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- Tzahi Y. Cath, V. Dean Adams and Amy E. Childress. **Experimental study of desalination using direct contact membrane distillation: a new approach to flux enhancement.** *Journal of Membrane Science* 2003, **228** (1) 5-16
- H. D. Hurwitz and R. Dibiani. **Experimental and theoretical investigations of steady and transient states in systems of ion exchange bipolar membranes.** *Journal of Membrane Science* 2004, **228** (1) 17-43
- T. A. Centeno, J. L. Vilas and A. B. Fuertes. **Effects of phenolic resin pyrolysis conditions on carbon membrane performance for gas separation.** *Journal of Membrane Science* 2004, **228** (1) 45-54
- S. Delgado, F. Diaz, L. Vera, R. Diaz and S. Elmaleh. **Modelling hollow-fibre ultrafiltration of biologically treated wastewater with and without gas sparging.** *Journal of Membrane Science* 2004, **228** (1) 55-63
- Antonina P. Kryvoruchko, Irina D. Atamanenko and Lyudmila Yu. Yurlova. **Concentration/purification of Co(II) ions by reverse osmosis and ultrafiltration combined with sorption on clay mineral montmorillonite and cation-exchange resin KU-2-8n.** *Journal of Membrane Science* 2004, **228** (1) 77-81
- N. K. Lazaridis, C. Blocher, J. Dorda and K. A. Matis. **A hybrid MF process based on flotation.** *Journal of Membrane Science* 2004, **228** (1) 83-88
- J. Postlethwaite, S. R. Lamping, G. C. Leach, M. F. Hurwitz and G. J. Lye. **Flux and transmission characteristics of a vibrating microfiltration system operated at high biomass loading.** *Journal of Membrane Science* 2004, **228** (1) 89-101
- N. Stafie, D. F. Stamatialis and M. Wessling. **Insight into the transport of hexane-solute systems through tailor-made composite membranes.** *Journal of Membrane Science* 2004, **228** (1) 103-116

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- C. A. Cooper, Y. S. Lin and M. Gonzalez. **Separation properties of surface modified silica supported liquid membranes for divalent metal removal/recovery.** *Journal of Membrane Science* 2004, **229** (1-2) 11-25
- Wayne Yoshida and Yoram Cohen. **Removal of methyl tert-butyl ether from water by pervaporation using ceramic-supported polymer membranes.** *Journal of Membrane Science* 2004, **229** (1-2) 27-32
- Ronald A. Siegel and Edward L. Cussler. **Reactive barrier membranes: some theoretical observations regarding the time lag and breakthrough curves.** *Journal of Membrane Science* 2004, **229** (1-2) 33-41
- Zhi-Gang Shao, Prabhuram Joghee and I-Ming Hsing. **Preparation and characterization of hybrid Nafion-silica membrane doped with phosphotungstic acid for high temperature operation of proton exchange membrane fuel cells.** *Journal of Membrane Science* 2004, **229** (1-2) 43-51
- J. Schwinge, D. E. Wiley and A. G. Fane. **Novel spacer design improves observed flux.** *Journal of Membrane Science* 2004, **229** (1-2) 53-61
- Susanta Banerjee, Gerhard Maier, Christine Dannenberg and Jurgen Spinger. **Gas permeabilities of novel poly(arylene ether)s with terphenyl unit in the main chain.** *Journal of Membrane Science* 2004, **229** (1-2) 63-71
- C. Hibshman, M. Mager and E. Marand. **Effects of feed pressure on fluorinated polyimide-organosilicate hybrid membranes.** *Journal of Membrane Science* 2004, **229** (1-2) 73-80
- Xiaochun Xu, Weishen Yang, Jie Liu, Liwu Lin, Norbert Stroh and Herwig Brunner. **Synthesis of NaA zeolite membrane on a ceramic hollow fiber.** *Journal of Membrane Science* 2004, **229** (1-2) 81-85
- Joseph S. Gardner, Jedediah O. Walker and John D. Lamb. **Permeability and durability effects of cellulose polymer variation in polymer inclusion membranes.** *Journal of Membrane Science* 2004, **229** (1-2) 87-93
- Peixiang Xing, Gilles P. Robertson, Michael D. Guiver, Serguei D. Mikhailenko, Keping Wang and Serge Kaliaguine. **Synthesis and characterization of sulfonated poly(ether ether ketone) for proton exchange membranes*1.** *Journal of Membrane Science* 2004, **229** (1-2) 95-106
- Hassiba Benguergoura, Taieb Aouak and Saad Moulay. **Use of pervaporation technique to monitor the oxidation of primary alcohols: n-propanol and n-butanol.** *Journal of Membrane Science* 2004, **229** (1-2) 107-116
- Ho Bum Park, Youn Kook Kim, Ji Min Lee, Sun Yong Lee and Young Moo Lee. **Relationship between chemical structure of aromatic polyimides and gas permeation properties of their carbon molecular sieve membranes.** *Journal of Membrane Science* 2004, **229** (1-2) 117-127
- Bumsuk Jung. **Preparation of hydrophilic polyacrylonitrile blend membranes for ultrafiltration.** *Journal of Membrane Science* 2004, **229** (1-2) 129-136
- Moon-Sung Kang, Yong-Jin Choi, Sung-Hye Kim and Seung-Hyeon Moon. **Enhancement of water splitting in bipolar membranes by optimized composite anion-exchange layer and alkali-treated polyacrylonitrile catalytic junction.** *Journal of Membrane Science* 2004, **229** (1-2) 137-146
- R. Wang, D. F. Li, C. Zhou, M. Liu and D. T. Liang. **Impact of DEA solutions with and without CO₂ loading on porous polypropylene membranes intended for use as contactors.** *Journal of Membrane Science* 2004, **229** (1-2) 147-157

- M. Celere and C. Gostoli. **Osmotic distillation with propylene glycol, glycerol and glycerol-salt mixtures.** *Journal of Membrane Science* 2004, **229** (1-2) 159-170
- S. Ognier, C. Wisniewski and A. Grasmick. **Membrane bioreactor fouling in sub-critical filtration conditions: a local critical flux concept.** *Journal of Membrane Science* 2004, **229** (1-2) 171-177
- J. Barron-Zambrano, S. Laborie, Ph. Viers, M. Rakib and G. Durand. **Mercury removal and recovery from aqueous solutions by coupled complexation-ultrafiltration and electrolysis.** *Journal of Membrane Science* 2004, **229** (1-2) 179-186
- J. Fernandez-Sempere, F. Ruiz-Bevia and R. Salcedo-Diaz. **Measurements by holographic interferometry of concentration profiles in dead-end ultrafiltration of polyethylene glycol solutions.** *Journal of Membrane Science* 2004, **229** (1-2) 187-197
- G. De Luca, A. Sindona, L. Giorno and E. Drioli. **Quantitative analysis of coupling effects in cross-flow membrane emulsification.** *Journal of Membrane Science* 2004, **229** (1-2) 199-209
- M. Modesti, C. Dall'Acqua, A. Lorenzetti and E. Florian. **Mathematical model and experimental validation of water cluster influence upon vapour permeation through hydrophilic dense membrane.** *Journal of Membrane Science* 2004, **229** (1-2) 211-223
- S. A. Gordeyev and S. J. Shilton. **Forced convection spinning of gas separation hollow fibre membranes: some underlying factors, mechanisms and effects.** *Journal of Membrane Science* 2004, **229** (1-2) 225-233
- Jinyi Luan and A. Plaisier. **Study on treatment of wastewater containing nitrophenol compounds by liquid membrane process.** *Journal of Membrane Science* 2004, **229** (1-2) 235-239
- Eric Favre. **Pioneers in membrane transport: Graham, von Wroblewski ... and Lhermite.** *Journal of Membrane Science* 2004, **229** (1-2) 241-242

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- H. M. Yeh, C. H. Chen and T. Y. Yueh. **Influence of channel-width ratio on solvent extraction through a double-pass parallel-plate membrane module.** *Journal of Membrane Science* 2004, **230** (1-2) 13-19
- Liang Tan, Li Yang, Xuehong Gu, Wanqin Jin, Lixiong Zhang and Nanping Xu. **Influence of the size of doping ion on phase stability and oxygen permeability of SrCo_{0.8}Fe_{0.2}O₃- oxide.** *Journal of Membrane Science* 2004, **230** (1-2) 21-27
- J. P. Robinson, E. S. Tarleton, C. R. Millington and A. Nijmeijer. **Solvent flux through dense polymeric nanofiltration membranes.** *Journal of Membrane Science* 2004, **230** (1-2) 29-37
- Stephanie Roualdes and Jean Durand. **Experimental design and modelling in the investigation of PECVD parameters effects on the structural and gas transport properties of plasma polysiloxane membranes.** *Journal of Membrane Science* 2004, **230** (1-2) 39-48
- Vincent Rouessac, Petronel Tuluc and Jean Durand. **Composite plasma-polymerized organosiloxane-based material for hydrocarbon vapor selectivity.** *Journal of Membrane Science* 2004, **230** (1-2) 49-59
- Lina E. Karlsson and Patric Jannasch. **Polysulfone ionomers for proton-conducting fuel cell membranes: sulfoalkylated polysulfones.** *Journal of Membrane Science* 2004, **230** (1-2) 61-70
- Sacide Alsoy Altinkaya and Bulent Ozbas. **Modeling of asymmetric membrane formation by dry-casting method.** *Journal of Membrane Science* 2004, **230** (1-2) 71-89
- Trevor E. Clark, Harry W. Deckman, Donald M. Cox and Ronald R. Chance. **In situ determination of the adsorption characteristics of a zeolite membrane.** *Journal of Membrane Science* 2004, **230** (1-2) 91-98
- Diana J. Hellman, Alan R. Greenberg, William B. Krantz and NSF Multi-University Center for Membrane Applied Science and Technology. **A novel process for membrane fabrication: thermally assisted evaporative phase separation (TAEPS).** *Journal of Membrane Science* 2004, **230** (1-2) 99-109
- Tatsuya Watari, Jianhua Fang, Kazuhiro Tanaka, Hidetoshi Kita, Ken-ichi Okamoto and Tetsuji Hirano. **Synthesis, water stability and proton conductivity of novel sulfonated polyimides from 4,4'-bis(4-aminophenoxy)biphenyl-3,3'-disulfonic acid.** *Journal of Membrane Science* 2004, **230** (1-2) 111-120
- Qing-Lin Liu and Jian Xiao. **Silicalite-filled poly(siloxane imide) membranes for removal of VOCs from water by pervaporation.** *Journal of Membrane Science* 2004, **230** (1-2) 121-129
- Gerardo Catapano, Ralph Hornscheidt, Andreas Wodetzki and Ulrich Baurmeister. **Turbulent flow technique for the estimation of oxygen diffusive permeability of membranes for the oxygenation of blood and other cell suspensions.** *Journal of Membrane Science* 2004, **230** (1-2) 131-139
- M. Niwa, H. Kawakami, T. Kanamori, T. Shinbo, A. Kaito and S. Nagaoka. **Surface orientation effect of asymmetric polyimide hollow fibers on their gas transport properties.** *Journal of Membrane Science* 2004, **230** (1-2) 141-148
- A. J. Gijsbertsen-Abrahamse, A. van der Padt and R. M. Boom. **Status of cross-flow membrane emulsification and outlook for industrial application.** *Journal of Membrane Science* 2004, **230** (1-2) 149-159
- C. Charmette, J. Sanchez, Ph. Gramain and A. Rudatsikira. **Gas transport properties of poly(ethylene oxide-co-epichlorohydrin) membranes.** *Journal of Membrane Science* 2004, **230** (1-2) 161-169

- Samuel P. Kusumocahyo, Kimio Sumaru, Toshiyuki Kanamori, Takashi Iwatsubo and Toshio Shinbo. **Synthesis and characterization of an ultrathin polyion complex membrane containing α -cyclodextrin for separation of organic isomers.** *Journal of Membrane Science* 2004, **230** (1-2) 171-174
- Minfeng Zeng, Zhengping Fang and Chengwei Xu. **Effect of compatibility on the structure of the microporous membrane prepared by selective dissolution of chitosan/synthetic polymer blend membrane.** *Journal of Membrane Science* 2004, **230** (1-2) 175-181
- In-Chul Kim and Kew-Ho Lee. **Effect of poly(ethylene glycol) 200 on the formation of a polyetherimide asymmetric membrane and its performance in aqueous solvent mixture permeation.** *Journal of Membrane Science* 2004, **230** (1-2) 183-188

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- Chuanfang Yang, W. H. Smyrl and E. L. Cussler. **Flake alignment in composite coatings,** *Journal of Membrane Science* 2004, **231** (1-2) 1-12
- Yoshinobu Tanaka. **The effect of solution leakage in an ion-exchange membrane electrodialyzer on mass transport across a membrane pair.** *Journal of Membrane Science* 2004, **231** (1-2) 13-24
- A. F. Ismail and A. R. Hassan. **The deduction of fine structural details of asymmetric nanofiltration membranes using theoretical models.** *Journal of Membrane Science* 2004, **231** (1-2) 25-36
- L. Paugam, S. Taha, G. Dorange, P. Jaouen and F. Quemeneur. **Mechanism of nitrate ions transfer in nanofiltration depending on pressure, pH, concentration and medium composition.** *Journal of Membrane Science* 2004, **231** (1-2) 37-46
- Yuan Fang, P. J. Novak, R. M. Hozalski, E. L. Cussler and M. J. Semmens. **Condensation studies in gas permeable membranes.** *Journal of Membrane Science* 2004, **231** (1-2) 47-55
- Subramanian Ramakrishnan, C. J. McDonald, R. K. Prud'homme and J. D. Carbeck. **Latex composite membranes: structure and properties of the discriminating layer.** *Journal of Membrane Science* 2004, **231** (1-2) 57-70
- Liang Liang, James M. Dickson, Jianxiong Jiang and Michael A. Brook. **Effect of low flow rate on pervaporation of 1,2-dichloroethane with novel polydimethylsiloxane composite membranes.** *Journal of Membrane Science* 2004, **231** (1-2) 71-79
- C. P. Koutsou, S. G. Yiantsios and A. J. Karabelas. **Numerical simulation of the flow in a plane-channel containing a periodic array of cylindrical turbulence promoters.** *Journal of Membrane Science* 2004, **231** (1-2) 81-90
- Ben Lodge, S. J. Judd and A. J. Smith. **Characterisation of dead-end ultrafiltration of biotreated domestic wastewater.** *Journal of Membrane Science* 2004, **231** (1-2) 91-98
- Ivo F. J. Vankelecom, Koen De Smet, Lieven E. M. Gevers, Andrew Livingston, Dinesh Nair, Sven Aerts, Stefan Kuypers and Pierre A. Jacobs. **Physico-chemical interpretation of the SRNF transport mechanism for solvents through dense silicone membranes.** *Journal of Membrane Science* 2004, **231** (1-2) 99-108
- R. Kiyono, G. H. Koops, M. Wessling and H. Strathmann. **Mixed matrix microporous hollow fibers with ion-exchange functionality.** *Journal of Membrane Science* 2004, **231** (1-2) 109-115
- D. Lee, L. Zhang, S. T. Oyama, S. Niu and R. F. Saraf. **Synthesis, characterization, and gas permeation properties of a hydrogen permeable silica membrane supported on porous alumina.** *Journal of Membrane Science* 2004, **231** (1-2) 117-126
- Samuel P. Kusumocahyo, Toshiyuki Kanamori, Kimio Sumaru, Takashi Iwatsubo and Toshio Shinbo. **Pervaporation of xylene isomer mixture through cyclodextrins containing polyacrylic acid membranes.** *Journal of Membrane Science* 2004, **231** (1-2) 127-132
- F. T. Akin and Jerry Y. S. Lin. **Oxygen permeation through oxygen ionic or mixed-conducting ceramic membranes with chemical reactions.** *Journal of Membrane Science* 2004, **231** (1-2) 133-146
- Masahide Taniguchi and Georges Belfort. **Low protein fouling synthetic membranes by UV-assisted surface grafting modification: varying monomer type.** *Journal of Membrane Science* 2004, **231** (1-2) 147-157
- Beelin Cheang and Andrew L. Zydney. **A two-stage ultrafiltration process for fractionation of whey protein isolate.** *Journal of Membrane Science* 2004, **231** (1-2) 159-167
- M. Mondor, D. Ippersiel, F. Lamarche and J. I. Boye. **Effect of electro-acidification treatment and ionic environment on soy protein extract particle size distribution and ultrafiltration permeate flux.** *Journal of Membrane Science* 2004, **231** (1-2) 169-179
- Yossef A. Elabd, Charles W. Walker and Frederick L. Beyer. **Triblock copolymer ionomer membranes: Part II. Structure characterization and its effects on transport properties and direct methanol fuel cell performance.** *Journal of Membrane Science* 2004, **231** (1-2) 181-188
- S. I. Semenova. **Polymer membranes for hydrocarbon separation and removal.** *Journal of Membrane Science* 2004, **231** (1-2) 189-207
- D. B. Mosqueda-Jimenez, R. M. Narbaitz, T. Matsuura, G. Chowdhury, G. Pleizier and J. P. Santerre. **Influence of processing conditions on the properties of ultrafiltration membranes.** *Journal of Membrane Science* 2004, **231** (1-2) 209-224

- Zhi-Ping Zhao, Jiding Li, Dan-Xia Zhang and Cui-Xian Chen. **Nanofiltration membrane prepared from polyacrylonitrile ultrafiltration membrane by low-temperature plasma: I. Graft of acrylic acid in gas**, *Journal of Membrane Science* 2004, **232** (1-2) 1-8
- Richard Ash. **Transport with time-dependent boundary conditions in a -dimensional membrane**. *Journal of Membrane Science* 2004, **232** (1-2) 9-18
- F. Li, W. Meindersma, A. B. de Haan and T. Reith. **Experimental validation of CFD mass transfer simulations in flat channels with non-woven net spacers**. *Journal of Membrane Science* 2004, **232** (1-2) 19-30
- V. Ramani, H. R. Kunz and J. M. Fenton. **Investigation of Nafion®/HPA composite membranes for high temperature/low relative humidity PEMFC operation**. *Journal of Membrane Science* 2004, **232** (1-2) 31-44
- Semant Jain and Sharad K. Gupta. **Analysis of modified surface force pore flow model with concentration polarization and comparison with Spiegler–Kedem model in reverse osmosis systems**. *Journal of Membrane Science* 2004, **232** (1-2) 45-62
- Kai Loon Chen, Lianfa Song, Say Leong Ong and Wun Jern Ng. **The development of membrane fouling in full-scale RO processes**. *Journal of Membrane Science* 2004, **232** (1-2) 63-72
- U. Senthilkumar and B. S. R. Reddy. **Structure–gas separation property relationships of non-ionic and cationic amino-hydroxy functionalized poly (dimethylsiloxane) membranes**. *Journal of Membrane Science* 2004, **232** (1-2) 73-83
- P. Czermak, M. Ebrahimi, K. Grau, S. Netz, G. Sawatzki and P. H. Pfromm. **Membrane-assisted enzymatic production of galactosyl-oligosaccharides from lactose in a continuous process**. *Journal of Membrane Science* 2004, **232** (1-2) 85-91
- H. Yanagishita, J. Arai, T. Sandoh, H. Negishi, D. Kitamoto, T. Ikegami, K. Haraya, Y. Idemoto and N. Koura. **Preparation of polyimide composite membranes grafted by electron beam irradiation**. *Journal of Membrane Science* 2004, **232** (1-2) 93-98
- B. Schlichter, V. Mavrov, T. Erwe and H. Chmiel. **Regeneration of bonding agents loaded with heavy metals by electro dialysis with bipolar membranes**. *Journal of Membrane Science* 2004, **232** (1-2) 99-105
- Kitty Nymeijer, Tymen Visser, Rijanne Assen and Matthias Wessling. **Super selective membranes in gas–liquid membrane contactors for olefin/paraffin separation**. *Journal of Membrane Science* 2004, **232** (1-2) 107-114
- F. Piroux, E. Espuche and R. Mercier. **The effects of humidity on gas transport properties of sulfonated copolyimides**. *Journal of Membrane Science* 2004, **232** (1-2) 115-122
- Quang Trong Nguyen, Karine Glinel, Maxime Pontie and Zhenghua Ping. **Immobilization of bio-macromolecules onto membranes via an adsorbed nanolayer: An insight into the mechanism**. *Journal of Membrane Science* 2004, **232** (1-2) 123-132
- P. K. Mohapatra, D. S. Lakshmi, D. Mohan and V. K. Manchanda. **Selective transport of cesium using a supported liquid membrane containing di-t-butyl benzo 18 crown 6 as the carrier**. *Journal of Membrane Science* 2004, **232** (1-2) 133-139
- Robert Clement, Anne Jonquieres, Ilaria Sarti, Maria Federica Sposata, Maria Angels Custal Teixidor and Pierre Lochon. **Original structure–property relationships derived from a new modeling of diffusion of pure solvents through polymer membranes**. *Journal of Membrane Science* 2004, **232** (1-2) 141-152
- Jian-Jun Qin, Maung Htun Oo, Hsiaowan Lee and Bruno Coniglio. **Effect of feed pH on permeate pH and ion rejection under acidic conditions in NF process**. *Journal of Membrane Science* 2004, **232** (1-2) 153-159