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Hsiu-Li Lin, T. Leon Yu, Kun-Sheng Shen and Li-Ning Huang. Effect of Triton-X on the preparation of Nafion/PTFE composite membranes. *Journal of Membrane Science 2004, 237* (1-2) 1-7

J. Paris, C. Molina-Jouve, D. Nuel, P. Moulin and F. Charbit. **Enantioenrichment by pervaporation.** *Journal of Membrane Science 2004, 237* (1-2) 9-14

Chunsheng Feng, Baoli Shi, Guomin Li and Yonglie Wu. **Preparation and properties of microporous membrane from poly(vinylidene fluoride-co-tetrafluoroethylene) (F2.4) for membrane distillation.** *Journal of Membrane Science 2004, 237* (1-2) 15-24

Dirk Nehring, Roberto Gonzalez, Ralf Portner and Peter Czermak. **Experimental and modeling study of a membrane filtration process using ceramic membranes to increase retroviral pseudotype vector titer.** *Journal of Membrane Science 2004, 237* (1-2) 25-38

J. G. Wijmans. **The role of permeant molar volume in the solution-diffusion model transport equations.** *Journal of Membrane Science 2004, 237* (1-2) 39-50

A. O. Imdakm and T. Matsuura. **A Monte Carlo simulation model for membrane distillation processes: direct contact (MD).** *Journal of Membrane Science 2004, 237* (1-2) 51-59

Eliza M. Tsui and Munir Cheryan. **Characteristics of nanofiltration membranes in aqueous ethanol.** *Journal of Membrane Science 2004, 237* (1-2) 61-69

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Jalal Barzin, C. Feng, K. C. Khulbe, T. Matsuura, S. S. Madaeni and H. Mirzadeh. **Characterization of polyethersulfone hemodialysis membrane by ultrafiltration and atomic force microscopy.** *Journal of Membrane Science 2004, 237* (1-2) 77-85

Cinthia Bittencourt Spricigo, Ariovaldo Bolzan, Ricardo Antonio Francisco Machado and Jose Carlos Cunha Petrus. **Mathematical modeling of the membrane separation of nutmeg essential oil and dense CO₂.** *Journal of Membrane Science 2004, 237* (1-2) 87-95

M. Teresa A. Reis and Jorge M. R. Carvalho. **Modelling of zinc extraction from sulphate solutions with bis(2-ethylhexyl)thiophosphoric acid by emulsion liquid membranes.** *Journal of Membrane Science 2004, 237* (1-2) 97-107

Raja Ghosh. **Separation of human albumin and IgG by a membrane-based integrated bioseparation technique involving simultaneous precipitation, microfiltration and membrane adsorption.** *Journal of Membrane Science 2004, 237* (1-2) 109-117

Anupam Shukla and Anil Kumar. **Analysis of separation of chromic acid by zeolite-clay composite membrane using space-charge model.** *Journal of Membrane Science 2004, 237* (1-2) 119-130

Prakhar Prakash, David Hoskins and Arup K. SenGupta. **Application of homogeneous and heterogeneous cation-exchange membranes in coagulant recovery from water treatment plant residuals using Donnan membrane process.** *Journal of Membrane Science 2004, 237* (1-2) 131-144

Chris Yang, S. Srinivasan, A. B. Bocarsly, S. Tulyani and J. B. Benziger. **A comparison of physical properties and fuel cell performance of Nafion and zirconium phosphate/Nafion composite membranes.** *Journal of Membrane Science 2004, 237* (1-2) 145-161

Chih-Lung Chen and Dah-Shyang Tsai. **Permeation properties of microporous membranes prepared via coating of evaporated polydimethylsilane.** *Journal of Membrane Science 2004, 237* (1-2) 163-165

Chase Duclos-Orsello, Wayne P. Kelly, Donald C. Grant, Joseph Zahka and Volkmar Thom. **Neutral adsorptive capture of particles by membranes: network modeling near the membrane isoelectric point.** *Journal of Membrane Science 2004, 237* (1-2) 167-180

Martin Chandler and Andrew Zydny. **High throughput screening for membrane process development.** *Journal of Membrane Science 2004, 237* (1-2) 181-188

Syed Khateeb Zaidi and Ashwani Kumar. **Effects of ethanol concentration on flux and gel formation in dead end ultrafiltration of PEG and dextran.** *Journal of Membrane Science 2004, 237* (1-2) 189-197

Jong Hak Kim, Jongok Won and Yong Soo Kang. **Silver polymer electrolytes by -complexation of silver ions with polymer containing C=C bond and their application to facilitated olefin transport membranes.** *Journal of Membrane Science 2004, 237* (1-2) 199-202

K. Farahbakhsh and D. W. Smith. **Estimating air diffusion contribution to pressure decay during membrane integrity tests.** *Journal of Membrane Science 2004, 237* (1-2) 203-212

Mikko O. Lamminen, Harold W. Walker and Linda K. Weavers. **Mechanisms and factors influencing the ultrasonic cleaning of particle-fouled ceramic membranes.** *Journal of Membrane Science 2004, 237* (1-2) 213-223

Sang Cheol Lee. **Comparison of extraction efficiencies of penicillin G at different w/o ratios in the emulsion liquid membrane systems with dilute polymer solutions.** *Journal of Membrane Science* 2004, 237 (1-2) 225-232

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Hui-Min Wang, Chen-You Li, Shu-Jen Chen, Tung-Wen Cheng and Teh-Liang Chen. **Abatement of concentration polarization in ultrafiltration using n-hexadecane/water two-phase flow.** *Journal of Membrane Science* 2004, 238 (1-2) 1-7

Claudio P. Ribeiro, Jr., Paulo L. C. Lage and Cristiano P. Borges. **A combined gas-stripping vapour permeation process for aroma recovery.** *Journal of Membrane Science* 2004, 238 (1-2) 9-19

A. M. Polyakov, L. E. Starannikova and Yu. P. Yampolskii. **Amorphous Teflons AF as organophilic pervaporation materials: Separation of mixtures of chloromethanes.** *Journal of Membrane Science* 2004, 238 (1-2) 21-32

Weihua Peng, Isabel C. Escobar and Donald B. White. **Effects of water chemistries and properties of membrane on the performance and fouling—a model development study.** *Journal of Membrane Science* 2004, 238 (1-2) 33-46

Christopher J. Orme, John R. Klaehn and Frederick F. Stewart. **Gas permeability and ideal selectivity of poly[bis(phenoxy)phosphazene], poly[bis-(4-tert-butylphenoxy)phosphazene], and poly[bis-(3,5-di-tert-butylphenoxy)1,2(chloro)0.8phosphazene].** *Journal of Membrane Science* 2004, 238 (1-2) 47-55

Paul Scovazzo, Jesse Kieft, Daniel A. Finan, Carl Koval, Dan DuBois and Richard Noble. **Gas separations using non-hexafluorophosphate [PF₆]⁻ anion supported ionic liquid membranes.** *Journal of Membrane Science* 2004, 238 (1-2) 57-63

Takaaki Tanaka and Douglas R. Lloyd. **Formation of poly(-lactic acid) microfiltration membranes via thermally induced phase separation.** *Journal of Membrane Science* 2004, 238 (1-2) 65-73

Muthusamy Sivakumar, Tomoyuki Suzuki, Yusuke Yamamoto, K. P. O. Mahesh, Hiroaki Yoshimizu and Yoshiharu Tsujita. **Structure and properties of the mesophase of syndiotactic polystyrene membrane: VII. Isothermal sorption behavior of xenon.** *Journal of Membrane Science* 2004, 238 (1-2) 75-81

S. Govender, E. P. Jacobs, W. D. Leukes, B. Odhav and V. L. Pillay. **Towards an optimum spore immobilisation strategy using *Phanerochaete chrysosporium*, reverse filtration and ultrafiltration membranes.** *Journal of Membrane Science* 2004, 238 (1-2) 83-92

J. N. Barsema, S. D. Klijnstra, J. H. Balster, N. F. A. van der Vegt, G. H. Koops and M. Wessling. **Intermediate polymer to carbon gas separation membranes based on Matrimid PI.** *Journal of Membrane Science* 2004, 238 (1-2) 93-102

S. V. Satyanarayana and P. K. Bhattacharya. **Pervaporation of hydrazine hydrate: separation characteristics of membranes with hydrophilic to hydrophobic behaviour.** *Journal of Membrane Science* 2004, 238 (1-2) 103-115

Cheng-Liang Chang and Ming-Shih Chang. **Preparation of multi-layer silicone/PVDF composite membranes for pervaporation of ethanol aqueous solutions.** *Journal of Membrane Science* 2004, 238 (1-2) 117-122

Tongwen Xu and Weihua Yang. **Fundamental studies on a novel series of bipolar membranes prepared from poly(2,6-dimethyl-1,4-phenylene oxide) (PPO): I. Effect of anion exchange layers on I-V curves of bipolar membranes.** *Journal of Membrane Science* 2004, 238 (1-2) 123-129

N. Hilal, R. Nigmatullin and A. Alpatova. **Immobilization of cross-linked lipase aggregates within microporous polymeric membranes.** *Journal of Membrane Science* 2004, 238 (1-2) 131-141

Ji-Won Rhim, Ho Bum Park, Choong-Sub Lee, Ji-Hyun Jun, Dae Sik Kim and Young Moo Lee. **Crosslinked poly(vinyl alcohol) membranes containing sulfonic acid group: proton and methanol transport through membranes.** *Journal of Membrane Science* 2004, 238 (1-2) 143-151

Lu Shao, Tai-Shung Chung, Suat Hong Goh and Kumari Pallathadka Pramoda. **Transport properties of cross-linked polyimide membranes induced by different generations of diaminobutane (DAB) dendrimers.** *Journal of Membrane Science* 2004, 238 (1-2) 153-163

M. Y. Kariduraganavar, A. A. Kittur, S. S. Kulkarni and K. Ramesh. **Development of novel pervaporation membranes for the separation of water-isopropanol mixtures using sodium alginate and NaY zeolite.** *Journal of Membrane Science* 2004, 238 (1-2) 165-175

C. Causserand, S. Rouaix, A. Akbari and P. Aimar. **Improvement of a method for the characterization of ultrafiltration membranes by measurements of tracers retention.** *Journal of Membrane Science* 2004, 238 (1-2) 177-190

B. Yordanov and L. Boyadzhiev. **Pertraction of citric acid by means of emulsion liquid membranes.** *Journal of Membrane Science* 2004, 238 (1-2) 191-197

M. Khayet, K. C. Khulbe and T. Matsuura. **Characterization of membranes for membrane distillation by atomic force microscopy and estimation of their water vapor transfer coefficients in vacuum membrane distillation process.** *Journal of Membrane Science* 2004, 238 (1-2) 199-211

Yo Jin Kim, Won Choon Choi, Seong Ihl Woo and Won Hi Hong. **Proton conductivity and methanol permeation in NafionTM/ORMOSIL prepared with various organic silanes.** *Journal of Membrane Science* 2004, **238** (1-2) 213-222

Jong Hak Kim, Su Mi Park, Jongok Won and Yong Soo Kang. **Erratum to "Dependence of facilitated olefin transport on the thickness of silver polymer electrolyte membranes":** [Journal of Membrane Science 236 (2004) 209–212], **238** (1-2) 223

VOL. 239, NO. 2, 2004

N. Vasileva and Ts. Godjevargova. **Study on the behaviour of glucose oxidase immobilized on microfiltration polyamide membrane**, *Journal of Membrane Science* 2004, **239** (2) 157-161

Jesus Garcia-Aleman and James M. Dickson. **Permeation of mixed-salt solutions with commercial and pore-filled nanofiltration membranes: membrane charge inversion phenomena.** *Journal of Membrane Science* 2004, **239** (2) 163-172

J. Llorens, M. Pujola and J. Sabate. **Separation of cadmium from aqueous streams by polymer enhanced ultrafiltration: a two-phase model for complexation binding.** *Journal of Membrane Science* 2004, **239** (2) 173-181

Runhong Du and Jiasen Zhao. **Properties of poly (N,N-dimethylaminoethyl methacrylate)/polysulfone positively charged composite nanofiltration membrane.** *Journal of Membrane Science* 2004, **239** (2) 183-188

Jose Ignacio Calvo, Aldo Bottino, Gustavo Capannelli and Antonio Hernandez. **Comparison of liquid-liquid displacement porosimetry and scanning electron microscopy image analysis to characterise ultrafiltration track-etched membranes.** *Journal of Membrane Science* 2004, **239** (2) 189-197

M. J. Sumner, W. L. Harrison, R. M. Weyers, Y. S. Kim, J. E. McGrath, J. S. Riffle, A. Brink and M. H. Brink. **Novel proton conducting sulfonated poly(arylene ether) copolymers containing aromatic nitriles.** *Journal of Membrane Science* 2004, **239** (2) 199-211

I. -J. Kang, M. E. Rezac and P. H. Pfromm. **Membrane permeation based sensing for dissolved water in organic micro-aqueous media.** *Journal of Membrane Science* 2004, **239** (2) 213-217

Yi-Chieh Wang, Shu-Chin Fan, Kueir-Rarn Lee, Chi-Lan Li, Shu-Hsien Huang, Hui-An Tsai and Juin-Yih Lai. **Polyamide/SDS-clay hybrid nanocomposite membrane application to water–ethanol mixture pervaporation separation.** *Journal of Membrane Science* 2004, **239** (2) 219-226

M. A. Izquierdo-Gil, J. Abildskov and G. Jonsson. **The use of VMD data/model to test different thermodynamic models for vapour–liquid equilibrium.** *Journal of Membrane Science* 2004, **239** (2) 227-241

Wendong Xu, Shankararaman Chellam and Dennis A. Clifford. **Indirect evidence for deposit rearrangement during dead-end microfiltration of iron coagulated suspensions.** *Journal of Membrane Science* 2004, **239** (2) 243-254

D. J. Upadhyay and N. V. Bhat. **Pervaporation studies of gaseous plasma treated PVA membrane.** *Journal of Membrane Science* 2004, **239** (2) 255-263

J. de Jong, N. E. Benes, G. H. Koops and M. Wessling. **Towards single step production of multi-layer inorganic hollow fibers.** *Journal of Membrane Science* 2004, **239** (2) 265-269

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Jiu-Qing Liu, Zhen-Liang Xu and Kang-Gen Zhou. **Study on new method of the preparation of pure ammonium metatungstate (AMT) using a coupling process of neutralization–nanofiltration–crystallization**, *Journal of Membrane Science* 2004, **240** (1-2) 1-9

Jukka Tanninen, Samatha Platt, Andreas Weis and Marianne Nystrom. **Long-term acid resistance and selectivity of NF membranes in very acidic conditions.** *Journal of Membrane Science* 2004, **240** (1-2) 11-18

J. S. Turner and Y. -L. Cheng. **pH dependence of PDMS–PMAA IPN morphology and transport properties.** *Journal of Membrane Science* 2004, **240** (1-2) 19-24

Pierre Schatzel, Q. T. Nguyen and Benoit Riffault. **Statistical mechanics of diffusion in polymers: Conductivity and electroosmosis in ion exchange membranes.** *Journal of Membrane Science* 2004, **240** (1-2) 25-35

Dae Sik Kim, Ho Bum Park, Ji Won Rhim and Young Moo Lee. **Preparation and characterization of crosslinked PVA/SiO₂ hybrid membranes containing sulfonic acid groups for direct methanol fuel cell applications.** *Journal of Membrane Science* 2004, **240** (1-2) 37-48

Sangyoup Lee, Gary Amy and Jaeweon Cho. **Applicability of Sherwood correlations for natural organic matter (NOM) transport in nanofiltration (NF) membranes.** *Journal of Membrane Science* 2004, **240** (1-2) 49-65

Kai Yu Wang, Takeshi Matsuura, Tai-Shung Chung and Wei Fen Guo. **The effects of flow angle and shear rate within the spinneret on the separation performance of poly(ethersulfone) (PES) ultrafiltration hollow fiber membranes.** *Journal of Membrane Science* 2004, **240** (1-2) 67-79

J. B. Xu, S. Lange, J. P. Bartley and R. A. Johnson. **Alginate-coated microporous PTFE membranes for use in the osmotic distillation of oily feeds.** *Journal of Membrane Science* 2004, **240** (1-2) 81-89

- Lanying Jiang, Tai-Shung Chung, Dong Fei Li, Chun Cao and Santi Kulprathipanja. **Fabrication of Matrimid/polyethersulfone dual-layer hollow fiber membranes for gas separation.** *Journal of Membrane Science* 2004, **240** (1-2) 91-103
- Ming Wu, Darren Delai Sun and Joo Hwa Tay. **Effect of operating variables on rejection of indium using nanofiltration membranes.** *Journal of Membrane Science* 2004, **240** (1-2) 105-111
- A. Abrutis, A. Teiserskis, G. Garcia, V. Kubilius, Z. Saltyte, Z. Salciunas, V. Faucheux, A. Figueras and S. Rushworth. **Preparation of dense, ultra-thin MIEC ceramic membranes by atmospheric spray-pyrolysis technique.** *Journal of Membrane Science* 2004, **240** (1-2) 113-122
- M. Khayet, A. Velazquez and J. I. Mengual. **Direct contact membrane distillation of humic acid solutions.** *Journal of Membrane Science* 2004, **240** (1-2) 123-128
- P. Velikovska, P. Legentilhomme, J. Comiti and P. Jaouen. **Suction effects on the hydrodynamics in the vicinity of an ultrafiltration plane ceramic membrane.** *Journal of Membrane Science* 2004, **240** (1-2) 129-139
- Rong-Qiang Fu, Tong-Wen Xu, Yi-Yun Cheng, Wei-Hua Yang and Zhong-Xiao Pan. **Fundamental studies on the intermediate layer of a bipolar membrane: Part III. Effect of starburst dendrimer PAMAM on water dissociation at the interface of a bipolar membrane.** *Journal of Membrane Science* 2004, **240** (1-2) 141-147
- S. Jessie Lue, F. Joshua Wang and Shian-Yiaw Hsiaw. **Pervaporation of benzene/cyclohexane mixtures using ion-exchange membrane containing copper ions.** *Journal of Membrane Science* 2004, **240** (1-2) 149-158
- Sonia Aguado, Ana C. Polo, Maria P. Bernal, Joaquin Coronas and Jesus Santamaria. **Removal of pollutants from indoor air using zeolite membranes.** *Journal of Membrane Science* 2004, **240** (1-2) 159-166
- M. Yakup Ar?ca, Meltem Y?lmaz, Emine Yalc?n and Gulay Bayramolu. **Surface properties of Reactive Yellow 2 immobilised pHHEMA and HEMA/chitosan membranes: characterisation of their selectivity to different proteins.** *Journal of Membrane Science* 2004, **240** (1-2) 167-178
- K. Friess, M. ipek, V. Hynek, P. Sysel, K. Bohata and P. Izak. **Comparison of permeability coefficients of organic vapors through non-porous polymer membranes by two different experimental techniques.** *Journal of Membrane Science* 2004, **240** (1-2) 179-185
- E. Reverchon and S. Cardea. **Formation of cellulose acetate membranes using a supercritical fluid assisted process.** *Journal of Membrane Science* 2004, **240** (1-2) 187-195
- P. Canizares, A. Perez, R. Camarillo and J. J. Linares. **A semi-continuous laboratory-scale polymer enhanced ultrafiltration process for the recovery of cadmium and lead from aqueous effluents.** *Journal of Membrane Science* 2004, **240** (1-2) 197-209
- G. S. Gohil, Vinod K. Shahi and R. Rangarajan. **Comparative studies on electrochemical characterization of homogeneous and heterogeneous type of ion-exchange membranes.** *Journal of Membrane Science* 2004, **240** (1-2) 211-219
- Mikihiro Nomura, Seiji Fujiwara, Kazuhiko Ikenoya, Seiji Kasahara, Hayato Nakajima, Shinji Kubo, Gab-Jin Hwang, Ho-Sang Choi and Kaoru Onuki. **Application of an electrochemical membrane reactor to the thermochemical water splitting IS process for hydrogen production.** *Journal of Membrane Science* 2004, **240** (1-2) 221-226
- M. M. Beppu, E. J. Arruda, R. S. Vieira and N. N. Santos. **Adsorption of Cu(II) on porous chitosan membranes functionalized with histidine.** *Journal of Membrane Science* 2004, **240** (1-2) 227-235
- Jesus Garcia-Aleman, James Dickson and A. Mika. **Experimental analysis, modeling, and theoretical design of McMaster pore-filled nanofiltration membranes.** *Journal of Membrane Science* 2004, **240** (1-2) 237-255