2. Drinking and waste water applications

P2-1 Direct contact membrane distillation equipped with a solar absorber in saline water desalination
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P2-2 Size control of intercrystalline pathways of a MFI zeolite membranes for water purification
Mikihiro Nomura, Hiromi Uchida, Hirofumi Kawagoe
Shibaura Institute of Technology, Japan

P2-3 Study on the pretreatment for seawater RO desalination using ceramic membranes
Zhaoliang Cui[1], Wenbo Peng[2], Weihong Xing[1], Yiqun Fan[1]
1: Nanjing University of Technology, China
2: Nanjing Jiusi High-Tech Co.,Ltd, China

P2-4 Characterization of humic acid fouling in microfiltration membrane
Kazuho Nakamura, Takako Orime, Kanji Matsumoto
Department of chemical system engineering, Yokohama National University, Japan

P2-5 A study on sulfonated polymeric reverse osmosis membrane for seawater desalination
Ina Yum, Mihye Yun, Dongjae Jeong, Jeongsik Oh, Yongtaek Lee
Department of chemical Engineering, Chungnam National University, Korea

P2-6 Dense cellulose acetate membranes for forward osmosis
Cheng-Kang Yang, Shing-Yi Suen
National Chung Hsing University, Taiwan

P2-7 Performance and application of hollow fiber ultrafiltration membrane of PVC alloy in supply of municipal drinking water
Lianggang Chen, Jie Chen
Water Treatment Research Centre, Suzhou Litree Ultra-filtration Membrane Technology Co, Ltd, China

P2-8 Water reclaim from high salinity wastewater using electrodialysis/reverse osmosis hybrid system
Chunhung Kent Kuo, Shingjiang Jessie Lue
Department of Chemical and Materials Engineering, Chang Gung University, Taiwan

P2-9 Modeling of membrane extraction with recyclic operation

Cheng-Liang Chang, Chii-Dong Ho, Jr-Wei Tu, Jr-Chiang Yang
Energy and Opto-Electronic Materials Research Center, Department of Chemical and Materials Engineering, Tamkang University, Taiwan

P2-10 Performance of tubular TiO_2/Al_2O_3 composite membranes coupled with the simultaneous electrocoagulation and electrofiltration process in the treatment of STN-LCD wastewater
Gordon C. C. Yang, Chia-Heng Yen
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P2-11 [Withdrawn]

P2-12 Water recovery from wastewater of high salt concentration using reverse osmosis
Lingyung Hung, Shingjiang Jessie Lue
Department of Chemical and Materials Engineering and Green Technology Research Center, Chang Gung University, Taiwan

P2-13 Desalination of high NaCl wastewater using electrodialysis
Yu Jie Ting, Shingjiang Jessie Lue
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P2-14 Dialysis wastewater treatment using membrane bioreacter process
Toyozo Hamada
Research & Development Management, Daicel Chemical Industries, Ltd., Japan

P2-15 Synthesis of novel mixed matrix scaffolds and adsorption of Cu+2 ions of waste water
Tzu-Yang Hsien[1], Yi-Hsing Lien[2], Da-Ming Wang[3]
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2: National Taiwan University, Taiwan
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P2-16 Development of external MBR systems to achieve easy maintenance and cost reduction in restructuring large-scale WWTPs
Keitaro Suzumura[1], Tomotaka Hashimoto[1], Hiroki Itokawa[2], Takao Murakami[2]
1: Technical Marketing Department, Microza & Water Processing Devision, Asahikasei Chemicals Corporation, Japan
2: Research and Technology Development Department, Japan Sewage Works Agency, Japan

P2-17 Influence of operating conditions on the desalination and concentration of dye from wastewater

Xing Guo Dai[1], Li Guang Wu[2], Lin Zhang[1], Huan Lin Chen[1], Cong Jie Gao[3]
1: Department of Chem. Eng. & Bioeng., Zhejiang University, China
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3: National Engineering Research Center for Liquid Separation Membrane, China

P2-18 Identification and evaluation of low carbon footprint membranes processes for complex water recycling applications
Ebrahim Negaresh, Shane Cox, Mojgan Bassandeh, Alice Antony, Greg Leslie
Centre for Membrane Science and Technology, University of New South Wales, UNESCO, Australia

P2-19 Development of removal and decomposition of pentachlorophenol in the polluted soil by combination system of silicone rubber membrane separation and photocatalytic reaction
Jun Sawai, Yoko Tsukada, Ai Shirakawa, Kyoko Yokota, Ko-ichi Sahra, Mikio Kikuchi
Faculty of Applied Bioscience, Kanagawa Institute of Technology, Japan

P2-20 Treatment of contraceptive wastewater with a combination of membrane bioreactor and bioaugmentation technique
Shulan Ji, Zhenping Qin, Wei Li, Guojun Zhang
College of Environmental and Energy Engineering, Beijing Unversity of Technology, China

P2-21 Flotation effect of oil droplet with high-pressure carbon dioxide on de-emulsification of O/W emulsion
Satoshi Nagao, Tomoki Takahashi, Atsushi Shono, Katsuto Otake
Faculty of Engineering, Tokyo University of Science, Japan

P2-22 Comparison of aerator performance for submerged Membrane Bio Reactor for wastewater treatment
Taichi Uesaka[1], Yoshiaki Itoh[1], Yuji Otsuka[1], Kazuo Iwakura[2]
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2: Kubota Membrane USA Corporation, USA

P2-23 The application of nanofiltration membranes in removing NaCl from glyphosate mother liquor
Jie Li, Cong-Hui Tu, Xiao-Lin Wang
State Key Laboratory of Chemical Engineering, Department of Chemical Engineering, Tsinghua University, China

P2-24 Challenge testing membrane microfilters at a wastewater facility in the New York City watershed
Joseph Habib, Denis Vial
Pall Water Processing, USA

P2-25 High performance nano-filtration composite membranes based on poly(vinyl alcohol) coating on nanofibrous poly(vinylidene fluoride)
Jianhua Cao, Dayong Wu, Daihua Tang, Haiyan Wang
Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China

P2-26 Synthesis and preparation of metallic ions absorption polymer and nanofibers
Wen-Yi Chen, Shu-Hui Cheng, Jong-Pyng Chen
Industrial Technology Research Institute, Taiwan

P2-27 Mass transfer efficiency improvement of membrane dialysis with ultrafiltration operation
Jr-Wei Tu, Chii-Dong Ho
Energy and Opto-Electronic Materials Research Center, Department of Chemical and Materials Engineering, Tamkang University, Taiwan

P2-28 Removal of oestrogens in water using a hybrid photocatalytic-membrane reactor
Pierre Le-Clech, Heather M. Coleman, Wenxi Pee, Dominique Peng
University of New South Wales, Australia

P2-29 Membrane distillation for the treatment of brine concentrate
Shane J Cox, Winnie Lim, Ali Moghaddam, Greg L. Leslie
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P2-30 Removal of aqueous iron ion by micellar enhanced ceramic membranes adding surfactant: effect of surfactant concentration
Jin Yong Park, Seong Gyu Gang
Hallym University, Korea

P2-31 Effect of periodic water-back-flushing in advanced water treatment by tubular alumina ceramic ultrafiltration
Jin Yong Park, Song Hui Lee
Hallym University, Korea

P2-32 A new membrane hybrid process with high concentration of powdered activated carbon for drinking water treatment
Ohsung Kwon[1], Chansik Kim[1], Youngkeun Choi[1], Hyowon Ahn[2], Yonghyo Park[2] , Soohong Noh[1]
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2: Korea Water Resources Corporation, Korea

P2-33 Carbon nanotube based membranes for water desalination by membrane distillation

Ludovic Dumée[1,2], Kallista Sears[1], Jürg Schütz[1], Niall Finn[1], Stephen Gray[2], Mikel Duke[2]

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P2-34 (O9-3) A/O-MBR system for advanced biological nutrient removal

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4. Facilitated transport membranes

P4-1 Effect of ionic liquids on dissociation of copper flakes into copper nanoparticles and its application to facilitated olefin transport

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P4-2 Facilitated olefin transport membranes using partially positive charged surface of gold nanoparticles

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P4-3 CO_2 separation by hybrid method of hollow fiber membrane with permeating of carrier solution

Kazuki Hagawa, Yoshikage Ohmukai, Tatsuo Maruyama, Tomohiro Sotani, Masaaki Teramoto, Hideto Matsuyama

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P4-4 Application of membrane reactor with CO_2-selective membrane to water gas reaction for H_2 purification

Kazuki Hagawa[1], Yoshikage Ohmukai[1], Tatsuo Maruyama[1], Keiko Shimada[2], Kaori Kuzushita[2], Eiji Kamio[2], Masaaki Teramoto[2], Osamu Okada[2], Hideto Matsuyama[1]

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P4-5 Development of facilitated transport membranes for CO_2 separation at elevated temperatures

Keiko Shimada[1], Kaori Kuzushita[1], Eiji Kamio[1], Masaaki Teramoto[1], Osamu Okada[1], Kazuki Hagawa[2], Tatsuo Maruyama[2], Yoshikage Ohmukai[2], Hideto Matsuyama[2]

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P4-6 Selective extraction of Zn(II) using a polymer inclusion membrane

Spas D Kolev[1], Yoshinari Baba[2], Tsutomu Tasaki[2], Natalie Pereira[1], Robert W. Cattrall[1], Geoffrey W. Stevens[3], Jilska M. Perera[3]

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5. Gas separation and pervaporation

P5-1 Removal of VOC from water by pervaporation with hollow-fiber silicone rubber membrane module
Jingli Xu, Akira Ito
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P5-2 VOC vapor separation using a triethylene glycol liquid membrane
Akira Ito, Guozhe Sui
Dep. Chemical Engineering, Niigata University, Japan

P5-3 Dehumidification and humidification of air using a hygroscopic liquid membrane
Akira Ito, Jinlong Li,
Dep. Chemical Engineering, Niigata University, Japan

P5-4 Liquid membrane for CO_2 separation using diglycolamine
Akira Ito
Dep. Chemical Engineering, Niigata University, Japan

P5-5 Development of CO_2 selective separation membranes of poly(amidoamine) dendrimer incorporated into cross-linked poly(vinyl alcohol)
Shuhong Duan, Ikuo Taniguchi, Shingo Kazama, Yuichi Fujioka
Research Institute of Innovative Technology for the Earth (RITE), Japan

P5-6 A contrasting analysis of CO_2 transport and solvation properties in [C4mim][NTf2] ionic liquid supported on nanopore membrane
Quan Gan, Yiran Zou, David Rooney, Paul Nacanrrow
Queen's University Belfast, UK

P5-7 CO_2 permeation and CO_2/N_2 separation characteristics on microporous inorganic membranes under high pressures
Satoshi Itoguchi, Tomohisa Yoshioka, Masakoto Knezashi, Toshinori Tsuru
Department of Chemical Engineering, Hiroshima University, Japan

P5-8 A numerical analysis for recovery of CO_2 from aqueous absorbent solutions by hollow fiber membrane with co-current flow
Jeongsik Oh, Dongjae Jeong, Mihye Yun, Ina Yum, Yongtaek Lee, Hyoseong Ahn, Jeonghoon Kim
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P5-9 CO_2 permselectivity through composite polymer membranes prepared from graft copolymer and porous PVDF membrane

Shuichi Kuwada, Mitsuru Higa, Keita Takuno
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P5-10 Preparation of CO_2 selective membranes from graft copolymers synthesized by atom transfer radical polymerization

Keita Takuno, Shuichi Kuwada, Kazuaki Yaguchi, Mitsuru Higa
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P5-11 Selective CO_2 separation from the closed spaces by hollow fiber contained nanohydrogel-CA membrane reactor

Yatao Zhang, Lin Zhang, Huanlin Chen
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P5-12 Time dependence of carbon dioxide transport properties on the plasticization of polyimide membranes

Shinji Kanehashi, Kazukiyo Nagai
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P5-13 Metal-doped silica membrane reactor for hydrogen production from water gas shift reaction

Tsutomu Tasaki, Simon Smart, Joao C. Diniz daCosta
Department of Chemical Engineering, The University of Queensland, Australia

P5-14 Application of membrane separation to hydrogen production from water using photocatalysts

Takashi Iida, Kazuhiro Tanaka, Hidetoshi Kita, Miki Sugiyama, Yoshihisa Sakata, Hayao Imamura
Yamaguchi University, Japan

P5-15 Synthesis and characterization of Ni doped silica membranes prepared by a hybrid sol-gel/CVD method

Sadao Araki[1], Hiroyuki Yano[2], Shunsuke Tanaka[2], Yoshikazu Miyake[2]
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P5-16 Deterioration phenomena of phillipsite (PHI) membrane after esterification

Yoshimichi Kiyozumi, Yasuhisa Hasegawa, Takako Nagase, Mizuki Shimura, Chie Abe, Tomoya Inoue
National Institute of Advanced Industrial Science and Technology, Japan

P5-17 Oxygen permeation through ceramic dense membrane based on mixed-ion and electronic conductors
Yosuke Takahashi[1], Yasunori Ando[1], Akihiro Kawahara[1], Masayoshi Hirano[2]
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P5-18 Development of amorphous silica membranes using counter-diffusion chemical vapor deposition (CD-CVD) method
Yosuke Takahashi, Keita Miyajima, Haruka Ohta, Tomokazu Eda, Yasunori Ando
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P5-19 Carbon molecular sieve membranes with matrimid/nanotube for gas permeation
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P5-20 Preparation of carbon molecular sieve membranes for pervaporation separation applications
Liao Kuo Sung[1], Lee Kueir Rarn[1], Lai juin Yih[1], Fu Ywu Jang[2]
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P5-21 Dehydration of alcohols by pervaporation through carbon hollow fiber membranes
Miki Yoshimune, Kenji Haraya
National Institute of Advanced Industrial Science and Technology (AIST), Japan

P5-22 Separation of volatile organic compounds/water vapor using polydimethylsiloxine-carbon nanotube composite membranes
Yukito Aoyama, Ryotaro Kiyono, Yuto Shimizu
Department of Chemistry and Material, Shinshu University, Japan

P5-23 Molecular engineering of mesopores in microporous carbon materials for gas separation
Ho Bum Park[1], Suresh Mulmi[1], Sang Hoon Han[1], Young Moo Lee[1], Ji Won Rhim[2]
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P5-24 Dehydration of acetic acid by pervaporation using resorcinol-formaldehyde-based carbon membranes

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P5-25 Pervaporation separation of ethylacetate/water mixtures with pore-filling PDMS/PMHS membrane
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P5-26 Effect of polymer structure on the separation properties for pervaporation through PDMS-grafted polyamide and polyimide membranes
Cheol Min Yun[1], Hiroki Ishikura[2], Yu Nagase[1]
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P5-27 Pervaporation of ethanol/water mixtures through PDMS-HTPB interpenetrating polymer network supported membranes
Xia Zhan, Jiding Li, Jian Chen, Junqi Huang
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P5-28 Pervaporation of toluene/methanol mixtures using polyurethane (PU)-polydimethylsiloxane (PDMS) blends
Shingjiang Jessie Lue[1], Jia Shyang Ou[1], Chien-Chieh Hu[2], Juin-Yih Lai[3]
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P5-29 PDMS-silica composite membranes with silane coupling for organic vapor separation
Sung Soo Kim, Haesook Kim
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P5-30 Solubility, diffusivity, and permeability of benzene vapor and water vapor in silicon- and fluorine-containing polymers
Shuichi Sato, Kazukiyo Nagai
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P5-31 Effect of dispersion of silicalite particles on the performance of polydimethylsiloxane-based mixed matrix membranes in pervaporation

Wang Wei, Gongping Liu, Shanshan Xia, Wanqin Jin
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P5-32 Influence of alkali cation on permeation properties of A type zeolite membranes

Yun Mihye, Jeong DongJae, Yum Ina, Oh Jeongsik, Lee Yongtaek
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P5-33 Pervaporation separation performance for dehydrating alcohol solutions through asymmetric polycarbonate membrane surface-modified by induced residual air plasma and grafted with hydrophilic monomers

Manuel De Guzman, Lee Kueir Rarn, Lai Juin Yih
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P5-34 Annealing effect on pervaporation performance of alcohol aqueous solutions through interfacial polymerized polyamide thin-film composite membranes

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P5-35 Noval dual-layer hollow fiber membranes for alcohol dehydration via pervaporation

Yan Wang, Tai Shung Chung
National University of Singapore, Singapore

P5-36 Pervaporation separation of organic solutions through a silica hybrid membranes prepared by using a low temperature CVD method

Emi Matsuyama, Keita Monma, Takumi Ishizu, Yoshio Negishi, Mikihiro Nomura
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P5-37 Dehydration and removal of dissolved gases using porous ceramic membranes in pervaporation

Kaori Okahana, Masakoto Kanezashi, Tomohisa Yoshioka, Toshinori Tsuru
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P5-38 Prediction of pervaporation performance of aqueous ethanol solutions based on single gas permeation

Jinhui Wang, Tomohisa Yoshioka, Masakoto Kanezashi, Toshinori Tsuru

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P5-39 The preparation of chitosan/PSf composite hollow fiber membrane for pervaporation

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P5-40 Benzene removal from water through poly(mathylmethacrylate)-poly(dimethylsiloxane) copolymer membranes containing ionic liquid by pervaporation

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P5-41 Effect of silica additives on pervaporation performance of chitosan/(silica/PVDF) composite membranes

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P5-42 Characterization of aromatic polyamide pervaporation membranes by positron annihilation spectroscopy

Wei-Song Hung, Yun-Hsuan Huang, Kueir-Rarn Lee, Juin-Yih Lai

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P5-43 Effects of polymerization and pervaporation operation conditions on dehydration performance through interfacial polymerized thin-film composite membranes

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P5-44 Novel thin-film composite polyamide membranes prepared by interfacial polymerization for pervaporation

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P5-45 Characteristic of composite membrane for separation of water/n-butanol by pervaporation

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P5-46 Synthesis and pervaporation properties of phenyl-functionalized silica membranes for the removal of organic solvents from organic/water mixtures

Satoshi Imasaka[1], Sadao Araki[2], Shunsuke Tanaka[1], Yoshikazu Miyake[1]

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P5-47 Membranes of crosslinked hyperbranch polymers and their pervaporation properties in separating water/isopropnal mixture

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P5-48 Crosslinked poly(vinyl alcohol)/polyacrylonitrile composite membranes prepared for enhance esterification reaction coupling with pervaporation

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P5-49 High performance of ceramic-supported crosslinked PVA composite membrane for pervaporation dehydration of ethyl acetate/water azeotrope

Shanshan Xia, Yuexin Zhu, Wang Wei, Wanqin Jin, Nanping Xu

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P5-50 Na-montmorillonite-filled polyethersulfone membranes for gas transport
Jhen-Wei Wu[1], Shing-Yi Suen[1], Roman Petrychkovych[2], Petr Uchytil[2]
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P5-51 Gas separation properties of polymeric crystals
Hiroaki Yoshimizu
Graduate School of Engineering, Nagoya Institute of Technology, Japan

P5-52 Temperature dependence on gas permeation properties of crystalline poly(lactic acid) blend membranes
Tomomi Komatsuka, Kazukiyo Nagai
Department of Applied Chemistry, Meiji University, Japan

P5-53 Effect of membrane structure on gas separation performance and long time stability of membrane contactor
Saeid Rajabzadeh, Shinya Yoshimoto, Yoshikage Ohmukai, Tatsuo Maruyama, Tomohiro Sotani, Masaaki Teramoto, Hideto Matsuyama
Department of Chemical Science and Engineering, Kobe University, Japan

P5-54 Gas permeation properties of thermally stable polymer membranes
Ho Bum Park, Yoon Jin Cho, Hyo Won Kim, Sang Hoon Han, Young Moo Lee
School of Chemical Engineering, Hanyang University, Korea

P5-55 Gas transport properties and temperature dependence of syndiotactic polystyrene films including the mesophase form
Miki Tsurunaga, Hiroaki Yoshimizu
Graduate School of Engineering, Nagoya Institute of Technology, Japan

P5-56 Gas diffusion behaviors of poly(Phenylene Oxide) in glassy state by NMR spectroscopy
Masahiro Okazawa, Hiroaki Yoshimizu
Graduate School of Engineering, Nagoya Institute of Technology, Japan

P5-57 Gas transport properties of poly(4-methyl-1-pentene) studied by NMR techniques
Yuki Okumura, Hiroaki Yoshimizu
Graduate School of Engineering, Nagoya Institute of Technology, Japan

P5-58 Preparation and characterization of high performance polybenzimidazole membranes derived from amine-containing polyimide for gas separation
Seung Joo Kim, Jae Eun Lee, Sang Hoon Han, Ho Bum Park, Young Moo Lee
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P5-59 Gas permeation properties of polybenzoxazole membranes for gas separation
Sang Hoon Han, Keun Young Kim, Ho Bum Park, Young Moo Lee
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P5-60 Preparation and characterization of highly permeable polyimide and polybenzoxazole copolymer membranes for gas separation
Nurasyikin Misdan, Sang Hoon Han, Ho Bum Park, Young Moo Lee
School of Chemical Engineering, Hanyang University, Korea

P5-61 Investigation on the variation in the fine structure of plasma-polymerized composite membrane
Chia-Hao Lo[1], Jheng-Kai Huang[1], Wei-Song Hung[1], Shu-Hsien Huang[2], Manuel De Guzman[1], V. Rouessac[3], Chi-Lan Li[4], Chien-Chieh Hu[4], Kueir-Rarn Lee[1], Juin-Yih Lai[1]
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P5-62 Development of dissolved gas permeator used in deep-sea monitoring system to detect methane leaks
Kazuhiro Tanaka[1], Masahiro Ota[1], Yoshiyasu Yamanaka[1], Tomoya Hirata[1], Hidetoshi Kita[1], Takashi Oketani[2], Tsuyoshi Fukasawa[2], Kouji Kano[2]
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P5-63 Deep desulfurization of liquefied petroleum gas (LPG) by HTBN/PAN composite membrane
Jian Chen, Jiding Li, Yangzheng Lin, Cuixian Chen
Department of Chemical Engineering, Tsinghua University, China

P5-64 Performance evaluation of a condenser-gas membrane hybrid system for acetone recovery
Eleazer Llauderes Vivas, Arnel Bas Beltran, Eulsaeng Cho, Wookjin Chung

Department of Environmental Engineering and Biotechnology, Myongji University, Korea

P5-65 Characterizations of magnetically oriented the layer structure of liquid crystalline aromatic polyester with n-alkyl side chains and its gas diffusion properties

Toshihito Karakasa, Hiroaki Yoshimizu
Graduate school of Engineering, Nagoya Institute of Technology, Japan

P5-66 Synthesis and properties of membranes from substituted polyacetylenes containing ionic liquid moiety

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P5-67 Development of novel esterification reaction system using water-permselective membranes and ionic liquid

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P5-68 Permeation and separation characteristics for an aqueous ethanol solution through poly(butylmethacrylate) membrane containing ionic liquid

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P5-69 Pervaporation membrane technology and its applications

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P5-70 Introduction of Perfluoroalkyl Groups by in-situ Click Reaction to Poly(diphenylacetylene) Membrane

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P5-71 Synthesis of Poly(dendrons) Having Amino Groups and CO_2 Permselectivity of the Resulting Self-supporting Membranes

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P5-72 (O5-3) Removal of VOCs from their aqueous solution by pervaporation with PDMS-zeolite composite membrane

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7. Inorganic membranes

P7-1 Sol-gel derived palladium doped silica membranes for hydrogen separation
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P7-2 Decomposition of hydrogen sulfide into hydrogen using a membrane reactor with a hydrogen-selective silica membrane
Kazuki Akamatsu[1], Masataka Nakane[1], Takashi Sugawara[1], Tadashi Hattori[2], Shin-ichi Nakao[1]
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P7-3 The preparation and characterization of silica membrane for hydrogen separation through chemical vapor deposition
Ho-Sang Choi[1], Kwang-Hyun Lee[2]
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P7-4 High-temperature hydrogen gas permeation properties and chemical structure of co-doped amorphous silica-based membranes
Yuji Iwamoto[1], Koji Hataya[1], Koji Sato[2], Takayuki Nagano[2], Tomoko Takahashi[1]
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P7-5 Thermal and hydrothermal stability of gamma-alumina-based ceramics as a mesoporous intermediate layer for hydrogen-permselective amorphous silica-based membranes
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P7-6 Hydrothermal stability of amorphous silica membrane on Ni-doped gamma-Al_2O_3
Takayuki Nagano, Koji Sato, Mayumi Akiyama, Seiji Takahashi
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P7-7 Hydrogen separation with self-supported Pd thin films prepared by a novel electroless plating method

Masatoshi Sato[1], Mitsutaka Kawamura[1], Keiko Hisamatsu[2], Misaki Ishitsuka[2], Masakazu Mukaida[2], Shigeki Hara[2], Hiroyuki Suda[2], Kenji Haraya[2]
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P7-8 Steam reforming of pre-desulfurized kerosene using Pd alloy membrane reactor
Shigeyuki Uemiya, Chihiro Hayakawa, Mahiro Arakawa, Manabu Miyamoto
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P7-9 Pressure-dependent permeance of a dense uniform palladium membrane
Misaki Ishitsuka, Shigeki Hara, Hiroyuki Suda, Masakazu Mukaida, Kenji Haraya
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P7-10 Hydrogen separation using microporous carbon membranes prepared by the vapor deposition of furfuryl alcohol
Norikazu Nishiyama, Kyohei Makita, Masaru Nakao, Yong-Rong Dong, Yasuyuki Egashira, Korekazu Ueyama
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P7-11 Pore size control of the microporous carbon membranes using organic templates
Norikazu Nishiyama, Yong-Rong Dong, Yasuyuki Egashira, Korekazu Ueyama
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P7-12 CO_2/CH_4 separation performance of PPO derived carbon molecular sieve membranes
Miki Yoshimune, Kenji Haraya
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P7-13 Preparation of Li_4SiO_4 membranes for high temperature CO_2 separation
Mikihiro Nomura, Masataka Sugiyama, Youichiro Nishi
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P7-14 Controllable synthesis of bi-layered ZSM-5/silicalite-1 zeolite membranes
Chun Zhang, Zhou Hong, Jishang Xu, Xuehong Gu, Nanping Xu
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P7-15 Preparation and characterization of yttrium doped zirconia membranes
Yoshiharu Terazawa, Tomohisa Yoshioka, Masakoto Kanezashi, Toshinori Tsuru

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P7-16 Preparation of desirable sized O/W emulsion droplet with SPG membrane emulsification followed by solvent evaporation

Ryota Watanabe, Eiji Kamio, Yoshikage Ohmukai, Tatsuo Maruyama, Hideto Matsuyama
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P7-17 Surface modifications of macroporous Al_2O_3 membranes using organosilane

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P7-18 Preparation and characterization of tubular ceramic membrane for microfiltration using atmospheric plasma spray

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P7-19 Preparation of nanoporous inorganic membrane on supports with a graded supports

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P7-20 Micro-porous ceramic film as electrolyte supports for dye sensitized solar cells

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P7-21 Preparation of hydrophobic Silica Using Methyltriethoxysilane and Tetraethorthosilicate as Co-Precursors

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8. Membrane fouling

P8-1 Effect of surface morphology of hollow fiber membrane on membrane fouling property
Takeshi Katagiri, Yoshikage Ohmukai, Tatsuo Maruyama, Tomohiro Sotani, Hideto Matsuyama
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P8-2 Resistance of cross-flow microfiltration with side stream
Rome-Ming Wu, Kuo-Jen Lee, Yung-Sheng Lai
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P8-3 A study on the mechanism of particle deposition in submerged membrane filtration
Kuo-Jen Hwang, Hsieng-Chia Chen
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P8-4 Characterization of PVDF hollow-fiber low pressure membrane foulants
Noriko Hanaizumi[1], Takao Sasaki[1], Shin-ichi Minegishi[1], Masahiro Henmi[1], Yoshihisa Shimizu[2]
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P8-5 Membrane fouling in dead-end microfiltration of activated sludge and its supernatant
Nobuyuki Katagiri, Tetsutaka Sengoku, Eiji Iritani
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P8-6 Organic fouling behavior of anion exchange membranes prepared from chloromethyl styrene and divinylbenzene
Nobuyuki Tanaka, Minami Nagase, Mitsuru Higa
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P8-7 Effect of surfactant adsorption on zeta potential of microfiltration membranes
Kazuho Nakamura, Satoshi Komaki, Kanji Matsumoto
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P8-8 The location dominating the zeta potential in fouled microfiltration membranes
Kazuho Nakamura, Takako Orime, Kanji Matsumoto
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P8-9 Development of pore size monitoring system for MF/UF membranes by streaming potential measurement

Kazuho Nakamura, Hirofumi Sato, Kanji Matsumoto
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P8-10 Adaption of innovative water quality and surface analytical technologies to diagnose molecular structure of fouling of membrane and sorptive separation process
Mojgan Bassandeh, Alice Antony, Ebrahim Negaresh, Greg Leslie
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P8-11 Organic fouling properties of anion exchange membranes with hydrophilic polymer matrix
Minami Nagase, Megumi Nishimura, Nobuyuki Tanaka, Mitsuru Higa
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P8-12 Evolution of physically irreversible fouling in an MF membrane filtering river water: a two-step fouling mechanisms
Katsuki Kimura, Hiroshi Yamamura, Yoshimasa Watanabe
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P8-13 Assessment of fouling potential of SMP in MBRs by using lectins
Ippei Tanaka, Taro Miyoshi, Katsuki Kimura, Yoshimasa Watanabe
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P8-14 Measurements of adhesion force between proteins and membranes by using atomic force microscopy (AFM)
Hiromasa Matsuno, Hiroshi Yamamura, Katsuki Kimura, Yoshimasa Watanabe
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P8-15 Study of organic fouling on fluoroploymeric microfiltration membrane
Kuo-Lun Tung, Nien-Jung Lin, Tzu-Chun Chen
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P8-16 Visualization of oil deposition on the hollow fiber membrane during microfiltration of oily wastewater by ultrasonic reflectometry and wavelet analysis
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P8-17 UTDR as a non-destructive technique to detect membrane fouling in a spiral-wound RO module

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P8-18 The effect of sludge retention time on the performance of polytetrafluoroethylene membrane bioreactor

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P8-19 The filtration characteristics of hollow fiber microfiltration - Effect of various kinds of solids in the excess activated sludge -

Kenji Kawasaki, Hisako Tanimoto, Ryo Nagasaki, Akira Matsuda

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P8-20 Modeling of fouling in membrane filtration of dilute dispersions

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P8-21 High fouling resistance of polyethersulfone UF membrane with Tetronic 1307 prepared via non-solvent induced phase separation (NIPS)

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P8-22 Development of grafted polymer membrane with silver nanoparticle for anti-fouling and antibacterial activity

Isao Sawada, Tatsuya Ito, Yoshikage Ohmukai, Tatsuo Maruyama, Tomohiro Sotani, Hideto Matsuyama

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P8-23 Improvement of antifouling property of poly(lactic acid) hollow fiber membrane by adding PLA-co-PEG

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P8-24 Inhibition of bio-fouling by intermittent chlorine injection (ICI) and long-term operation results in SWRO desalination

Akihiro Ariji, Masaki Nishida, Mikio Katsube, Toshiyuki Yagi, Atsuo Kumano, Nobuya Fujiwara
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P8-25 Surface modification of SWRO membrane using comb-like amphiphilic copolymer

Jihye Park, Jung-Me Moon, Jin-Hong Kim, Hyoung-Woo Choi, Sung-Pyo Hong, Tae-Moon Tak
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P8-26 Low fouling nanofiltration membrane

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P8-27 Low fouling and high rejection spiral RO element PROC10

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P8-28 Protein antifouling PVDF membranes: effect of amphiphilic polymer

Rajkumar Patel, Jong Hak Kim, Byoung Ryul Min
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P8-29 Advanced characterization of solutions obtained during membrane bioreactor cleaning

Pierre Le-Clech, Nashida Subhi, Richard M. Stuetz, Vicki Chen
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P8-30 Effect of NIPAM grafted amount on performances of thermo -sensitive membrane in temperature swing filtering - Cleaning system

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P8-31 Electrodialysis and electrochemical degradation of ionic metals and cyanide in electroplating wastewater with in-situ membrane cleaning

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P8-32 Filtration of seawater with microporous membranes of biodegradable plastics

Youhei Watanabe[1], Masatou Ueno[1], Takeru Hashimoto[1], Masaki Takahashi[1], Tomoaki Kouya[1], Masayuki Taniguchi[1], Douglas R. Lloyd[2], Takaaki Tanaka[1]

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P8-33 Effect of the aeration rate on the water velocity distribution in submerged hollow fiber modules

Youngkeun Choi[1], Chansik Kim[1], Myoungsu Cho[1], Ohsung Kwon[1], Soohong Noh[1], Hyungwoo, Hur[2], Seungkook Park[2], Kyeongho Yeon[2], Sodam Yoon[2], Inho Yeo[2]

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10. Transport mechanism in membrane

P10-1 Mass transport study of PDMS membranes for the pervaporation separation of alkane/ thiophenes mixtures

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P10-2 Free-volume depth profile for interfacial polymerization membranes examined with positron annihilation spectroscopy: relationship with swelling effect on pervaporation performance

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P10-3 Molecular dynamics study of water-like vapor permeation through amorphous silica network and inter-particle pores on microporous silica membranes

Tomohisa Yoshioka, Kenpei Fukushima, Masakoto Kanezashi, Toshinori Tsuru
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P10-4 Sorption of water vapor of EVAL/PAA blend nano-nonwovens modified by layer-by-layer technique

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P10-5 Investigation on mass transfer property for a hollow fiber reverse osmosis membrane module

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P10-6 Correlation between water permeability and water/salt selectivity tradeoff in polymer membranes for desalination

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P10-7 [Withdrawn]

P10-8 Effect of pH and temperature on the transmembrane potential across nanofiltration membranes

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P10-9 Modeling on separation performance of nanofiltration membranes for ammonia salts solution
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P10-10 Experimental investigation research on nanofiltration membranes for divalent salts of dilute feed concentration solution
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P10-11 Experimental investigation of membrane potential in electrolyte solutions for nanofiltration membrane
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P10-12 Relationship between the permeate flux and solute-membrane interaction in cross-flow ultrafiltration
Tung-Wen Cheng, Hsin-Pei Chou, Yu-Lun Chiu
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P10-13 A model for the initial period of permeation process of cross-flow ultrafiltration of whey suspension based on the rheology of compressible cake
Kensuke Karasu[1], Shiro Yoshikawa[1], Sandra E. Kentish[2], Geoffrey W. Stevens[2]
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P10-14 Analysis of solute transport by diffusion and convection in hemodialyzer using finite element method

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P10-15 Deformation and permeation control of bipolar gel membranes under an electric field

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P10-16 Electrolyte transport behavior across heterogeneous amphoteric charged membranes

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P10-17 Characterization of pore size and surface charge density of UF/MF membranes by streaming potential measurement

Kiyomi Yamashiro, Kazuho Nakamura, Wakako Hirayama, Tadashi Nittami, Kanji Matsumoto
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P10-18 Preparation and characterization of NPN type charged membranes with ionic barrier properties

Mitsutaka Sawamura, Mitsuru Higa
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P10-19 Positron studies of membrane and electrolyte materials

James I. Mardel, Anita J. Hill
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P10-20 CFD simulation study of packed bed reactors for hydrogen generation

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P10-21 Simulation study for effect of static void structures and dynamics of amorphous silica membranes on gas permeation properties using an MD technique

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P10-22 Application of mulitiscale computational chemistry to membrane technology

Hiromitsu Takaba[1], Ai Suzuki[1], Michihisa Koyama[2], Hideyuki Tsuboi[1], Nozomu Hatakeyama[1], Akira Endou[1], Carlos A. Del Carpio[1], Momoji Kubo[1], Akira Miyamoto[1]
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P10-23 Gas diffusion in poly(1-trimethylsiyl-1-propyne) membrane from molecular dynamics simulations
Min Cheng, Jianwen Jiang, Raj Rajagopalan, Tai-Shung Chung
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P10-24 Development of a microscopic free volume theory for prediction of penetrant self-diffusivity in polymeric systems
Hidenori Ohashi[1], Taichi Ito[2], Takeo Yamaguchi[1]
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P10-25 Geometrical and topological analysis of membrane's 3D pore structure
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3: Wuhan Institute of Technology, Australia

P10-26 Novel and useful characterisation method for free volume related phenomena in membranes
James I. Mardel, Anita J. Hill
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P10-27 Effects of pH and stirring speed on the filtration of hyaluronic acid
Tung-Wen Cheng, Che-Jung Hsu, Yu-Lun Chiu
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P10-28 Separation technique of organic solvent in waste liquid using PDMS membranes
Emi Inagaki, Yuto Shimizu, Ryotaro Kiyono
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P10-29 Comparison of shell side mass transfer correlations in a randomly packed hollow fiber membrane module
Shufeng Shen, Kathryn H. Smith, Sandra E. Kentish, Geoff W. Stevens
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P10-30 (O12-1) Determining transport mechanisms within pores of different size, shape and composition

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P10-31 (O12-3) Analysis of the transmembrane potential arising across nanofiltration membranes

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