

## 1. Refreed Journal Articles

1. K. Yamamoto, J. Ohshita, T. Mizumo, M. Kanezashi, T. Tsuru, Preparation of hydroxyl group containing bridged organosilica membranes for water desalination, *Separation and Purification Technology*, 156 (2015) 396-402. doi:10.1016/j.seppur.2015.10.028
2. L. Meng, M. Kanezashi, J. Wang, T. Tsuru, Permeation properties of BTESE-TEOS organosilica membranes and application to O<sub>2</sub>/SO<sub>2</sub> gas separation, *Journal of Membrane Science*, 496 (2015) 211-218. doi:10.1016/j.memsci.2015.08.066
3. X. Ren, M. Kanezashi, H. Nagasawa, T. Tsuru, Preparation of organosilica membranes on hydrophobic intermediate layer and evaluation of gas permeation in the presence of water vapor, *Journal of Membrane Science*, 496 (2015) 154-164. doi:10.1016/j.memsci.2015.08.050
4. L. Meng, M. Kanezashi, T. Tsuru, Catalytic membrane reactors for SO<sub>3</sub> decomposition in Iodine-Sulfur thermochemical cycle: A simulation study, *International Journal of Hydrogen Energy*, 40 (2015) 12687-12696. doi:10.1016/j.ijhydene.2015.07.124
5. G. Gong, H. Nagasawa, M. Kanezashi, T. Tsuru, Reverse osmosis performance of layered-hybrid membranes consisting of an organosilica separation layer on polymer supports, *Journal of Membrane Science*, 494 (2015) 104-112. doi:10.1016/j.memsci.2015.07.039
6. X. Ren, M. Kanezashi, H. Nagasawa, T. Tsuru, Plasma-assisted multi-layered coating towards improved gas permeation properties for organosilica membranes, *RSC Advances*, 5 (2015) 59837-59844. DOI: 10.1039/C5RA08052E
7. M. Kanezashi, H. Sasaki, H. Nagasawa, T. Yoshioka, T. Tsuru., Evaluating the gas permeation properties and hydrothermal stability of organosilica membranes under different hydrosilylation conditions, *Journal of Membrane Science*, 493(2015) 664-672.
8. S. M. Ibrahim, H. Nagasawa, M. Kanezashi, T. Tsuru, Robust organosilica membranes for high temperature reverse osmosis (RO) application: Membrane preparation, separation characteristics of solutes and membrane regeneration, *Journal of Membrane Science*, 493 (2015) 515-523. doi:10.1016/j.memsci.2015.06.060
9. M. Nishibayashi, H. Yoshida, M. Uenishi, M. Kanezashi, H. Nagasawa, T. Yoshioka, T. Tsuru, Photo-induced sol-gel processing for low-temperature fabrication of high performance silsesquioxane membranes for molecular separation, *Chemical Communications*, 51 (2015) 9932-9935. DOI: 10.1039/C5CC02997J (Front cover)
10. X. Ren, M. Kanezashi, H. Nagasawa, T. Tsuru, Plasma treatment of hydrophobic sub-layers to prepare uniform multi-layered films and high-performance gas separation membranes, *Applied Surface Science* 349 (2015) 415-419. doi:10.1016/j.apsusc.2015.04.230
11. L. Meng, T. Tsuru, Microporous membrane reactors for hydrogen production, *Current Opinion in Chemical Engineering*, 8 (2015) 83-88.
12. H. Nagasawa, T. Minamizawa, M. Kanezashi, T. Yoshioka, T. Tsuru, Microporous organosilica membranes for gas separation prepared via PECVD using different O/Si ratio precursors, *Journal of Membrane Science*, 489 (2015)11-19.
13. G. Li, H. R. Lee, H. Nagasawa, T. Yoshioka, M. Kanezashi, T. Tsuru, Pore-size evaluation and gas transport behaviors of microporous membranes: A experimental and theoretical study, *AIChE Journal*, 61 (2015) 2268-2279. DOI: 10.1002/aic.14812
14. L. Meng, X. Yu, T. Niimi, H. Nagasawa, M. Kanezashi, T. Yoshioka, T. Tsuru, Methylcyclohexane dehydrogenation for hydrogen production via a bimodal catalytic membrane reactor, *AIChE Journal*, 61 (2015) 1628-1638. DOI: 10.1002/aic.14764
15. M. Kanezashi, R. Matsugasako, H. Tawarayama, H. Nagasawa, T. Yoshioka, T. Tsuru, Tuning the pore sizes of novel silica membranes for improved gas permeation properties via in-situ reaction between NH<sub>3</sub> and Si-H groups, *Chemical Communications*, 51 (2015) 2551-2554. DOI: 10.1039/C4CC09159K
16. K. Yamamoto, J. Ohshita, T. Mizumo, T. Tsuru, Efficient synthesis of SiOC glasses from ethane, ethylene, and acetylene-bridged polysilsesquioxanes, *Journal of Non-Crystalline Solids*, 408 (2015)137-141.
17. J. Ohshita, H. Muragishi, K. Yamamoto, T. Mizumo, M. Kanezashi, T. Tsuru, Preparation and separation properties of porous norbornane-bridged silica membrane, *Journal of Sol-Gel Science and Technology* 73 (2015) 365-370. DOI 10.1007/s10971-014-3542-y

## 2. Books, Chapters

1. 都留稔了, 任秀秀, 『吸着・分離材料の設計、モジュール化と新しい応用』第2章 無機吸着材、分離膜の細孔の設計、配列・孔径の制御 第10節 シリカ膜の膜構造制御と気体分離特性の向上, 株式会社技術情報協会 (2015)

## 3. Review Articles

1. 都留稔了, 長澤寛規, 無機RO/NF膜の開発最前線, 膜 (2015) 191-196.
2. 都留稔了, 多孔質セラミック膜による水素分離および触媒膜型反応器への応用, セラミックス, 50 (2015) 310-314.
3. 都留稔了, Suhaina M. Ibrahim, Waravut Puthai, 多孔質セラミック膜の細孔径制御とRobust ナノ濾過・逆浸透膜への応用, セラミックス 50 (2015) 121-125.

## 4. Invited, keynote lecture

1. Toshinori Tsuru, Nanopermporometry (NPP) and Normalized Knudsen-based permeance (NKP) for pore-size evaluation of nano/subnano-porous membranes, Hong Kong University of Science and Technology, 27 March, 2015, Hong Kong
2. Toshinori Tsuru, Hydrogen production from energy carriers by silica-based catalytic membrane reactors, International Conference on Catalysis in Membrane Reactor (ICCMR), 2015 June 22-25, Szczecin, Poland, Keynote
3. Toshinori Tsuru, High-performance organosilica membranes and expanding applications, International Symposium on Inorganic Membranes (ISIMS), 2015/07/22, plenary
4. Toshinori Tsuru, Robust organosilica membranes for expanding liquid-phase separation, Aseanian Membrane Society (AMS), 2015/07/22, keynote

## 5. Others

Top Cited paper  
([http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1547-5905/homepage/MostCited.html](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1547-5905/homepage/MostCited.html)) in AICHE Journal

2015.12 Top Cited AICHE Journal Papers from 2011, Evaluation and Fabrication of Pore-Size-Tuned Silica Membranes with Tetraethoxydimethyl Disiloxane for Gas Separation

2015.12 Top Cited AICHE Journal Papers from 2011, Permeation Properties of Hydrogen and Water Vapor Through Porous Silica Membranes at High Temperatures

2015.12 Top Cited AICHE Journal Papers from 2013, Ammonia Decomposition in Catalytic Membrane Reactors: Simulation and Experimental Studies

Front cover in Chemical Communications

M. Nishibayashi, H. Yoshida, M. Uenishi, M. Kanezashi, H. Nagasawa, T. Yoshioka, T. Tsuru, Photo-induced sol-gel processing for low-temperature fabrication of high performance silsesquioxane membranes for molecular separation, *Chemical Communications*, 51 (2015) 9932-9935. DOI: 10.1039/C5CC02997J (Front cover)