

Prof. Chung group's Publications in 2015 (Dec 31)

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1) <http://www.chbe.nus.edu.sg/index.php/user-profile/userprofile/chencts>

2) <http://www.chbe.nus.edu.sg/membrane>

All the listed papers were written by my students/staff and me only.

I hand corrected all the papers.

Publications:

1. S. P. Sun, S. Y. Chan, W. H. Xing, Y. Wang, T. S. Chung, Facile synthesis of dual-layer organic solvent nanofiltration (OSN) hollow fiber membranes, *ACS Sustainable Chemistry & Engineering* 3, 3019–3023 (2015) (IF= 4.642)
2. X. Li, W. L. Ang, Y. D. Liu, T. S. Chung, Engineering design of outer-selective tribore hollow fiber membranes for forward osmosis and oil-water separation, *AIChE J.* 61 (12), 4491-4501. (IF= 2.748)
3. S. Zhang, T. S. Chung, Osmotic power from seawater brine by hollow fiber membrane modules: net power output and optimum operating conditions, accepted by *AIChE J.* (IF= 2.748)
4. D. Hua, G. M. Shi, F. Chao, T. S. Chung, Teflon AF2400/Ultem composite hollow fiber membranes for alcohol dehydration by high-temperature vapor permeation, accepted by *AIChE J.* (IF= 2.748)
5. C. F. Wang, T. S. Chung, Energy recovery by pressure retarded osmosis (PRO) in SWRO-PRO integrated processes, *Applied Energy* 162, 687–698 (2016). (IF=5.613)
6. P. H. H. Duong, S. Chisca, P. Y. Hong, H. Cheng, S. Nunes, T. S. Chung, Hydroxyl functionalized polytriazole-co-polyoxadiazole as substrates for forward osmosis membranes, *ACS Applied Materials & Interfaces* 7, 3960–3973 (2015). (IF = 6.723)
7. Q. C. Ge, T. S. Chung, Oxalic acid complexes: promising draw solutes for forward osmosis (FO) in protein enrichment, *Chemical Communication* 51, 4854 - 4857 (2015). (IF = 6.834)
8. D. W. Mangindaan, N. M Woon, G. M. Shi, T. S. Chung, P84 polyimide membranes modified by a tripodal amine for enhanced pervaporation dehydration of acetone, *Chemical Engineering Science* 122, 14–23 (2015). (IF = 2.337)
9. S. P. Sun, S. Y. Chan and T. S. Chung A slow-fast phase separation (SFPS) process to fabricate dual-layer hollow fiber substrates for thin-film composite (TFC) organic solvent nanofiltration (OSN) membranes, *Chemical Engineering Science* 129, 232–242 (2015). (IF = 2.337)
10. Y. P. Tang, H. Wang, T. S. Chung, Towards high water permeability in triazine framework-based microporous membranes for dehydration of ethanol, *ChemSusChem* 8, 138 – 147 (2015). (IF=7.657)
11. F. J. Fu, S. Zhang, T. S. Chung, Sandwich-structured hollow fiber membranes for osmotic power generation, *Desalination* 376, 73–81 (2015). (IF=3.756)
12. G. Han, J. Zuo, C. F. Wan, T. S. Chung, Hybrid pressure retarded osmosis–membrane distillation (PRO–MD) process for osmotic power and clean water generation, *Environmental Science: Water Research & Technology* 1, 507–515 (2015).

13. Y. Zhang, S. Zhang, T. S. Chung, Nanometric graphene oxide framework membranes with enhanced heavy metal removal via nanofiltration, *Environmental Science & Technology* 49 (16) 10235–10242 (2015). (IF = 5.330)
14. S. Zhang, M. H. Peh, Z. W. Thong, T. S. Chung, A thin film interfacial crosslinking approach to fabricate a chitosan rejecting layer over the polyethersulfone support for heavy metal removal, *Industrial & Engineering Chemistry Research* 54 (1), 472-479 (2015). (IF =2.587)
15. Y. K. Ong, H. T. Ng, T. S. Chung, A conceptual demonstration of decaffeination via nanofiltration, *Industrial & Engineering Chemistry Research* 54 (31), 7737–7742 (2015). (IF =2.587)
16. C. Z. Liang, S. P. Sun, B. W. Zhao, T. S. Chung, Integration of nanofiltration hollow fiber membranes with coagulation/flocculation to treat colored wastewater from a dyestuff manufacturer: a pilot scale study, *Industrial & Engineering Chemistry Research* 54, 11159–11166 (2015). (IF =2.587)
17. Y. P. Tang, J. X. Chan, T. S. Chung, M. Weber, C. Staudt, C. Maletzko, Simultaneously covalent and ionic bridging towards antifouling of GO-embedded nanocomposite hollow fiber membranes, *Journal of Materials Chemistry A*. 3 (2015) 10573–10584. (IF =7.443)
18. L. Hao, K. S. Liao, T. S. Chung, Photo-oxidative PIM-1 based mixed matrix membranes with superior gas separation performance, *Journal of Materials Chemistry A*. 3, 17273–17281 (2015). (IF =7.443)
19. R. C. Ong, T. S. Chung, J. S. de Wit, B. J. Helmer, Novel cellulose ester substrates for high performance flat-sheet thin-film composite (TFC) forward osmosis (FO) membranes, *Journal of Membrane Science* 473, 63-71 (2015). (IF = 5.056)
20. P. Wang, T. S. Chung, Recent advances in membrane distillation processes: Membrane development, configuration design and application exploring, *Journal of Membrane Science* 474, 39–56 (2015). (IF = 5.056)
21. L. Luo, G. Han, T. S. Chung, M. Weber, C. Staudt, C. Maletzko, Oil/water separation via ultrafiltration by novel triangle-shape tri-bore hollow fiber membranes from sulfonated polyphenylenesulfone, *Journal of Membrane Science* 476, 162–170 (2015). (IF = 5.056)
22. C. F. Wan, T. S. Chung, Osmotic power generation by pressure retarded osmosis using seawater brine as the draw solution and wastewater brine as the feed, *Journal of Membrane Science* 479 (2015) 148–158. (IF = 5.056).
23. S. C. Chen, C. F. Wan, T. S. Chung, Enhanced fouling by inorganic and organic foulants on pressure retarded osmosis (PRO) hollow fiber membranes under high pressures, *Journal of Membrane Science* 479 (2015) 190–203. (IF = 5.056)
24. W. P. Zhu, J. Gao, S. P. Sun, S. Zhang, T. S. Chung, Poly(amidoamine) dendrimer (PAMAM) grafted on thin film composite (TFC) nanofiltration (NF) hollow fiber membranes for heavy metal removal, *Journal of Membrane Science* 487, 117–126 (2015). (IF = 5.056)
25. D. Hua, T. S. Chung, Universal surface modification by aldehydes on polymeric membranes for isopropanol dehydration via pervaporation, *Journal of Membrane Science* 492, 197–208 (2015). (IF = 5.056)
26. P. Salehian, M. Askari, M. L. Chua, G. M. Shih, T. S. Chung, In situ regulation of micro-pore to design high performance polyimide membranes for pervaporation dehydration of isopropanol, *Journal of Membrane Science* 493, 299–310 (2015). (IF = 5.056)
27. P. Wang, Y. Cui, Q. C. Ge, T. F. Tew, T. S. Chung, Evaluation of hydroacid complex in the forward osmosis-membrane distillation (FO-MD) system for desalination, *Journal of Membrane Science* 494, 1–7 (2015). (IF = 5.056)
28. R. Wei, S. Zhang, Y. Cui, R. C. Ong, T.S. Chung, B. J. Helmer, J. S. de Wit, Highly permeable forward osmosis (FO) membranes for high osmotic pressure but viscous draw solutes, *Journal of Membrane Science* 496, 132–141 (2015). (IF = 5.056)

29. J. Zuo, S. Bonyadi, T. S. Chung, Exploring the potential of commercial polyethylene membranes for desalination by membrane distillation, *Journal of Membrane Science* 497, 239–247 (2016). (IF = 5.056)
30. T. Cai, X. Li, C. F. Wan, T. S. Chung, Zwitterionic Polymers Grafted Poly(ether sulfone) Hollow Fiber Membranes and Their Antifouling Behaviors for Osmotic Power Generation, *Journal of Membrane Science* 497, 142–152 (2016). (IF = 5.056).
31. S. Japip, Y. C. Xiao, K. S. Liao, T. S. Chung, Enhancement of molecular-sieving properties by constructing surface nano-metric layer via vapor cross-linking, *Journal of Membrane Science* 497, 248–258 (2016). (IF = 5.056)
32. J. Gao, S. P. Sun, W. P. Zhu, T. S. Chung, Green modification of outer selective p84 nanofiltration (NF) hollow fiber membranes for cadmium removal, *Journal of Membrane Science* 499, 361–369 (2016). (IF = 5.056)
33. Y. M. Xu, N. L. Le, J. Zou, T. S. Chung, Aromatic polyimide and crosslinked thermally rearranged poly(benzoxazole-co-imide) membranes for isopropanol dehydration via pervaporation, *Journal of Membrane Science* 499, 317–325 (2016). (IF = 5.056)
34. G. Han, B. W. Zhao, F. J. Fu, T. S. Chung, M. Weber, C. Staudt, C. Maletzko, High performance thin-film composite membranes with mesh-reinforced hydrophilic sulfonated polyphenylenesulfone (sPPSU) substrates for osmotically driven processes, *Journal of Membrane Science* 502, 84–93, 2016. (IF = 5.056)
35. Z. L. Cheng, X. Li, Y. D. Liu, T. S. Chung, Robust outer-selective thin-film composite polyethersulfone hollow fiber membranes with low reverse salt flux for renewable salinity-gradient energy generation, accepted by *Journal of Membrane Science*. (IF = 5.056)
36. B. W. Zhao, N. Peng, C. Z. Liang, W. F. Yong, T. S. Chung, Hollow fiber membrane dehumidification device for air conditioning system, *Membranes* 5, 722-738 (2015).
37. W. F. Yong, T. S. Chung, Miscible blends of carboxylated polymers of intrinsic microporosity (cPIM-1) and Matrimid, *Polymer* 59 (2015) 290-297. (IF = 3.562)
38. W. F. Yong, A. K. H. Kwek, K. S. Liao, T. S. Chung, Suppression of aging and plasticization in highly permeable polymers, *Polymer* 77, 377-386 (2015). (IF = 3.562)
39. G. Han, S. Zhang, X. Li, T. S. Chung, Progress in pressure retarded osmosis (PRO) membranes for osmotic power generation, *Progress in Polymer Science* 51, 1–27 (2015). (IF=26.932)
40. G. M. Shi, J. Zuo, S. H. Tang, S. Wei, T. S. Chung, Layer-by-layer (LbL) polyelectrolyte membrane with Nexar™ polymer as a polyanion for pervaporation dehydration of ethanol, *Separation and Purification Technology* 140, 13–22 (2015). (IF = 3.091)
41. T. S. Chung, L. Luo, C. F. Wan, Y. Cui, G. Amy, What is next for forward osmosis (FO) and pressure retarded osmosis (PRO), *Separation and Purification Technology* 156, 856–860 (2015). (IF = 3.065)
42. G. Han, J. S. de Wit, T. S. Chung: Water reclamation from emulsified oily wastewater via effective forward osmosis hollow fiber membranes under the PRO mode, *Water Research* 81, 54-63 (2015). (IF = 5.528)
43. S. C. Chen, G. Amy, T. S. Chung, Membrane fouling and anti-fouling strategies using RO retentate from a municipal water recycling plant as the feed for osmotic power generation, *Water Research* 88, 144–155 (2016). (IF = 5.528)
44. X. Li, T. Cai, C. Y. Chen, T. S. Chung, Negatively charged hyperbranched polyglycerol grafted membranes for osmotic power generation from municipal wastewater, *Water Research* 89, 50-58 (2016). (IF = 5.528)