane and surface binding interactions using mass spectrometry</b> H.T. Ngo*, L. Mackay, A. Cronshaw, M. Bradley, A.I. Schäfer, <i>University of Edinburgh, UK</i>
[P2.126]	<b>Assessing nanofiltration and reverse osmosis for the detoxification of fermentable solutions</b> N. Nguyen*, C. Fargues <sup>1,2</sup> , R. Lewandowski <sup>1,2</sup> , W. Guiga <sup>2,3</sup> , M.L. Lameloise <sup>1,2</sup> , <sup>1</sup> <i>AgroParisTech, France</i> , <sup>2</sup> <i>INRA, France</i> , <sup>3</sup> <i>CNAM, France</i>
[P2.127]	<b>Plasma-assisted hybrid coatings as low-fouling surface treatment of membrane spacer materials</b> J. Nikkola*, K. Nättinen <sup>1</sup> , J. Mannila <sup>1</sup> , J. Vartiainen <sup>1</sup> , H.L. Alakomi <sup>1</sup> , C.Y. Tang <sup>2</sup> , <sup>1</sup> <i>VTT Technical Research Centre of Finland, Finland</i> , <sup>2</sup> <i>Nanyang Technological University, Singapore</i>
[P2.128]	<b>Novel and versatile OSN-assisted processing: Potencial for API synthesis and beyond</b> D. Ormerod, <i>Vito, Belgium</i>
[P2.129]	<b>XPS study of the composition and structure nanofiltration (NF) and reverse osmosis (RO) membranes</b> A. Hornés, A. Maroto-Valiente, J.A. Otero*, A. Otero-Fernández, M.D. Fernández, <i>Universidad de Cantabria, Spain</i>
[P2.130]	<b>Functional dual-layer ceramic hollow fibre membranes for methane conversion</b> N.H. Othman*, Z. Wu, K. Li, <i>Imperial College London, UK</i>

[P2.131]	<b>Pervaporation performance of composite PDMS membrane for butanol production</b> J.M. Pääkkilä <sup>*1</sup> , W. Kujawski <sup>2</sup> , R.L. Keiski <sup>1</sup> , <sup>1</sup> University of Oulu, Finland, <sup>2</sup> Nicolaus Copernicus University, Poland
[P2.132]	<b>Study on the phenomena of the commercial reverse osmosis membrane in osmotically driven membrane process</b> Y.I. Park*, M.E. Cho, S.E. Nam, B.S. Kim, Korea Research Institute of Chemical Technology, Republic of Korea
[P2.133]	<b>Determining wetted membrane microstructures using ESEM and DIC microscopy and their implications to membrane performance</b> D.A. Patterson <sup>*1</sup> , K. Krohn <sup>2</sup> , <sup>1</sup> University of Bath, UK, <sup>2</sup> University of Auckland, New Zealand
[P2.134]	<b>Influence of the structural features of anodic alumina membrane on their permeance</b> D.I. Petukhov*, M.V. Berekchiyan, K.S. Napolskii, A.A. Eliseev, M.V. Lomonosov Moscow State University, Russia
[P2.135]	<b>Synthesis and application of novel 12unctionalised nanostructured membranes incorporating N-doped CNT supported metal nanoparticles in water treatment</b> N. Phao <sup>*1,3</sup> , S.D. Mhlanga <sup>1,3</sup> , E.N. Nxumalo <sup>2,3</sup> , B.B. Mamba <sup>2,3</sup> , <sup>1</sup> University of the Witwatersrand, South Africa, <sup>2</sup> University of Johannesburg, South Africa, <sup>3</sup> Mintek NIC Water Research Platform, South Africa
[P2.136]	<b>Surface charge of nanofiltration membranes in different ethanol/water mixtures</b> A. Pihlajamäki*, T. Laakso, M. Mänttari, Lappeenranta University of Technology, Finland
[P2.137]	<b>Membrane formation in micro-channels by phase inversion</b> S.I.S. Pinto*, J. Ponmozhi, J.B.L.M. Campos, J.M. Miranda, University of Porto, Portugal
[P2.138]	<b>Novel cross-linked gelatine membranes for gas separation: Enhancement of carbon dioxide permeability by addition of polyethylene glycol and ferulic acid</b> J. Biscarat, C. Charmette, C. Pochat-Bohatier*, J. Sanchez, Université Montpellier 2, France
[P2.139]	<b>3D reconstruction and in situ characterization of microfiltration membranes in an environmental scanning electron microscope</b> P. Poelt*, H. Reingruber, A. Zankel, C. Mayrhofer, Graz University of Technology, Austria
[P2.140]	<b>Transport of molybdenum from acidic sulfate solutions using alamine 336 by non-dispersive solvent extraction</b> S. Porhel <sup>*1,3</sup> , J. Duhamet <sup>1</sup> , G. Borda <sup>1</sup> , R. Denoyel <sup>3</sup> , A.P. Serond <sup>2</sup> , <sup>1</sup> CEA Marcoule, France, <sup>2</sup> AREVA, France, <sup>3</sup> Université de Provence, France
[P2.141]	<b>Anomalous concentration dependences of specific electrical conductivity of ion-exchange membranes equilibrated with ampholyte-containing solutions</b> V.V. Sarapulova <sup>1</sup> , E.E. Nevakshenova <sup>1</sup> , N.D. Pismenskaya <sup>1</sup> , V.V. Nikonenko <sup>1</sup> , G. Pourcelly <sup>*2</sup> , <sup>1</sup> Kuban State University, Russia, <sup>2</sup> Université de Montpellier 2, France
[P2.142]	<b>Influence of the properties of layer-by-layer active layers on forward osmosis performance</b> S. Qi*, L. Li, T. Tang, Nanyang Technological University, Singapore
[P2.143]	<b>Fabrication and characterization of novel forward osmosis membranes based on layer-by-layer assembly</b> Q. Qi*, T. Tang, Nanyang Technological University, Singapore
[P2.144]	<b>Low-fouling UF membranes for water treatment by surface modification with hydrogel layers via a new macro-initiator</b> M. Quilitzsch*, M. Ulbricht, University Duisburg-Essen, Germany
[P2.145]	<b>PEG 12unctionalised POSS incorporated PEBAX<sup>®</sup> nanocomposite membranes</b> M.M. Rahman*, V. Filiz, S. Shishatskiy, S. Neumann, M.M. Khan, V. Abetz, Helmholtz-Zentrum Geesthacht, Germany
[P2.146]	<b>The role of microfiltration and ultrafiltration in hybrid treatment systems for NOM removal from water</b> M. Rajca, Silesian University of Technology, Poland
[P2.147]	<b>Food grade microcapsules produced by membrane emulsification</b> S. Ramakrishnan, M. Ferrando, C. Güell*, Universitat Rovira I Virgili, Spain
[P2.148]	<b>Study of the thermal, dielectric and mechanical properties of poly(methyl methacrylate-co-(1,4,7,10-tetraoxacyclododecan-2-yl)methyl methacrylate) membranes</b> B. Redondo-Foj <sup>*1</sup> , P. Ortiz-Serna <sup>1</sup> , M. Carsí <sup>1</sup> , M.J. Sanchis <sup>1</sup> , R. Díaz-Calleja <sup>1</sup> , F. García <sup>2</sup> , <sup>1</sup> Universitat Politècnica de València, Spain, <sup>2</sup> Universidad de Burgos, Spain, <sup>3</sup> Instituto de Ciencia y Tecnología de Polímeros, Spain
[P2.149]	<b>Effect of solvent, hydrophilic additives and corona treatment on performance of polyethersulfone UF membranes for oil/water separation</b> I. Sadeghi*, A. Aroujalian, A. Raisi, M. Fathizadeh, B. Dabir, Amirkabir University of Technology, Iran
[P2.150]	<b>Hydrophobic capillary membrane based on clay-alumina formulation for membrane distillation process</b> S. Sarkar*, S. Ghosh, G. Sahoo, N. Das, S. Bandyopadhyay, CSIR, India
[P2.151]	<b>CO<sub>2</sub> separation using SILM (supported ionic liquid membranes) – temperature influence of ionic liquids containing carboxylic anions in comparison to NTF2</b> J. Blath <sup>1,2</sup> , T. Hirth <sup>1,2</sup> , T. Schiestel <sup>*1</sup> , <sup>1</sup> Fraunhofer Institute for Interfacial Engineering and Biotechnology, Germany, <sup>2</sup> University of Stuttgart, Germany
[P2.152]	<b>Analytical views on large cut-off ultrafiltration membranes</b> T. Schleuss <sup>*1</sup> , R. Petersen <sup>1</sup> , J.I. Calvo Díez <sup>2</sup> , V. Thom <sup>1</sup> , M. Viktorin <sup>1</sup> , <sup>1</sup> Sartorius-Stedim Biotech, Germany, <sup>2</sup> Universidad de Valladolid, Spain
[P2.153]	<b>Immobilization of trypsin on polymer membranes via electron beam irradiation</b> A. Schulze*, S. Starke, A. Prager, M. Went, Leibniz Institute of Surface Modification, Germany
[P2.154]	<b>New generation of LSCF oxygen transport membranes</b> F. Schulze-Küppers*, S. Baumann, W.A. Meulenber, H.P. Buchkremer, Forschungszentrum Jülich IEK-1, Germany
[P2.155]	<b>Mem-brain gas separation membranes for energy-efficient processes</b> M. Czaperek <sup>1</sup> , S. Baumann <sup>1</sup> , H.J. Bouwmeester <sup>2</sup> , W.A. Meulenber <sup>1</sup> , M. Modigell <sup>3</sup> , J.M. Serra <sup>4</sup> , S. Shishatskiy <sup>5</sup> , I. Voigt <sup>6</sup> , F. Schulze-Küppers <sup>*1</sup> , <sup>1</sup> Forschungszentrum Jülich GmbH, Germany, <sup>2</sup> University of Twente, The Netherlands, <sup>3</sup> RWTH Aachen University, Germany, <sup>4</sup> Universidad Politècnica de Valencia, Spain, <sup>5</sup> GKSS-Forschungszentrum Geesthacht GmbH, Germany, <sup>6</sup> Fraunhofer-Institut für Keramische Technologien und Systeme, IKTS, Germany
[P2.156]	<b>Understanding the mechanisms of biofouling on nanofiltration membranes: Effect of the biofilm structure on solute removal</b> A.J.C. Semiao*, G. Gazzola, O. Habimana, R. Heffernan, C. Murphy, E. Casey, University College Dublin, Ireland
[P2.157]	<b>Reverse solute diffusion and its adverse effect on osmotic power production in pressure retarded osmosis</b> Q.H. She*, X. Jin, C.Y. Tang, Nanyang Technological University, Singapore
[P2.158]	<b>Evaluation of optimal PRO test conditions for flat sheet membranes under various DS concentrations</b> M. Shibuya*, D. Shigefuji, M. Higa, Yamaguchi University, Japan

[P2.159]	<b>Performance of forward osmosis hollow fiber membrane modules for pressure retarded osmosis</b> D. Shigefuji*, M. Shibuya, N. Endo, M. Higa, <i>Yamaguchi University, Japan</i>
[P2.160]	<b>Perfluorinated compounds as test media for porous membranes</b> S. Shishatskiy*, K. Buhr, J. Hahn, A. Jung, V. Filiz, S. Rangou, V. Abetz, <i>Helmholtz-Zentrum Geesthacht, Germany</i>
[P2.161]	<b>Non dispersive solvent extraction for removal of dissolved organic from aqueous medium using hollow fiber membrane contactor</b> S.K. Singh*, M. Bindu, S.C. Tripathi, P.M. Gandhi, <i>Bhabha Atomic Research Centre, India</i>
[P2.162]	<b>Effects of additives and post treatments on performance of thin-film nanofiber composite forward osmosis membrane</b> X.X. Song*, Z. Liu, S. Sun, <i>Nanyang Technological University, Singapore</i>
[P2.163]	<b>Energy recovery from the brines of seawater and wastewater using thin-film nanofiber composite pressure retarded osmosis membranes</b> X.X. Song*, L. Liu, S. Sun, <i>Nanyang Technological University, Singapore</i>
[P2.164]	<b>Aquaporin-based biomimetic membranes for desalination</b> C.Y. Tang <sup>1</sup> , <sup>1</sup> <i>Nanyang Technological University, Singapore</i> , <sup>2</sup> <i>COBIS, Denmark</i> , <sup>3</sup> <i>Technical University of Denmark, Denmark</i>
[P2.165]	<b>Fixed-site membranes: Fabrication, characterization and application for boron sorption</b> N. Thakur*, S.A. Kumar, A. Pandey, S.D. Kumar, A.V.R. Reddy, <i>BARC, India</i>
[P2.166]	<b>New CO<sub>2</sub> separation membranes based on pyrrolidinium ionic materials</b> L.C. Tomé <sup>*1,2</sup> , D. Mecerreyes <sup>3</sup> , C.S.R. Freire <sup>2</sup> , L.P.N. Rebelo <sup>1</sup> , I.M. Marrucho <sup>1,2</sup> , <sup>1</sup> <i>Universidade Nova de Lisboa, Portugal</i> , <sup>2</sup> <i>Universidade de Aveiro, Portugal</i> , <sup>3</sup> <i>University of the Basque Country, Spain</i>
[P2.167]	<b>Evaluation of the water permeability and salt permeability through forward osmosis membranes in osmotically driven mode</b> H. Toyama*, D. Shigefuji, K. Kinoshita, M. Higa, <i>Yamaguchi University, Japan</i>
[P2.168]	<b>Zeolite filled PDMS/PAN membranes for separation of low concentrated alcohol/water mixtures</b> O.T. Tröber <sup>*1</sup> , H.R. Richter <sup>1</sup> , M.W. Weyd <sup>1</sup> , E.T.H.B. Brueschke <sup>2</sup> , G.T. Tusel <sup>2</sup> , <sup>1</sup> <i>Fraunhofer Institute of Ceramic Technologies and Systems, Germany</i> , <sup>2</sup> <i>GFT Membrane Systems GmbH, Germany</i>
[P2.169]	<b>Pervaporation of the esterification reaction mixture of ethyl acrylate with commercial membranes</b> H.T. Truong <sup>*1</sup> , S. Rode <sup>1</sup> , D. Roizard <sup>1</sup> , S. Mouzon-Pelletier <sup>2</sup> , S. Tretjak <sup>2</sup> , <sup>1</sup> <i>Laboratory of Reactions and Process Engineering, France</i> , <sup>2</sup> <i>Arkema, Research and Development Centre for the East, France</i>
[P2.170]	<b>Influence of fluorocarbon flat-membrane hydrophobicity on carbon dioxide absorption process</b> J.H. Chen, K.L. Tung*, Y.F. Lin, S.H. Lin, <i>Chung Yuan Christian University, Taiwan</i>
[P2.171]	<b>Polyacrylonitrile membranes with antibacterial properties</b> N. Potvorova, P. Vakuliuk*, I. Furtat, A. Burban, <i>National University of Kiev- Mohyla Academy, Ukraine</i>
[P2.172]	<b>Developing a new membrane platform for adsorption</b> V.H.A. van Dijk*, M. Gironès, R.G.H. Lammertink, Z. Borneman, D.C. Nijmeijer, <i>University of Twente, The Netherlands</i>
[P2.173]	<b>Nano-silver in membranes for medical applications</b> J. van Erkel <sup>1</sup> , <sup>1</sup> <i>TNO Water Treatment, The Netherlands</i> , <sup>2</sup> <i>Pentair X-Flow B.V., The Netherlands</i> , <sup>3</sup> <i>RWTH Aachen University, Germany</i>
[P2.174]	<b>Recovery of chemicals from fast pyrolysis oil derived aqueous extracts by pervaporation, nanofiltration and reverse osmosis</b> P. Vandezande <sup>*1</sup> , D. Goeminne <sup>1,2</sup> , A. Buekenhoudt <sup>1</sup> , J. Yperman <sup>3</sup> , R. Carleer <sup>3</sup> , W. Prins <sup>2</sup> , <sup>1</sup> <i>Flemish Institute for Technological Research, Belgium</i> , <sup>2</sup> <i>Ghent University, Belgium</i> , <sup>3</sup> <i>Hasselt University, Belgium</i>
[P2.175]	<b>Unraveling the solvent flux behavior of ceramic nanofiltration membranes</b> A. Buekenhoudt, P. Vandezande*, M. Bulut, <i>Flemish Institute for Technological Research, Belgium</i>
[P2.176]	<b>Solvent purification and recycling in the process industry using innovative membrane technology (SOLVER)</b> P. Vandezande <sup>*1</sup> , P. Cuperus <sup>2</sup> , F. Velterop <sup>3</sup> , C. Lynch <sup>4</sup> , G. Vermeulen <sup>5</sup> , J.G. Crespo <sup>7</sup> , O. De Backer <sup>6</sup> , <sup>1</sup> <i>Flemish Institute for Technological Research, Belgium</i> , <sup>2</sup> <i>SolSep BV, The Netherlands</i> , <sup>3</sup> <i>Pervatech BV, The Netherlands</i> , <sup>4</sup> <i>GKA Technologies Ltd, Ireland</i> , <sup>5</sup> <i>De Neef Chemical Processing NV, Belgium</i> , <sup>6</sup> <i>Packo Inox NV, Belgium</i> , <sup>7</sup> <i>Universidade Nova de Lisboa, Portugal</i>
[P2.177]	<b>Production of biodiesel by methanolysis of soybean oil over basic polymeric catalytic membranes</b> R.N. dos Santos <sup>1</sup> , A.G. Silva <sup>1</sup> , L.M. Ferreira <sup>2</sup> , M.H. Casimiro <sup>1</sup> , A.M. Ramos <sup>1</sup> , J. Vital <sup>*1</sup> , <sup>1</sup> <i>Universidade Nova de Lisboa, Portugal</i> , <sup>2</sup> <i>Universidade Técnica de Lisboa, Portugal</i>
[P2.178]	<b>Catalytic composite PVA membranes for acetalisation of phenylacetaldehyde in membrane reactors</b> T.F. Ceia, A.G. Silva, J.V. Pinto, M.H. Casimiro, A.M. Ramos, J. Vital*, <i>Universidade Nova de Lisboa, Portugal</i>
[P2.179]	<b>High permeability glassy polymers for OSN: Effect of solvent, solute and polymer structure</b> A. Volkov <sup>*1</sup> , S. Tsarkov <sup>1</sup> , V. Khotimskiy <sup>1</sup> , P.M. Budd <sup>2</sup> , <sup>1</sup> <i>RAS, Russia</i> , <sup>2</sup> <i>The University of Manchester, UK</i>
[P2.180]	<b>Improved MOF and zeolite membranes by support modification</b> N. Wang*, A. Huang, J. Caro, <i>Leibniz University Hannover, Germany</i>
[P2.181]	<b>Ultrafiltration membranes modified using the layer-by-layer assembly of polyelectrolytes for enhanced performance</b> J. Kochan, J.E. Wong*, L.A.T. Nguyen, T. Melin, M. Wessling, <i>RWTH Aachen University, Germany</i>
[P2.182]	<b>Is there a role for membrane processes in localised, small scale desalination systems coupled directly with solar energy?</b> H.Y. Wu <sup>*1</sup> , J. Hu <sup>2</sup> , R. Field <sup>1</sup> , <sup>1</sup> <i>University of Oxford, UK</i> , <sup>2</sup> <i>National University of Singapore, Singapore</i>
[P2.183]	<b>Solubility and diffusion of CO<sub>2</sub> in supported ionic liquid mixture membrane</b> Y.H. Wu*, Y.C. Duan, T.H. Zhang, T.M. Li, <i>Tongji University, China</i>
[P2.184]	<b>Impact of hollow fiber position in an industrial UF module on the membrane ageing</b> S. Wang <sup>1,2</sup> , Y. Wyart <sup>*1,2</sup> , J. Perot <sup>3</sup> , F. Nauleau <sup>3</sup> , P. Moulin <sup>1,2</sup> , <sup>1</sup> <i>Aix Marseille Université, France</i> , <sup>2</sup> <i>CNRS, France</i> , <sup>3</sup> <i>SAUR, France</i>
[P2.185]	<b>Effect of poly(ethylene glycol) on structure and properties of polypropylene membrane formed via thermally induced phase separation</b> Z.Y. Xi*, Y.Q. Yang, Y.J. Wang, H. Zhao, <i>Beijing Research Institute of Chemical Industry, China</i>
[P2.186]	<b>Gold coated block copolymer membranes with precisely controllable pore size for molecule separations</b> H.Z. Yu*, X.Y. Qiu, K.V. Peinemann, <i>King Abdullah University of Science and Technology, Saudi Arabia</i>
[P2.187]	<b>The application of membrane contactors for ammonia recovery from pig slurry</b> A. Zarebska*, K. Villy Christensen, B. Norddahl, <i>University of Southern Denmark, Denmark</i>
[P2.188]	<b>A heuristic approach for membrane selection in organic solvent nanofiltration</b> S. Zeidler <sup>*1,2</sup> , U. Kätzel <sup>1</sup> , P. Kreis <sup>3</sup> , <sup>1</sup> <i>Merck KgaA, Germany</i> , <sup>2</sup> <i>TU Dortmund University, Germany</i> , <sup>3</sup> <i>Evonik Industries AG, Germany</i>
[P2.189]	<b>Coating of zwitterionic compound on forward osmosis membrane surface for high fouling resistance</b> L. Zou*, A. Nguyen, <i>University of South Australia, Australia</i>

<b>Poster Session 3</b>	
Wednesday 26 <sup>th</sup> September at 16:40-18:40, Benjamin Britten Lounge & Whittle Room	
<b>[P3.001]</b>	<b>Analysis of hybrid reverse osmosis cascades for ultrapurification of chemicals</b> R. Abejón*, A. Garea, A. Irabien, <i>Universidad de Cantabria, Spain</i>
<b>[P3.002]</b>	<b>Effect of zeolite preheat treatment and membrane post heat treatment on the gas separation properties of PVAc/4A mixed matrix membrane</b> J. Ahmad*, M.B. Hagg, <i>Norwegian University of Science and Technology, Norway</i>
<b>[P3.003]</b>	<b>Dynamic filtration (RVF) applied to wine clarification: Impact of membrane nature and hydrodynamics</b> Y. El Rayess <sup>1,2</sup> , A. Devatine <sup>3,4</sup> , P. Taillandier <sup>1,2</sup> , M. Mietton-Peuchot <sup>3,4</sup> , C. Albasi <sup>*1,2</sup> , L. Fillaudeau <sup>1,4</sup> , <sup>1</sup> <i>Université de Toulouse, France</i> , <sup>2</sup> <i>CNRS, France</i> , <sup>3</sup> <i>Université de Bordeaux, France</i> , <sup>4</sup> <i>INRA, France</i>
<b>[P3.004]</b>	<b>Factors influencing the ultrasound-enhanced cleaning process of an ultrafiltration ceramic membrane fouled by reactive dye particles</b> E. Alventosa-deLara, S. Barredo-Damas, M.I. Alcaina-Miranda*, M.I. Iborra-Clar, <i>Universitat Politècnica de València, Spain</i>
<b>[P3.005]</b>	<b>Electrokinetic study of three industrial membranes</b> N. Aljohani*, D. Oatley, <i>Swansea University, UK</i>
<b>[P3.006]</b>	<b>Study of long term fouling in crossflow ultrafiltration</b> R. Cantó-Polo, M.C. Vincent-Vela, B. Cuartas-Urbe, S. Álvarez-Blanco*, J. Lora-García, <i>Universidad Politécnica de Valencia, Spain</i>
<b>[P3.007]</b>	<b>Use of backpulse systems in fouling control</b> J. André*, T. Melin, M. Wessling, <i>RWTH Aachen University, Germany</i>
<b>[P3.008]</b>	<b>Functionalized UIO-66 based mixed matrix membranes for CO<sub>2</sub> separation</b> M.W. Anjum*, A.L. Khan, F. Vermoortele, N. Beniwal, D. DeVos, I.F.J. Vankelecom, <i>KU Leuven, Belgium</i>
<b>[P3.009]</b>	<b>Correlation between reynolds number and limit flux during skim milk microfiltration</b> C. Astudillo*, B. Cancino, <i>Pontificia Universidad Católica de Valparaíso, Chile</i>
<b>[P3.010]</b>	<b>Preparation of nanofiltration membranes using sol-gel transition of organic molecular networks in their phase-separating mixtures with linear polymers</b> J.W. Park, J.S. Bae*, E. Jeon, S.Y. Moon, <i>Gwangju Institute of Science and Technology, Republic of Korea</i>
<b>[P3.011]</b>	<b>A new approach to modelling of a water vapour selective membrane module for improving the efficiency of humidity harvesting</b> D. Bergmair <sup>*1,2</sup> , S.J. Metz <sup>1</sup> , H.C. Lange <sup>2</sup> , A.A. van Steenhoven <sup>2</sup> , <sup>1</sup> <i>Wetsus, The Netherlands</i> , <sup>2</sup> <i>Technische Universiteit Eindhoven, The Netherlands</i>
<b>[P3.012]</b>	<b>Paper mill wastewater recycle and reuse: An integrated treatment approach</b> Y. Bhole <sup>*1</sup> , D. Musale <sup>1</sup> , <sup>1</sup> <i>Nalco Waters India Limited, India</i> , <sup>2</sup> <i>Nalco Company, USA</i>
<b>[P3.013]</b>	<b>Supported biomimetic nanoporous blockcopolymer membranes for the integration of transmembrane proteins</b> M. Bieligmeyer <sup>*1</sup> , M. Müller <sup>1</sup> , T. Hirth <sup>1,2</sup> , T. Schiestel <sup>1</sup> , <sup>1</sup> <i>Fraunhofer Institute for Interfacial Engineering and Biotechnology, Germany</i> , <sup>2</sup> <i>University of Stuttgart, Germany</i>
<b>[P3.014]</b>	<b>Influence of non-ionic surfactants on reverse micellar-enhanced ultrafiltration</b> L.A.T. Nguyen <sup>1</sup> , M. Schwarze <sup>1</sup> , A. Drews <sup>2</sup> , M. Kraume <sup>1</sup> , R. Schomäcker <sup>1</sup> , L. Böhm <sup>*1</sup> , <sup>1</sup> <i>TU, Germany</i> , <sup>2</sup> <i>HTW, Germany</i>
<b>[P3.015]</b>	<b>Process intensification through micellar enhanced ultrafiltration</b> M. Schwarze <sup>1</sup> , M. Schmidt <sup>1</sup> , L.A.T. Nguyen <sup>1</sup> , A. Drews <sup>2</sup> , M. Kraume <sup>1</sup> , R. Schomäcker <sup>1</sup> , L. Böhm <sup>*1</sup> , <sup>1</sup> <i>TU, Germany</i> , <sup>2</sup> <i>HTW, Germany</i>
<b>[P3.016]</b>	<b>Scale-up of membrane affinity adsorbers based on tested physical model</b> S. Dimartino <sup>1,2</sup> , C. Boi <sup>*1</sup> , G.C. Sarti <sup>1</sup> , <sup>1</sup> <i>University of Bologna, Italy</i> , <sup>2</sup> <i>University of Christchurch, New Zealand</i>
<b>[P3.017]</b>	<b>Comparison between reverse osmosis and membrane distillation for bilge water treatment</b> A. Bottino <sup>*1</sup> , A. Comite <sup>1</sup> , F. Ferrari <sup>1</sup> , A. Jezowska <sup>1</sup> , A. Voena <sup>1</sup> , G. Capannelli <sup>2</sup> , <sup>1</sup> <i>University of Genoa, Italy</i> , <sup>2</sup> <i>TICASS S.c.r.l, Italy</i> , <sup>3</sup> <i>AOC S.R.L., Italy</i>
<b>[P3.018]</b>	<b>Modelling the VIPS process using free volumes theory - validation using in-line and in-situ measurements by near infrared spectroscopy measurements</b> D. Bouyer*, C. Pochat-Bohatier, <i>European Institute of Membranes, France</i>
<b>[P3.019]</b>	<b>Anodic alumina membranes for separation processes in liquid media</b> D.A. Buldakov*, D.I. Petukhov, A.A. Eliseev, <i>Lomonosov Moscow State University, Russia</i>
<b>[P3.020]</b>	<b>Ultrafiltration of stored urine for its safe reuse</b> A. Triger <sup>1,2</sup> , J.S. Pic <sup>1,2</sup> , C. Cabassud <sup>*1,2</sup> , <sup>1</sup> <i>Universite de Toulouse, France</i> , <sup>2</sup> <i>INRA, France</i> , <sup>3</sup> <i>CNRS, France</i>
<b>[P3.021]</b>	<b>Influence of additional particles in cake-layers formed by MBR's supernatants: In-situ measurement of structural properties at local scale</b> P. Loulergue <sup>1,2</sup> , C. Guigui <sup>1,2</sup> , C. Cabassud <sup>*1,2</sup> , <sup>1</sup> <i>Université de Toulouse, France</i> , <sup>2</sup> <i>INRA, France</i>
<b>[P3.022]</b>	<b>Modification of mixed matrix membranes for organic solvent nanofiltration</b> J. Campbell*, R. Davies, C. Braddock, A.G. Livingston, <i>Imperial College, UK</i>
<b>[P3.023]</b>	<b>Evaluation of nanofiltration membranes for sugar reduction in red grape must</b> C. Salgado <sup>1</sup> , F.J. Carmona <sup>*2</sup> , L. Palacio <sup>1</sup> , P. Prádanos <sup>1</sup> , A. Hernández <sup>1</sup> , <sup>1</sup> <i>University of Valladolid, Spain</i> , <sup>2</sup> <i>University of Extremadura, Spain</i>
<b>[P3.024]</b>	<b>Development of a nuclearized pilot for the purification of radioactive water: Dead end filtration with ceramic membrane</b> E. Carretier <sup>*1</sup> , H. Marteau <sup>2</sup> , P. Moulin <sup>1</sup> , <sup>1</sup> <i>Aix Marseille Université, France</i> , <sup>2</sup> <i>CEA, France</i>
<b>[P3.025]</b>	<b>Fouling reduction in anaerobic membrane bioreactor treating municipal wastewater</b> A. Cerón-Vivas*, J.M. Morgan-Sagastume, A. Noyola, <i>Universidad Nacional Autónoma de México, Mexico</i>
<b>[P3.026]</b>	<b>Design of a packed bed membrane reactor for the oxidative coupling of methane</b> A.S. Chaudhari*, J.J.F.E. Ramakers, F. Gallucci, M. van Sint Annaland, <i>Eindhoven University of Technology, The Netherlands</i>
<b>[P3.027]</b>	<b>Reuse of waste water to make drinking water by using RO membranes technology: Technical feasibility and European Regulation</b> E. Chaumien*, R. BODA, L. Boutarin, <i>Hydranautics, USA</i>
<b>[P3.028]</b>	<b>Proven performance of high area seawater reverse osmosis (SWRO) membrane elements</b> L.B. Boutarin, M.N. Neculau, R.G. Garrote, E. Chaumien*, <i>Hydranautics, USA</i>

[P3.029]	<b>Removal of cesium from aqueous solutions by copper hexacyanoferrate membrane coated electrodes in a electrochemical adsorption system</b> R.Z. Chen <sup>*1</sup> , H. Tanaka <sup>1</sup> , T. Kawamoto <sup>1</sup> , M. Asai <sup>1</sup> , C. Fukushima <sup>1</sup> , M. Watanabe <sup>3</sup> , M. Kurihara <sup>2</sup> , M. Arisaka <sup>3</sup> , T. Nankawa <sup>3</sup> , <sup>1</sup> National Institute of Advanced Industrial Science and Technology, Japan, <sup>2</sup> Yamagata University, Japan, <sup>3</sup> Japan Atomic Energy Agency, Japan
[P3.030]	<b>Unleashing the potential of carbon-nanotubes for removing oil from water: Their deployment in pore channels of ceramic membrane</b> X. Chen <sup>*1</sup> , L. Hong <sup>1,2</sup> , <sup>1</sup> National University of Singapore, Singapore, <sup>2</sup> Institute of Materials Research and Engineering, Singapore
[P3.031]	<b>An insight into mass transfer in forward osmosis hollow fiber membranes and its implications for membrane fabrication</b> S.R. Chou <sup>*</sup> , R. Wang, <i>Nanyang Technological University, Singapore</i>
[P3.032]	<b>Towards a membrane process based parth to concentrate willow extract</b> K.V. Christensen <sup>*1</sup> , M.L. Ohm <sup>1</sup> , V.G. Horn <sup>2</sup> , <sup>1</sup> University of Southern Denmark, Denmark, <sup>2</sup> Palsgaard A/S, Denmark
[P3.033]	<b>Solubility of dichloromethane in Matrimid® 5218: Measurement and modelling through the non equilibrium thermodynamics of glassy polymer (NET-GP) approach</b> G. Cocchi <sup>*</sup> , M.G. Baschetti, M.G. De Angelis, F. Doghieri, <i>Università di Bologna, Italy</i>
[P3.034]	<b>Evaluation of the hydraulic cleaning efficiency as a function of the operating conditions in the ultrafiltration of BSA solutions</b> M.J. Corbatón-Báguena <sup>*</sup> , S. Álvarez-Blanco, M.C. Vincent-Vela, <i>Universidad Politécnica de Valencia, Spain</i>
[P3.035]	<b>Hydrogen and oxygen production using wastewater effluent treated with ultra-filtration and membrane distillation (Greenlysis)</b> E. Marzo <sup>1</sup> , A. Gali <sup>1</sup> , B. Lefevre <sup>1</sup> , L. Bouchy <sup>1</sup> , A. Vidal <sup>2</sup> , J.L. Cortina <sup>*1,4</sup> , A. Fabre <sup>3</sup> , <sup>1</sup> CETAqua, Spain, <sup>2</sup> Sorea, Spain, <sup>3</sup> CIRSEE, France, <sup>4</sup> Universitat Politècnica de Catalunya, Spain
[P3.036]	<b>Rejection of minor ionic solutes in nanofiltration. Influence of solution composition</b> N. Pages <sup>1</sup> , M. Reig <sup>1</sup> , A. Yaroshchuk <sup>1,2</sup> , O. Gibert <sup>1,3</sup> , J.L. Cortina <sup>*1,3</sup> , <sup>1</sup> Polytechnic University of Catalonia, Spain, <sup>2</sup> Catalan Institute for Research and Advanced Studies, Spain, <sup>3</sup> Water Technology Center, Spain
[P3.037]	<b>Concentration of seawater reverse osmosis brines using electro dialysis for a zero discharge system</b> S. Casas <sup>1</sup> , C. Aladjem <sup>2</sup> , J.L. Cortina <sup>*1,3</sup> , E. Larrotcha <sup>3</sup> , F. Valero <sup>4</sup> , C. Miguel <sup>4</sup> , <sup>1</sup> UPC-BarcelonaTech, Spain, <sup>2</sup> Solvay Ibérica S.L, Spain, <sup>3</sup> CETAqua, Spain, <sup>4</sup> ATLL. Carrer de Sant Martí de l'Erm, Spain
[P3.038]	<b>Mechanisms of ro membrane fouling by surfactants: A combination of experiments and simulation studies</b> Z. Mai <sup>1</sup> , E. Couallier <sup>*1</sup> , H. Zhu <sup>1</sup> , B. Rousseau <sup>2</sup> , M. Rakib <sup>1</sup> , <sup>1</sup> Ecole Centrale Paris, France, <sup>2</sup> Université Paris Sud, France
[P3.039]	<b>Fouling of reverse osmosis membranes by hydrocarbonated and fluorinated surfactants contained in firefighting water</b> C. Baudequin <sup>1</sup> , E. Couallier <sup>*1</sup> , Z. Mai <sup>1</sup> , M. Rakib <sup>1</sup> , I. Deguerry <sup>2</sup> , R. Severac <sup>2</sup> , <sup>1</sup> Centrale Paris, France, <sup>2</sup> DuPont de Nemours, France
[P3.040]	<b>Brine treatment by a membrane distillation-crystallization (MDC) process</b> R.J.M. Creusen <sup>*</sup> , J. van Medevoort, C.P.M. Roelands, J.A.D. van Renesse van Duivenbode, <i>TNO, The Netherlands</i>
[P3.041]	<b>Langmuir isotherms for studying biofilm-calcium phosphate interactions in wastewater membrane-based desalination</b> Y. Dahdal <sup>*</sup> , Y. Oren, R. Kasher, H. Rapaport, <i>Ben Gurion University of the Negev, Israel</i>
[P3.043]	<b>Nanofiltration and molecularly imprinted membranes: A theoretical study based on quantum mechanics approach</b> G. De Luca <sup>*</sup> , L. Donato, F. Tasselli, S.G. Del Blanco, F. Bisignano, E. Drioli, <i>CNR, Italy</i>
[P3.044]	<b>Evaluation of nanofiltration for the treatment of industrial effluents containing anionic surfactants</b> C. Korzenowski <sup>2,1</sup> , M.B.O. Martins <sup>1</sup> , A.M. Bernardes <sup>2</sup> , J. Zoppas Ferreira <sup>2</sup> , E.C.N.F. Duarte <sup>1</sup> , M.N. De Pinho <sup>*1</sup> , <sup>1</sup> Universidade Técnica de Lisboa, Portugal, <sup>2</sup> Universidade Federal do Rio Grande do Sul, Brazil
[P3.045]	<b>Nanofiltration for the treatment of coke plant ammoniacal wastewaters</b> C. Korzenowski <sup>1</sup> , M. Minhalma <sup>1,3</sup> , A.M. Bernardes <sup>1</sup> , J.Z. Ferreira <sup>1</sup> , M.N. de Pinho <sup>*1</sup> , <sup>1</sup> Universidade Técnica de Lisboa, Portugal, <sup>2</sup> Instituto Superior de Engenharia de Lisboa, Portugal
[P3.046]	<b>Arsenic removal by membrane processes: Modeling and applications</b> J. Fang, B. Deng <sup>*</sup> , <i>University of Missouri, USA</i>
[P3.047]	<b>Treatment of model textile dye wastewater (MTDW) towards developing novel submerged membrane bioreactor process</b> S.A. Deowan <sup>*1</sup> , B. Wagner <sup>1</sup> , C. Aresipathi <sup>1</sup> , J. Hoinkis <sup>1</sup> , A. Figoli <sup>2</sup> , E. Drioli <sup>3</sup> , <sup>1</sup> Karlsruhe University of Applied Sciences, Germany, <sup>2</sup> Institute on Membrane Technology, Italy, <sup>3</sup> University of Calabria, Italy
[P3.048]	<b>The development of polymeric membrane via casting technology for water desalting</b> A. EL-Gendi, A. Deratani <sup>*</sup> , S.A. Ahmed, S. ali, <i>National Research Center, Egypt</i>
[P3.049]	<b>Advanced surface-sensitive techniques for characterizing membrane surface phenomena and responsive membrane polymers.</b> G. Diaconu <sup>*1</sup> , T. Schäfer <sup>1,2</sup> , <sup>1</sup> University of the Basque Country, Spain, <sup>2</sup> Basque Foundation for Science, Spain
[P3.050]	<b>Molecular dynamics simulations of nanofiltration membranes: Construction and microscopic standpoint</b> M.D. Ding <sup>*</sup> , A.S. Szymczyk, A.G. Aziz Ghoufi, <i>Université de Rennes 1, France</i>
[P3.051]	<b>Computational studies of drugs in lipid membranes and liposomes</b> E.S.E. Eriksson <sup>*1</sup> , L.A. Eriksson <sup>1</sup> , J.P.M Jämbeck <sup>2</sup> , A.P. Lyubartsev <sup>2</sup> , A. Laaksonen <sup>2</sup> , <sup>1</sup> University of Gothenburg, Sweden, <sup>2</sup> Stockholm University, Sweden
[P3.052]	<b>Fenton coupled with nanofiltration for elimination of tartrazine</b> I. Escalona <sup>*1</sup> , F. Stüber <sup>1</sup> , A. Fortuny <sup>2</sup> , C. Bengoa <sup>1</sup> , A. Fabregat <sup>1</sup> , J. Font <sup>1</sup> , <sup>1</sup> Universitat Rovira i Virgili, Spain, <sup>2</sup> Universitat Politècnica de Catalunya, Spain
[P3.053]	<b>The effect of TiO2 nanoparticles on PES UF membrane fouling in water-oil separation</b> A. Esmaili Livari <sup>*</sup> , A. Aroujalian, A. Raisi, M. Fathizadeh, <i>Amirkabir University of Technology, Iran</i>
[P3.054]	<b>Spinning an optimized hollow fiber membrane for desalination by membrane distillation using experimental statistical designs</b> M. Essalhi <sup>*</sup> , L. Fernández, P. Arribas, M.C. García-Payo, M. Khayet, <i>University Complutense of Madrid, Spain</i>
[P3.055]	<b>High flux and bendable carbon nanofiber membranes for the filtration of nanoparticles from aqueous solutions</b> M. Faccini <sup>*</sup> , V. Shabafrooz, G. Borja, S. Vazquez-Campos, D. Amantia, <i>LEITAT Technological Center, Spain</i>
[P3.056]	<b>Novel modification of porous polypropylene microfiltration membrane grafted aminoethyl methacrylate anchored schiff-base for removal of Cu(II) from aqueous solution</b> F. Farjadian <sup>*1,2</sup> , S. Schwark <sup>1</sup> , M. Ulbricht <sup>1</sup> , <sup>1</sup> Universität Duisburg-Essen, Germany, <sup>2</sup> Shiraz University, Iran
[P3.057]	<b>Experimental determination of NF transport model parameters for predictive purposes</b> S. Déon, P. Fievet <sup>*</sup> , A. Escoda, <i>Université de Franche-Comté, France</i>

[P3.058]	<b>Influence of steric, electric and dielectric effects on membrane potential in binary and ternary electrolytes</b> Y. Lanteri <sup>4</sup> , P. Fievet* <sup>1</sup> , A. Szymczyk <sup>2,3</sup> , S. Deon <sup>1</sup> , A. Escoda <sup>1</sup> , <sup>1</sup> Université de Franche-Comté, France, <sup>2</sup> Université Européenne de Bretagne, France, <sup>3</sup> Université de Rennes 1, France, <sup>4</sup> Institut Européen des Membranes, France
[P3.059]	<b>Impact of pore swelling and salting-out effects on the transfer of PEG through NF membranes</b> A. Escoda <sup>1</sup> , P. Fievet* <sup>1</sup> , S. Bouranene <sup>2</sup> , S. Deon <sup>1</sup> , A. Szymczyk <sup>3,4</sup> , <sup>1</sup> Université de Franche-Comté, France, <sup>2</sup> Université Mohamed Chérif Messaadia, Algeria, <sup>3</sup> Université Européenne de Bretagne, France, <sup>4</sup> Université de Rennes 1, France
[P3.060]	<b>Preparation of novel mfi zeolite - pvdf mixed matrix membranes for potential vocs removal</b> M. Drobek <sup>1,2</sup> , A. Figoli* <sup>1</sup> , C. Algeri <sup>1</sup> , S. Santoro <sup>1</sup> , A. Trotta <sup>1,3</sup> , N. Gaeta <sup>1,3</sup> , <sup>1</sup> CNR, Italy, <sup>2</sup> Institut Européen des Membranes, France, <sup>3</sup> GVS, Italy
[P3.061]	<b>Photocatalytic membrane for water purification</b> K. Fischer*, M. Müller, J.W. Gerlach, A. Prager, A. Schulze, <i>Leibniz Institute of Surface Modification, Germany</i>
[P3.062]	<b>Identification of important chemical and physical properties for removal of pharmaceutical residuals in wastewater by nanofiltration</b> L. Flyborg* <sup>1</sup> , B. Björleinius <sup>2</sup> , K.M. Persson <sup>1</sup> , <sup>1</sup> Water Resources Engineering, Sweden, <sup>2</sup> Stockholm Water Co, Sweden
[P3.063]	<b>Asymmetric carbon molecular sieve membranes supported on non-modified TiO2 ceramic tubes for gas separation</b> K.C. Briceño <sup>1</sup> , D. Montané <sup>2</sup> , R. Garcia-Valls* <sup>1</sup> , A. Iulianelli <sup>3</sup> , A. Basile <sup>3</sup> , <sup>1</sup> Universitat Rovira i Virgili, Spain, <sup>2</sup> Catalonia Institute for Energy Research, Spain, <sup>3</sup> University of Calabria, Italy
[P3.064]	<b>New forward osmosis membranes with internal morphology design</b> R. Garcia-Valls* <sup>1</sup> , K. Briceño <sup>1</sup> , I. Fonseca <sup>2,3</sup> , L. Vega <sup>4,5</sup> , S. Guri <sup>4,5</sup> , <sup>1</sup> Universidad Rovira y Virgili, Spain, <sup>2</sup> Aigües de Barcelona, Spain, <sup>3</sup> CETAqua Water Technology Center, Spain, <sup>4</sup> Carburas Metalicos-Air products Group, Spain, <sup>5</sup> MATGAS-Research Center, Spain
[P3.065]	<b>Change in paradigm in wastewater treatment and his impact on fouling membrane</b> A. Gasmi* <sup>1,2</sup> , M. Heran <sup>1</sup> , A. Hannachi <sup>2</sup> , A. Grasnich <sup>1</sup> , <sup>1</sup> European Insitut of Membrane, France, <sup>2</sup> Engineering School of Gabes, Tunisia
[P3.066]	<b>Dead-end filtration of sponge-like colloids: The case of casein micelle</b> P. Qu <sup>1,2</sup> , G. Gesan Guiziu* <sup>1,2</sup> , A. Bouchoux <sup>1,2</sup> , <sup>1</sup> INRA, France, <sup>2</sup> AGROCAMPUS OUEST, France
[P3.067]	<b>Unexpected displacement of the equilibrium between the apo and the holo form during ultrafiltration of the metalloprotein <math>\alpha</math>-lactalbumin</b> M. Van Audenhaege <sup>1,2</sup> , F. Garnier-Lambrouin <sup>1,2</sup> , M. Piot <sup>1,2</sup> , G. Gésan-Guiziu* <sup>1,2</sup> , <sup>1</sup> INRA, France, <sup>2</sup> AGROCAMPUS OUEST, France
[P3.068]	<b>Comparison of milk protein separation processes by life cycle analysis: Chromatography vs filtration</b> S. Omont <sup>1</sup> , D. Froelich <sup>1</sup> , G. Gésan-Guiziu* <sup>2,3</sup> , M. Rabiller-Baudry <sup>4</sup> , F. Thueux <sup>5</sup> , D. Beudon <sup>6</sup> , <sup>1</sup> laboratoire MAPIE, France, <sup>2</sup> INRA, France, <sup>3</sup> Agrocampus Ouest, France, <sup>4</sup> Université Rennes 1, France, <sup>5</sup> ECOBILAN SA, Neuilly-sur-Seine, France, <sup>6</sup> SOREDAB SA, Boissière, France
[P3.069]	<b>Modeling and optimization of nanofiber structures for sterile filtration of liquids</b> S. Giglia*, S. Ashby-Leon, O. Kas, D. Nhiem, G. Tkacik, <i>EMD Millipore Corporation, USA</i>
[P3.070]	<b>Effects of sludge retention time (SRT) on the performance of high-retention membrane distillation bioreactor (MDBR)</b> S. Goh*, Q. Zhang, J. Zhang, Y. Liu, A.G. Fane, <i>Nanyang Technological University, Singapore</i>
[P3.071]	<b>Biofilm evolution in pre-treatment line to reverse osmosis</b> E. Dionisio <sup>1</sup> , J. Pérez <sup>1</sup> , F. Plaza <sup>2</sup> , G. Garralón <sup>2</sup> , A. Garralón <sup>3</sup> , M.A. Gómez* <sup>1</sup> , <sup>1</sup> University of Granada, Spain, <sup>2</sup> CADAGUA S.A., Spain, <sup>3</sup> CIEMAT, Spain
[P3.072]	<b>Organic fouling of thin-film composite and cellulose triacetate forward osmosis membranes by oppositely charged macromolecules</b> Y.S. Gu*, Y.N. Wang, J. Wei, C.Y. Tang, <i>Nanyang Technological University, Singapore</i>
[P3.073]	<b>New SPEEK/poly(arylene ether) blend-nanocomposite membranes via sol-gel method</b> M. Gurtekin Seden* <sup>1,2</sup> , E. Basturk <sup>2</sup> , T. Yilmaz Inan <sup>1</sup> , N. Kayaman Apohan <sup>2</sup> , A. Gungor <sup>1,2</sup> , <sup>1</sup> TUBITAK MAM Chemistry Institute, Turkey, <sup>2</sup> Marmara University, Turkey
[P3.074]	<b>Modeling of MF/UF membrane fouling by a protein: A new multiscale approach</b> S. Habibi*, F. Bellet, F. Lopes, E. Couallier, B. Goyeau, M. Rakib, <i>Ecole Centrale Paris, France</i>
[P3.075]	<b>Virtual screening of membrane materials</b> A.W. Thornton* <sup>1</sup> , M.S. Liu <sup>1</sup> , C.M. Doherty <sup>1</sup> , A.J. Hill <sup>1</sup> , M.R. Hill <sup>1</sup> , B.D. Freeman <sup>2</sup> , Y. Jiang <sup>2</sup> , F.T. Willmore <sup>2</sup> , I.C. Sanchez <sup>2</sup> , D. Dubbeldam <sup>3</sup> , <sup>1</sup> CSIRO, Australia, <sup>2</sup> University of Texas Austin, USA, <sup>3</sup> University of Amsterdam, The Netherlands
[P3.076]	<b>Structure formation of integral-asymmetric membranes of polystyrene-block-poly(ethylene oxide)</b> J. Hahn*, V. Filiz, S. Rangou, J. Clodt, A. Jung, K. Buhr, C. Abetz, V. Abetz, <i>Helmholtz-Zentrum Geesthacht, Germany</i>
[P3.077]	<b>Surface modification of mixed matrix membranes for the reduction of fouling</b> C. Hänel* <sup>1</sup> , K. Niedergall <sup>1</sup> , J. Barz <sup>2</sup> , T. Schiestel <sup>1</sup> , <sup>1</sup> Fraunhofer Institute for Interfacial Engineering and Biotechnology, Germany, <sup>2</sup> University of Stuttgart, Germany
[P3.078]	<b>Recovery of copper from smelter wastewater with the use of electrodialysis</b> H.K. Hansen*, A. Rojo, C. Gutierrez, J. Ferreira, M. Sepulveda, <i>Universidad Tecnica Federico Santa Maria, Chile</i>
[P3.079]	<b>Effect of pore-size of carbon hollow fiber membranes on dehydration performance of olefin gases</b> M. Yoshimune, K. Haraya*, <i>AIST, Japan</i>
[P3.080]	<b>Evaluation of nanofiltration based hybrid process in the removal of heavy metals</b> P. Häyrynen*, J. Landaburu-Aguirre, M. Pirilä, R. Lenkkeri, R.L. Keiski, <i>University of Oulu, Finland</i>
[P3.081]	<b>Prediction of single salt rejection in nanofiltration membranes</b> V. Silva, M. Montalvillo, J. Carmona, L. Palacio, A. Hernández*, P. Prádanos, <i>Universidad de Valladolid, Spain</i>
[P3.082]	<b>Formation of asymmetric films, as a membrane precursors, using Langmuir and Langmuir-Blodgett techniques</b> M. Hitrik*, D. Mandler, O. Lev, <i>Hebrew University of Jerusalem, Israel</i>
[P3.083]	<b>Comparison of PES membrane chemical cleaning efficiency using different protocols</b> O. Škorvan <sup>1,2</sup> , M. Holba* <sup>1,3</sup> , I. Bodík <sup>4</sup> , P. Mikulášek <sup>5</sup> , <sup>1</sup> Asio spol. s r.o., Czech Republic, <sup>2</sup> Institute of Chemical Technology, Czech Republic, <sup>3</sup> Institute of Botany, Academy of Sciences, Czech Republic, <sup>4</sup> Slovakian Technical University, Slovakia, <sup>5</sup> University of Pardubice, Czech Republic
[P3.084]	<b>Preparation bio-catalytic tio2 functionalized pes membrane and potential application for bpa removal</b> J. Hou*, G. Dong, Y. Ye, V. Chen, <i>University of New South Wales, Australia</i>



[P3.085]	<b>Development of a mechanistic model for mass transfer in sorption selective mixed-matrix membranes for gas separation</b> V. Kramer, D. Hülägü*, M. Kraume, E. Lyagin, <i>Technische Universität Berlin, Germany</i>
[P3.086]	<b>Detailed investigation on laboratory scale mixed-matrix-membrane preparation for gas separation</b> D. Hülägü*, V. Kramer, M. Böttger, M. Kraume, E. Lyagin, <i>Technische Universität Berlin, Germany</i>
[P3.087]	<b>Preparation of thin film nano-composite (TFN) membrane with nano-porous particles</b> S.H. Park, H.K. Park, S.S. Hwang*, K.Y. Baek, <i>Korea Institute of Science and Technology, Republic of Korea</i>
[P3.088]	<b>Simulation of heat and mass transfer in direct contact membranedistillation (md): The effect of membrane pore space description</b> A. Imdakm <sup>*1</sup> , T. Matsuura <sup>1</sup> , <sup>1</sup> Tripoli University, Libya, <sup>2</sup> University of Ottawa, Canada
[P3.089]	<b>Efficient gas sparging design through characterising the hydrodynamics inside submerged HF membrane systems</b> S. Jankhah*, P.R. Berube, <i>University of British Columbia, Canada</i>
[P3.090]	<b>Comparison of various smp and eps activated sludge models with respect to structure, identifiability and outputs</b> T. Janus, <i>De Montfort University, UK</i>
[P3.091]	<b>AiRO: Reverse osmosis on surface water without extensive pretreatment</b> R.C.M. Jong <sup>*1</sup> , J.A. De Ruijter <sup>2</sup> , J.Q.J.C. Verberk <sup>3</sup> , W.G.J. Van de Meer <sup>3</sup> , <sup>1</sup> Vitens Technology Centre, The Netherlands, <sup>2</sup> Hatenboer-Water, The Netherlands, <sup>3</sup> Delft University of Technology, The Netherlands
[P3.092]	<b>Effect of charge on membrane rejection during ultrafiltration: Comparison of dextran and carboxymethylcellulose (CMC) solutions</b> M. Pinelo, O.A. Prado, V. Møller, A. Meyer, G. Jonsson*, <i>Technical University of Denmark, Denmark</i>
[P3.093]	<b>Electrokinetic flow in polyelectrolyte-modified nanopores</b> L.H.Y. Yeh <sup>1,2</sup> , M.Z. Zhang <sup>1</sup> , S.Q. Qian <sup>1,3</sup> , J.P.H. Hsu <sup>2</sup> , S.W.J. Joo <sup>*3</sup> , <sup>1</sup> Old Dominion University, USA, <sup>2</sup> National Taiwan University, Taiwan, <sup>3</sup> Yeungnam University, Republic of Korea
[P3.095]	<b>Synthesis and characterization of chitosan/ZIF-7 mixed-matrix membranes for pervaporation dehydration of water/ethanol mixtures</b> C.H. Kang*, K.L. Tung, Y.F. Lin, Y.S. Huang, <i>Chung Yuan Christian University, Taiwan</i>
[P3.096]	<b>Influence of the addition of nanofiltration concentrate on mbr performance</b> C. Kappel <sup>*2,1</sup> , A. Zwijnenburg <sup>1</sup> , H. Temmink <sup>3</sup> , H. Rijnaarts <sup>3</sup> , A. Kemperman <sup>2</sup> , K. Nijmeijer <sup>2</sup> , <sup>1</sup> Wetsus, The Netherlands, <sup>2</sup> Twente University, The Netherlands, <sup>3</sup> Wageningen University, The Netherlands
[P3.097]	<b>Rheological properties of alginate fouling layers developing during RO membrane desalination</b> D.C. Sioutopoulos <sup>1</sup> , T.B. Goudoulas <sup>2</sup> , E.G. Kastrinakis <sup>2</sup> , S.G. Nychas <sup>2</sup> , A.J. Karabelas <sup>*1</sup> , <sup>1</sup> Centre for Research and Technology-Hellas, Greece, <sup>2</sup> Aristotle University of Thessaloniki, Greece
[P3.098]	<b>Incipient CaCO<sub>3</sub> scale formation on reverse osmosis membranes during brackish water desalination in spacer-filled channels</b> S.T. Mitrouli <sup>1</sup> , A.J. Karabelas <sup>*1</sup> , A. Karanasiou <sup>1</sup> , M. Kostoglou <sup>2</sup> , <sup>1</sup> Centre for Research and Technology-Hellas, Greece, <sup>2</sup> Aristotle University of Thessaloniki, Greece
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[P3.100]	<b>Multilayer polyelectrolyte-based thin films for desalination - comparison of the water flux and salt rejection as a function of film composition</b> H. Lomas <sup>1</sup> , Z. Zhu <sup>1</sup> , A.J. Hill <sup>2</sup> , F. Caruso <sup>1</sup> , S.E. Kentish <sup>*1</sup> , <sup>1</sup> The University of Melbourne, Australia, <sup>2</sup> CSIRO, Australia
[P3.101]	<b>Systematic identification of permeance models for pervaporation or vapor permeation membranes</b> M. Skiborowski <sup>1</sup> , N. Kerimoglu <sup>*1</sup> , K. Koch <sup>2</sup> , A. Gorak <sup>2</sup> , W. Marquardt <sup>1</sup> , <sup>1</sup> RWTH Aachen University, Germany, <sup>2</sup> Technical University Dortmund, Germany
[P3.102]	<b>Functionalized carbon nanotube mixed matrix membranes of polymers of intrinsic microporosity (PIMs) for gas separation</b> M.M. Khan*, V. Filiz, G. Bengtson, M.M. Rahman, S. Shishatskiy, V. Abetz, <i>Helmholtz-Zentrum Geesthacht, Germany</i>
[P3.103]	<b>SPEEK and functionalized mesoporous MCM-41 mixed-matrix membranes for gas separation</b> A.L. Khan <sup>*1</sup> , C. Klaysom <sup>1</sup> , A. Gahlaut <sup>1</sup> , X. Li <sup>1,2</sup> , I.F.J. Vankelecom <sup>1</sup> , <sup>1</sup> KU Leuven, Belgium, <sup>2</sup> Chinese Academy of Science, China
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[P3.105]	<b>Applicability of nanofiltration in the recovery of chrome tanning wastewater</b> B. Kiril Mert <sup>*1</sup> , K. Kestioğlu <sup>1</sup> , <sup>1</sup> Sakarya University, Turkey, <sup>2</sup> Uludag University, Turkey
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[P3.110]	<b>Molecular modeling of thermodynamical properties of the poly (vinyl alcohol) active layer used in ethanol pervaporation dehydration processes</b> O. Vitrac <sup>2,1</sup> , M. Oltheten <sup>2,1</sup> , M.L. Lameloise <sup>*1,2</sup> , Y. Imbert <sup>2,1</sup> , V. Athes <sup>1,2</sup> , M. Moussa <sup>1,2</sup> , <sup>1</sup> AgroParisTech, France, <sup>2</sup> INRA, France
[P3.111]	<b>Treatment of vinasse employing ultrafiltration combined with aerobic bioreactor with membrane and post-treatment with nanofiltration allowing it to reuse</b> N.C. Magalhães <sup>1</sup> , A.L.D. Silva <sup>1</sup> , M.C.S. Amaral <sup>1</sup> , L.C. Lange <sup>1</sup> , L.F. Neta <sup>2</sup> , M. Machado <sup>*1</sup> , <sup>1</sup> Federal University of Minas Gerais, Brazil, <sup>2</sup> Federal Center of Technological Education of Minas Gerais-CEFET, Brazil
[P3.112]	<b>Poly(phenylene sulfone)(PPSU) and TiO<sub>2</sub> hybrid nanocomposite membranes for desalination</b> D. Lawrence Arockiasamy*, T. Javed Alam, A. Mansour Alhoshan, <i>King Saud University, Saudi Arabia</i>
[P3.113]	<b>Colloidal fouling prediction in forward osmosis considering reverse diffusion of draw solute and cake enhanced osmotic pressure(ceop)</b> J.J. Lee*, M.K. Park, J.H. Kim, <i>Gwangju Institute of Science and Technology, Republic of Korea</i>

[P3.114]	<b>Comparison of draw solutes for a hybrid system consisting of forward osmosis, precipitation, and reverse osmosis</b> S.M. Park, Y.K. Choi, J.S. Sohn, S. Lee*, Y.J. Kim, <i>Kookmin University, Republic of Korea</i>
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[P3.116]	<b>Performance evaluation in concentrating PEG solutions using forward osmosis membrane and different draw solutions</b> Y.J. Zhao, L.F. Liu*, L. Jie, F.L. Yang, <i>Dalian University of Technology, China</i>
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[P3.119]	<b>Optimization of submerged ceramic micromembrane filtration for surface water treatment</b> J. Lu* <sup>1</sup> , H.Q. Wen <sup>2</sup> , S.G.J. Heijman <sup>1</sup> , L.C. Rietveld <sup>1</sup> , <sup>1</sup> Delft University of Technology, The Netherlands, <sup>2</sup> Qingdao Water Conservancy Bureau, China
[P3.120]	<b>Influence of the operating conditions on the chemical cleaning of ultrafiltration membranes fouled with bsa solution</b> M.J. Luján Facundo*, J.A. Mendoza Roca, B. Cuartas Uribe, S. Álvarez Blanco, A. Bes Piá, <i>Universidad Politécnica de Valencia, Spain</i>
[P3.121]	<b>Practical experience of backwashing with RO permeate for fouling control of UF treating surface water</b> C. Ma*, S.G.J. Heijman, L.C. Rietveld, <i>Delft University of Technology, The Netherlands</i>
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[P3.123]	<b>Advanced oxidation process associated with membrane separation for the treatment of sanitary landfill leachate</b> L.M. Diniz, L.H. Andrade, T.L. Manssula, E.P. Rocha, M.C.S. Amaral, L.C. Lange, M. Machado*, <i>Federal University of Minas Gerais, Brazil</i>
[P3.124]	<b>Nanofiltration as a post-treatment to membrane bioreactor effluent for dairy wastewater reuse</b> L.H. Andrade, F.D.S. Mendes, J.C. Espíndola, M.A. Herculano, M.C.S. Amaral, L.C. Lange, M. Machado*, <i>Federal University of Minas Gerais, Brazil</i>
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[P3.126]	<b>Characterization of biomass activity in conventional and hybrid MBR pilot plants by means of respirometric techniques</b> D. Di Trapani, G. Di Bella, G. Mannina*, M. Torregrossa, G. Viviani, <i>University of Palermo, Italy</i>
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[P3.131]	<b>Application of sandwich membrane for the treatment of palm oil mill effluent (POME) for water reuse</b> N.A. Azmi, K.F. Md Yunos*, R. Zakaria, <i>Universiti Putra Malaysia, Malaysia</i>
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[P3.133]	<b>An equation of state(EoS)-based approach to describe gas and vapor solubility in mechanically constrained phases: The case of semicrystalline polymers</b> M. Minelli* <sup>1</sup> , M.G. De Angelis <sup>1</sup> , <sup>1</sup> CIRI-MAM, Italy, <sup>2</sup> Università di Bologna, Italy
[P3.134]	<b>Solvent recovery from extract of organic farming raspberry marc applied membrane technologies</b> Z. Molnár*, A. Lovász, E. Békássy-Molnár, G. Vatai, <i>Corvinus University of Budapest, Hungary</i>
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[P3.137]	<b>Effects of feed solution characteristics and membrane fouling on N-nitrosamine rejection by reverse osmosis membranes</b> T. Fujioka <sup>1</sup> , L.D. Nghiem* <sup>1</sup> , S.J. Khan <sup>2</sup> , J.A. McDonald <sup>2</sup> , Y. Poussade <sup>3,4</sup> , J.E. Drewes <sup>2,5</sup> , <sup>1</sup> The University of Wollongong, Australia, <sup>2</sup> The University of New South Wales, Australia, <sup>3</sup> Veolia Water Australia, Australia, <sup>4</sup> Seqwater, Australia, <sup>5</sup> Colorado School of Mines, USA
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[P3.143]	<b>Olive mill wastewater reclamation by reverse osmosis: Membrane performance enhancement by permeate recirculation</b> J.M. Ochando-Pulido*, S. Rodriguez-Vives, A. Martinez-Ferez, <i>University of Granada, Spain</i>
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[P3.146]	<b>Treatment of wastewater. Removal of heavy metals by nanofiltration. Case study: Use of tfc membranes to separate cr (VI) in industrial pilot plant</b> J.A. Otero*, O. Mazarrasa, A. Otero-Fernández, M.D. Fernández, A. Hernández, A. Maroto-Valiente, <i>Universidad de Cantabria, Spain</i>
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[P3.151]	<b>Influence of turbulence promoter geometry on the intensification of microfiltration</b> S. Popovic*, D. Jovicevic, S. Milanovic, M. Tekic, <i>University of Novi Sad, Serbia</i>
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[P3.154]	<b>Skim milk ultrafiltration with a PES membrane: Effect of milk thermal pretreatment and concentration on the irreversible fouling</b> L. Paugam <sup>1</sup> , D. Delaunay <sup>2</sup> , M. Rabiller-Baudry*, <sup>1</sup> Université Rennes 1, France, <sup>2</sup> Université Caen, France
[P3.155]	<b>A multi-dimensional model for scaling in reverse osmosis devices</b> A.I. Radu*, J.S. Vrouwenvelder <sup>1,3</sup> , M.C.M. van Loosdrecht <sup>1</sup> , C. Picoreanu <sup>1</sup> , <sup>1</sup> Delft University of Technology, The Netherlands, <sup>2</sup> Wetsus, The Netherlands, <sup>3</sup> KAUST, Saudi Arabia
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[P3.157]	<b>Biodiesel purification using ultrafiltration ceramic membrane</b> M.J. Alves, I.G. Pereira, V.L. Cardoso, M.H.M. Reis*, <i>Federal University of Uberlandia, Brazil</i>
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[P3.163]	<b>Coating of porous capillary membranes with MOF mixed-matrix membranes for gas separation applications</b> M. Herz, C. Hänel, J. Schmucker, A. Weber, T. Schiestel*, <i>Fraunhofer Institute for Interfacial Engineering and Biotechnology, Germany</i>
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[P3.165]	<b>Nanofiltration ability to remove copper oxide and silver nanoparticles: The role of surface charge and size</b> V. Serrão Sousa*, C. Santos, M. Ribau Teixeira, <i>University of Algarve, Portugal</i>
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[P3.172]	<b>Mechanistic modeling of protein ultrafiltration: The role of small counter-ions in protein transfer</b> A. Szymczyk*, M. Rabiller-Baudry, <i>Université de Rennes 1, France</i>
[P3.173]	<b>Hindered diffusion of ions confined in nanopores: Molecular dynamics simulations versus continuum-based models</b> H. Zhu, A. Ghoufi, A. Szymczyk*, B. Balannec, D. Morineau, <i>Université de Rennes 1, France</i>
[P3.174]	<b>Atomic-scale modeling of antifouling properties of polyzwitterions as additive for water purification membranes</b> H. Takaba*, R. Nagumo, R. Miura, A. Suzuki, H. Tsuboi, N. Hatakeyama, <i>Tohoku University, Japan</i>
[P3.175]	<b>Potential of unsteady state membrane gas separation: From pulses to harmonic function</b> I.N. Beckman <sup>1</sup> , M.G. Shalygin <sup>1</sup> , V.V. Teplyakov* <sup>1</sup> , <sup>1</sup> TIPS RAS, Russia, <sup>2</sup> MSU, Russia
[P3.176]	<b>Study of heterogeneous reverse osmosis membranes from cellulose acetate and modified coal through chemical processes</b> B. Thaçi*, S. Gashi, N. Daci, M. Daci-Ajvazi, A. Dylhasi, <i>University of Prishtina, Albania</i>
[P3.177]	<b>Fouling behavior of silver nanoparticles during membrane filtration</b> K.W. Trzaskus*, A.J.B. Kemperman, D.C. Nijmeijer, <i>University of Twente, The Netherlands</i>
[P3.178]	<b>Comparison of pervaporation models in flowsheeting environment</b> N. Valentinyi* <sup>1</sup> , P. Mizsey <sup>1</sup> , <sup>1</sup> Budapest University of Technology and Economics, Hungary, <sup>2</sup> University of Pannonia, Hungary
[P3.179]	<b>Synthesis and characterisation of ultrafiltration PES membrane embedded with Ag decorated MgO nanocomposite</b> B. Vatsha* <sup>1,2</sup> , J.C. Ngila <sup>1</sup> , T.M. Msagati <sup>1</sup> , R. Moutloali <sup>1,2</sup> , <sup>1</sup> University of Johannesburg, South Africa, <sup>2</sup> Mintek, South Africa
[P3.180]	<b>Biomimetic selective layers based on self-assembling diblock copolymers</b> E.J. Vriezেকolk*, M. Gironès, D.C. Nijmeijer, <i>University of Twente, The Netherlands</i>
[P3.181]	<b>Bridging the gap between gas permeation properties at the transient and steady states</b> K. Wang, <i>Petroleum Institute, United Arab Emirates</i>
[P3.182]	<b>Comparison of microfiltration and ultrafiltration for algae harvesting</b> X.F. Sun <sup>1</sup> , C.W. Wang <sup>1</sup> , Y.J. Tong <sup>1</sup> , W.G. Wang <sup>1</sup> , J. Wei* <sup>2</sup> , <sup>1</sup> Wuhan Institute of Technology, China, <sup>2</sup> Alfa Laval Naskov A/S, Denmark
[P3.183]	<b>Membrane technology for the improved separation of bioactive compounds</b> S.R. Williams* <sup>1</sup> , D.L. Oatley <sup>1</sup> , A. Abdrahman <sup>1</sup> , T. Butt <sup>1</sup> , R. Nash <sup>2</sup> , <sup>1</sup> Swansea University, UK, <sup>2</sup> Phytoquest Ltd, UK
[P3.184]	<b>Organic fouling on ZrO<sub>2</sub> ceramic membrane in the ultrafiltration of synthetic water and wastewater treatment plant effluent</b> T. Zhang*, J.P. Croue, <i>King Abdullah University of Science and Technology, Saudi Arabia</i>
[P3.185]	<b>Synergy gas separation effects when using fillers of different natures (MOFs and zeolites) in the same mixed matrix membrane</b> B. Zornoza* <sup>1</sup> , B. Seoane <sup>1</sup> , J.M. Zamara <sup>2</sup> , C. Téllez <sup>1</sup> , J. Coronas <sup>1</sup> , <sup>1</sup> University of Zaragoza, Spain, <sup>2</sup> INCAPE, Argentina
[P3.186]	<b>The impact of MOF flexibility using an amino functionalized MOF in mixed matrix membranes for CO<sub>2</sub> separation</b> B. Zornoza* <sup>1</sup> , T. Rodenas <sup>2</sup> , C. Téllez <sup>1</sup> , J. Coronas <sup>1</sup> , J. Gascon <sup>2</sup> , F. Kapteijn <sup>2</sup> , <sup>1</sup> University of Zaragoza, Spain, <sup>2</sup> Delft University of Technology, The Netherlands
[P3.187]	<b>Development of membrane-based purification process of Bio-gas for CNG and grid injection application</b> J.H. Kim* <sup>1</sup> , H. Ahn <sup>1</sup> , B.J. Chang <sup>1</sup> , S.R. Park <sup>1,2</sup> , <sup>1</sup> Korea Research Institute of Chemical Technology, Republic of Korea, <sup>2</sup> Honam Petrochemical Corporation, Republic of Korea