

Jerry Y. S. Lin

School for Engineering of Matter, Transport and Energy

Arizona State University

Phone: (480) 965-7769

Fax: (480) 727-9321

Email: Jerry.Lin@ASU.edu

EMPLOYMENT

Academic Appointment

- 2011-Pres. Regents' Professor, Arizona State University
2009-Pres. Professor of Chemical Engineering, and Affiliated Professor of Materials Science and Engineering, School for Engineering of Matter, Transport and Energy, Arizona State University, Tempe, Arizona
2006-2009 Professor and Department Chair, Department of Chemical Engineering, Arizona State University, Tempe, Arizona
2005-2006 Professor, Department of Chemical and Materials Engineering, Arizona State University, Tempe, Arizona
1991-2004 Assistant Professor (1991-1995), Associate Professor (1996-1997), Professor (1998-2004), Dept. of Chemical Engineering, University of Cincinnati, Ohio
1988-1991 Post-Doctoral Staff Member, Materials Science Group, Chemical Technology Dept., University of Twente, The Netherlands

Other Appointments

- 2021-Pres Co-Editor-in-Chief, Journal of Membrane Science Letters (Elsevier)
2020-Pres Co-Editor-in-Chief, Journal of Membrane Science (Elsevier)
2023-Pres Co-Founder and Chief Scientist, Safe-LiMax LLC
2022-Pres Co-Founder and Chief Scientist, Safe-Li LLC
2018-Pres Scientific Advisor and Board Member, Saramike LLC
2008-2019 Editor, Journal of Membrane Science (Elsevier) 2020-Pres
2014-Pres. Editor, Imperial College Press, Chemical Engineering Series
2006-2011 Director of Board (06-09) and Chairman, Technology Committee, ECotality Inc.
2005-2010 Adjunct Professor, Dept. of Chemical and Materials Eng., University of Cincinnati, Ohio
2003-2004 Co-Director, NSF IU/CRC Center for Membrane Applied Science and Technology, University of Cincinnati
2003-2004 Director, Chemical Engineering Program, University of Cincinnati
Associate Head, Dept. of Chemical and Materials Engineering, University of Cincinnati
1998-2003 Director of Graduate Studies, Dept. of Chemical Engineering, University of Cincinnati

Visiting Professorships and Consulting

- Spring, 2012 Piercy Distinguished Visiting Professor, Dept. of Chem. Eng. & Mater. Sci., University of Minnesota
2001-2018. Cheung Kong Scholar Distinguished Guest Professor, Tianjin University
1998-2011 Guangbiao Distinguished Guest Professor, Hengyi Distinguished Guest Professor, Zhejiang University, Hangzhou, China
2006-2009 Bairen Distinguished Guest Professor, South China University of Technology, Guangzhou, China
2003-2006 Distinguished Visiting Professor, Dalian Institute of Chemical Physics, Dalian, China
1999-2001 JSPS Fellow Visiting Professor, Dept. Chemical Systems Engineering, University of Tokyo
1993-Pres. Consulting for Chemical, Petroleum and Utility Companies (such as GE, BOC Group, Linde, ExxonMobil, State Grid).

EDUCATION

- 1992 **Sc.D.** Materials Science, University of Twente, Enschede, The Netherlands
1988 **Ph.D.** Chemical Engineering, Worcester Polytechnic Inst., Massachusetts
1985 **M.S.** Chemical Engineering, Worcester Polytechnic Inst., Massachusetts
1982 **B.S.** Chemical Engineering (Petroleum Eng), Zhejiang University, Hangzhou, China

HONORS/RECOGNITION

- **AIChE Clarence (Larry) G. Gerhold Award (2021)**
- **AIChE Annual Meeting Honor Sessions** (In honor of Lin's Lifetime Achievements in Membrane Science and Technology) (2020)
- **Fellow, North American Membrane Society (NAMS) (2020)**
- Y.H. Ma Lectureship, Worcester Polytechnic Institute (2016)
- **Fellow, American Institute of Chemical Engineers (AIChE) (2013)**
- George T. Piercy Distinguished Visiting Professor, University of Minnesota (2012)
- Regents' Professor (the highest honor for ASU faculty), Arizona State University (2011)
- **Fellow, American Association for the Advancement of Science (AAAS) (2009)**
- **AIChE Institute Award** for Excellence in Industrial Gases Technology (2009)
- Chinese National Science Foundation Research Collaboration Award (2003)
- BP Faculty Excellence Award (2002)
- University of Cincinnati College of Engineering Research Award (2002)
- Cheung Kong Scholar (2001)
- Japan Society for Promotion of Science (JSPS) Fellow (1999)
- Sigma Xi Young Investigator Award (1998)
- Exxon Education Foundation Award (1997)
- University of Cincinnati Faculty Achievement Award (1995)
- **National Science Foundation CAREER Award (1995)**
- University of Cincinnati Outstanding Chemical Engineering Professor (1993)
- National Science Foundation Research Initiation Award (1992)

TEACHING INTEREST

Transport Phenomena (Mass, Heat and Moment Transfer)
Thermodynamics
Chemical Reaction Engineering
Sol-Gel Science,
Chemical Vapor Deposition
Membrane Science

RESEARCH AREAS/INTEREST

- **Inorganic Membrane Science**
(Mesoporous membranes, Microporous membranes, Zeolite membranes, Metal membranes, Dense ceramic membranes)
- **Membrane Catalysis**
(Membrane reactors for controlling selectivity, Membrane reactor for hydrogen production, Nanostructured membrane reactors)
- **Adsorption**
(New high-temperature sorbents, Self-assembled synthesis of nanoporous materials, Transport in nanoporous and microporous materials)

- **Ionic Conducting Ceramics and Solid Oxide Fuel Cells**
(Proton-conducting ceramics, Oxygen ionic conducting ceramics, Proton-conducting solid oxide fuel cells)
- **Energy storage**
(Batteries, adsorption enhanced energy storage)

Summary of Scientific Outputs, Research Activities and Service Contributions

- Lin's contributions to the fields of membranes and separation are documented in the following output:
 - Total 378 papers
 - 318 SCI referred journal papers
 - 60 book chapters and conference proceeding papers
 - 9 US patents and European patents
- Lin's impact on the field is indicated by a large number of citations of his papers (Web of Science SCI: citation >14,400 times, H-index of 67 and average citations per article of 43.56; Google Scholar Citation >27000 times, h-index 78; Dated Nov., 2020); He is among most cited author in chemical engineering field in the world (Elsevier/Shanghai Ranking) and in the field of membrane science.
- Lin has given over 44 plenary and keynote lectures in conferences, over 200 invited seminars, and presented about 200 papers in conferences.
- Lin's research has been supported by federal and state governments and private industrial and foundation, with over 85 research grants and contracts totaling about US\$20 million to his share. Since 1991, his work has been continuously supported by the National Science Foundation.
- Lin supervised about 110 Ph.D., M.S students and post-doctors, among which **45 received Ph.D.** with many placed in academia (3 in the U.S., 2 in Japan, 2 in Korea, 1 in Australia, and about a dozen in the rest of the world)].
- Lin is co-Editor-in-Chief now, and was Editor from 2008-2019, of the Journal of Membrane Science – the flagship journal in the field of membrane science and technology.
- Lin has organized 9 international conferences or symposia on membranes, including as conference chair (or co-chair) of 1998 North American Membrane Society (NAMS) Annual Meeting, 2004 International Conference on Inorganic Membranes, 2010 Gordon Research Conference on Membranes, and 2013 NAMS Annual Meeting;
- Lin served on various administrative positions including department chair and director of several academic programs; he also served on key academic committees including university, college and school level promotion and tenure committees, and decanal, head and faculty search committees.

PUBLICATIONS

Orcid ID: 0000-0001-5905-8336

Scopus Author ID: 25723514400

Researcher ID: F-1235-2010

Refereed Journal Articles (326 papers)

-1989-1993-

1. Y.S. Lin and Y.H. Ma, "A comparative chromatographic study of liquid adsorption and diffusion in microporous and macroporous adsorbents," *Ind. Eng. Chem. Res.*, 28(5), 622-630 (1989)
2. Y.S. Lin and Y.H. Ma, "Analysis of liquid chromatography with nonuniform crystallite particles," *AIChE J.*, 36, 1569-1576 (1990)
3. Y.S. Lin, L.G.J. de Haart, K.J. de Vries and A.J. Burggraaf, "A kinetic study on the electrochemical vapor deposition of solid oxide electrolyte films on porous substrates," *J. Electrochem. Soc.*, 137, 3960-3966 (1990)
4. Y.S. Lin, K.J. de Vries and A.J. Burggraaf, "Thermal stability and its improvement of alumina membranes prepared by sol-gel method," *J. Materials Sci.*, 26, 715-720 (1991)
5. Y.S. Lin, and A.J. Burggraaf, "Preparation and characterization of high-temperature thermally stable alumina membrane composites," *J. Am. Ceram. Soc.*, 74, 219-224 (1991)
6. L.G.J. de Haart, Y.S. Lin, K.J. de Vries and A.J. Burggraaf, "Modified-CVD of nanoscale structure in and EVD of thin layers on porous ceramic membranes," *J. European Ceram. Soc.*, 8, 59-70 (1991)
7. L.G.J. de Haart, Y.S. Lin, K.J. de Vries and A.J. Burggraaf, "On the kinetic study of electrochemical vapour deposition," *Solid State Ionics*, 47, 331-336 (1991)
8. Y.S. Lin and A.J. Burggraaf, "Modelling and analysis of CVD processes in porous media," *Chemical Engineering Sci.*, 46, 3067-3080 (1991)
9. Y.S. Lin, K.J. de Vries, H.W. Brinkman and A.J. Burggraaf, "Oxygen semipermeable solid oxide membrane composites prepared by electrochemical vapor deposition," *J. Membrane Sci.*, 66, 211-226(1992)
10. Y.S. Lin and A.J. Burggraaf, "CVD of solid oxides in porous substrates for membrane modifications," *AIChE J.*, 38, 445-454 (1992)
11. Y.S. Lin, "A theoretical analysis on pore size change of ceramic membranes after modification", *J. Membrane Sci.*, 79, 55-64 (1993)
12. Y.S. Lin and A.J. Burggraaf, "Experimental studies on pore size change of ceramic membranes after modification", *J. Membrane Sci.*, 79, 65-82 (1993)

-1994-

13. Y.S. Lin, W. Wang and J. Han, "Oxygen permeation through dense mixed-conducting oxide membranes", *AIChE J.*, 40, 786-798 (1994)
14. Y.S. Lin, C.H. Chang and R. Gopalan, "Improvement of thermal stability of porous nanostructured ceramic membranes", *Ind. Eng. Chem. Res.*, 33, 860-870 (1994)
15. C.H. Chang, R. Gopalan, Y.S. Lin, "A Comparative study on thermal and hydrothermal stability of alumina, titania and zirconia membranes", *J. Membrane Sci.*, 91, 27-45 (1994)
16. G. Xomeritakis and Y.S. Lin, "CVD of solid oxides in porous media for ceramic membrane preparation or modification. Comparison of Experimental Results with Semi-analytical Solutions", *Ind. Eng. Chem. Res.*, 33, 2607-2617 (1994)
17. G. Xomeritakis and Y.S. Lin, "CVD of solid oxides in porous media for ceramic membrane preparation or modification. Explicit solutions for deposition characteristics", *Chemical Engineering Sci.*, 49, 3909-3922 (1994)
18. J. Han and Y.S. Lin, "An improved analysis on kinetics of electrochemical vapor deposition", *Solid State Ionics*, 73, 255-263 (1994)

-1995-

19. V. Jayaraman, Y.S. Lin, M. Pakala and R.Y. Lin, "Fabrication of ultrathin metallic membranes on ceramic supports by sputter deposition", *J. Membrane Sci.*, 99, 89-100 (1995)
20. S.G. Deng and Y.S. Lin, "Sol-gel preparation and properties of alumina adsorbents for gas separations", *AIChE J.*, 41, 559-570 (1995)
21. R. Gopalan and Y.S. Lin, "Evolution of pore and phase structure of sol-gel derived lanthana doped titania at high temperatures", *Ind. Eng. Chem. Res.*, 34, 1189-1195 (1995)
22. G.P. Fotou, Y.S. Lin and S.E. Pratsinis, "Hydrothermal stability of pure and modified microporous silica membranes", *J. Materials Sci.*, 30, 2803-2808 (1995)
23. R.Gopalan, C.-H. Chang and Y.S. Lin, "Thermal stability improvement on pore and phase structure of sol-gel derived zirconia", *J. Materials Sci.*, 30, 3075-3081 (1995)
24. W. Wang and Y.S. Lin, "Analysis on oxidative coupling of methane in dense ceramic membrane reactor", *J. Membrane Sci.*, 103, 219-234 (1995)
25. V. Jayaraman and Y.S. Lin, "Synthesis and hydrogen permeation properties of ultrathin palladium-silver alloy membranes", *J. Membrane Sci.*, 104, 251-262 (1995)
26. S.G. Deng and Y.S. Lin, "Sulfur dioxide sorption properties and thermal stability of hydrophobic zeolites", *Ind. Eng. Chem. Res.*, 34, 4063-4070 (1995)
- 1996-
27. G. Xomeritakis, S.E. Pratsinis and Y.S. Lin, "Analysis of ceramic membrane modification by CVD", *Journal of Chemical Vapor Deposition*, 4, 173-196 (1996)
28. P. Huang, N. Xu, J. Shi and Y.S. Lin, "Characterization of asymmetric ceramic membranes by permoporometry", *J. Membrane Sci.*, 116, 301-305 (1996)
29. G. Xomeritakis and Y.S. Lin, "Fabrication of thin palladium membranes supported in porous ceramic substrate by chemical vapor deposition", *J. Membrane Sci.*, 120, 261-272 (1996)
30. Y.S. Lin and Y. Zeng, "Catalytic properties of oxygen semipermeable perovskite type ceramic membrane materials for oxidative coupling of methane", *Journal of Catalysis*, 164, 220-231 (1996)
31. S.G. Deng and Y.S. Lin, "Synthesis, stability and sulphation properties of sol-gel derived regenerative sorbents for flue gas desulfurization", *Ind. Eng. Chem. Res.*, 35, 1429-1437 (1996)
- 1997-
32. S.G. Deng and Y.S. Lin "Granulation of sol-gel derived nanostructured alumina", *AIChE J.*, 43, 505-514 (1997)
33. G. Xomeritakis, J. Han and Y.S. Lin, "Evolution of pore size distribution and average pore size of porous ceramic membrane during modification", *J. Membrane Sci.*, 124, 27-42 (1997)
34. Y. Zeng and Y.S. Lin, "Oxidative coupling of methane on oxygen semipermeable yttria doped bismuth oxide ceramics in reducing atmosphere", *Ind. Eng. Chem. Res.*, 36, 277-283 (1997)
35. S.G. Deng and Y.S. Lin "Microwave heating synthesis of supported sorbents", *Chemical Engineering Sci.*, 52, 1563-1575 (1997)
36. J. Han, G. Xomeritakis and Y.S. Lin, "Oxygen permeation through thin zirconia/yttria membranes prepared by EVD", *Solid State Ionics*, 93, 263-272 (1997)
37. J. Han, Y. Zeng, G. Xomeritakis, Y.S. Lin, "Electrochemical vapor deposition synthesis and oxygen permeation properties of dense zirconia- yttria- ceria membranes". *Solid State Ionics*, 98, 63-72 (1997)
38. S.G. Deng and Y.S. Lin, "Microwave synthesis of mesoporous and microporous alumina powders", *J. Materials Sci. Lett.*, 16, 1291-1294 (1997)
39. Y. Zeng and Y.S. Lin, "Catalytic properties of yttria doped bismuth oxide ceramics for oxidative coupling of methane", *Applied Catalysis A*, 159, 101-117 (1997)
40. Y. K. Kao, L. Lei and Y.S. Lin, "A comparative simulation study on oxidative coupling of methane in fixed-bed and membrane reactors", *Ind. Eng. Chem. Res.*, 36, 3583-3593 (1997)
41. P. Huang, N. Xu, and Y.S. Lin, "Recovery of organic solvents from air by ceramic membranes", *Ind. Eng. Chem. Res.*, 36, 3815-3820 (1997)
42. J. Han, Y. Zeng and Y.S. Lin, "Oxygen permeation through fluorite type bismuth-yttrium-copper oxide membranes", *J. Membrane Sci.*, 132, 235-243 (1997)

43. G. Xomeritakis and Y.S. Lin, "Fabrication of thin metallic membranes by MOCVD and sputtering", *J. Membrane Sci.*, 133, 217-230 (1997)
44. M.V. Chandak, Y.S. Lin, W. Ji and R.J. Higgins, "Sorption and diffusion of VOCs in DAY zeolite and silicalite-filled PDMS membranes", *J. Membrane Sci.*, 133, 231-243(1997)
-1998-
45. G. Xomeritakis and Y.S. Lin, "CVD synthesis and gas permeation properties of nanostructured palladium-alumina membranes", *AIChE J.*, 44, 174-183 (1998)
46. J. Kim and Y.S. Lin, "Sol-gel synthesis and characterization of yttria stabilized zirconia membranes", *J. Membrane Sci.*, 139, 75-83 (1998)
47. V. Chandak, Y.S. Lin, W. Ji and R.J. Higgins, "Sorption and diffusion of VOCs in poly (dimethylsiloxane) membranes", *J. Appl. Polymer Sci.*, 67, 165-175 (1998)
48. Z-M. Wang and Y.S. Lin, "Sol-gel synthesis of pure and copper oxide coated mesoporous alumina granular particles", *Journal of Catalysis*, 174, 43-51(1998)
49. Y.S. Lin and S.G. Deng, "Removal of trace sulfur dioxide from gas stream by regenerative sorption processes", *Separation and Purification Technology*, 13, 65-77 (1998)
50. Y. Wang and Y.S. Lin, "Sol-gel synthesis and gas adsorption properties of CuCl modified mesoporous alumina", *J. Sol-Gel Sci. Tech.*, 1, 185-195 (1998)
51. M. Pan, G.Y. Meng, C.S. Chen, D.K. Peng, Y.S. Lin*, "MOCVD synthesis of yttria doped perovskite type SrCeO₃ thin films", *Materials Letters*, 36, 44-47, (1998)
52. J. Dong and Y.S. Lin, "In-situ synthesis of P-type zeolite membrane on porous α -alumina supports", *Ind. Eng. Chem. Res.*, 37, 2404-2409 (1998)
53. M. Pan, G.Y. Meng, H.W. Xin, C.S. Chen, D.K. Peng, Y.S. Lin, "Pure and doped CeO₂ thin films prepared by MOCVD process", *Thin Solid Films*, 324, 89-93, (1998)
54. Y. Zeng and Y.S. Lin, "A transient TGA study on oxygen permeation properties of perovskite type ceramic membrane", *Solid State Ionics*, 110, 209-221 (1998)
55. M.V. Chandak and Y.S. Lin, "Hydrophobic zeolites as adsorbents for VOC removal", *Environmental Technology*, 19, 941-948 (1998)
56. J. Dong, K. Wegner and Y. S. Lin, "Synthesis of Submicron Polycrystalline Silicalite Films on Porous Ceramic Supports", *J. Membrane Sci.*, 148, 233-241 (1998)
57. Y. Zeng, Y.S. Lin and S.L. Swartz, "Perovskite type ceramic membranes: synthesis, oxygen permeation and membrane reactor performance for oxidative coupling of methane", *J. Membrane Sci.*, 150, 87-98 (1998)
58. Z-M. Wang and Y.S. Lin, "Sol-gel derived alumina alumina supported copper oxide sorbent for flue gas desulfurization", *Ind. Eng. Chem. Res.*, 37, 4675-4681 (1998)
59. J.H. Dong, P. Wang, N.P. Xu, J. Shi, (J)Y.S. Lin, "Modeling of the relationship between pore size distribution and thickness of ceramic MF membranes", *Chinese J. Chem. Eng. (English)*, 6, 222-232 (1998)
60. Y.S. Lin, X. Qi, M. Pan, G. Meng, "Hydrogen energy and solid state fuel cells", *Ionics*, 4, 444-450 (1998)
-1999-
61. Y. Zeng and Y.S. Lin, "Stability and surface catalytic properties of fluorite-structured yttria doped bismuth oxide under reducing atmosphere", *Journal of Catalysis*, 182, 30-36 (1999)
62. X. Qi and Y.S. Lin, "Electric conducting properties of terbium doped strontium cerate", *Solid State Ionics*, 120, 85-93 (1999)
63. P. Wang, P. Huang, N.P. Xu, J. Shi, Y.S. Lin, "Effects of sintering on properties of alumina microfiltration membranes", *J. Membrane Sci.*, 155, 309-314 (1999)
64. D. Dionysiou, X. Qi, Y. S. Lin, G.Y. Meng, D.K. Peng, "Preparation and characterization of terbium doped SrCeO₃ membranes for proton conduction", *J. Membrane Sci.*, 154, 143-153 (1999)
65. K. Wegner, J. Dong, Y.S. Lin, "Polycrystalline MFI zeolite membranes: xylene pervaporation and its implication on membrane microstructure", *J. Membrane Sci.*, 158, 17-27 (1999)

66. G. Buelna and Y.S. Lin, "Sol-gel derived nano-porous γ -alumina granules", *Microporous and Mesoporous Materials*, 30, 359-369 (1999)
67. Y.S. Lin, W. Ji, Y. Wang, and R.J. Higgins, "Cuprous chloride modified nanoporous alumina membranes for ethylene-ethane separation", *Ind. Eng. Chem. Res.*, 38, 2292-2298 (1999)
68. M. Pan, C. Cooper, Y.S. Lin and G. Y. Meng, "CVD modification and vapor/gas separation properties of nanoporous alumina membranes", *J. Membrane Sci.*, 158, 235-241 (1999)
69. B. McCool, G. Xomeritakis and Y.S. Lin, "Composition control and permeation properties of sputter deposited palladium silver membranes", *J. Membrane Sci.*, 161, 67-76 (1999)
70. S. Li, W. Jin, P. Huang, N. Xu, J. Shi, Y.S. Lin, "Comparison of oxygen permeability and stability of perovskite type $\text{La}_{0.2}\text{A}_{0.8}\text{Co}_{0.2}\text{Fe}_{0.8}\text{O}_{3-\delta}$ (A=Sr, Ba, Ca) membranes", *Ind. Chem. Eng. Res.*, 38, 2963-2972 (1999)
71. J. Kim and Y.S. Lin, "Synthesis and preparation of suspension derived porous ionic conducting ceramic membranes", *J. Am. Ceram. Soc.*, 82, 2641-2646 (1999)
72. S. Li, W. Jin, P. Huang, N. Xu, J. Shi, Y.S. Lin, "Experimental and modeling study on tubular perovskite type membranes for oxygen permeation", *AIChE J.*, 45, 2519-2526 (1999)
- 2000-
73. J. Kim and Y.S. Lin, "Synthesis and oxygen permeation properties of ceramic-metal dual-phase membranes", *J. Membrane Sci.*, 167, 123-133 (2000)
74. S. Li, W. Jin, P. Huang, N. Xu, J. Shi, Y.S. Lin, "Tubular lanthanum cobaltite perovskite type membranes for oxygen separation", *J. Membrane Sci.*, 166, 51-61 (2000)
75. W. Jin, S. Li, P. Huang, N. Xu, J. Shi, Y.S. Lin, "Tubular lanthanum cobaltite perovskite-type membrane reactors for partial oxidation of methane to syngas", *J. Membrane Sci.*, 166, 13-22 (2000)
76. X. Qi, Y.S. Lin and S.L Swartz, "Electrical transport and oxygen permeation properties of lanthanum cobaltite membranes synthesized by different methods", *Ind. Eng. Chem. Res.*, 39, 646-653 (2000)
77. J. Dong, Y.S. Lin, M.Z. Hu, R.A. Peascoe and E.A. Payzant, "Template removal associated microstructural development of ceramic supported MFI zeolite membranes", *Microporous and Mesoporous Materials*, 34, 241-253 (2000)
78. X. Qi and Y.S. Lin, "Electrical conduction and hydrogen permeation through mixed proton-electron conducting strontium cerate membranes", *Solid State Ionics*, 130 (1-2), 149-156 (2000)
79. J. Kim and Y.S. Lin, "Palladium modified macroporous and mesoporous yttria stabilized zirconia membrane", *Ind. Eng. Chem. Res.*, 39, 2124-2126 (2000)
80. R. Sondhi, Y.S. Lin, W. Zhu, F. Alvarez, " Crossflow filtration of synthetic electroplating wastewater by ceramic membranes using high frequency backpulsing", *Environ. Technol.*, 21, 699-712 (2000)
81. Y.S. Lin, N. Yamamoto, Y. Choi, T. Yamaguchi, T. Okubo, and S.-I. Nakao, "A microscope FTIR mapping study on diffusion of hydrocarbons in single silicalite crystal particles", *Microporous and Mesoporous Materials*, 38, 207-220 (2000)
82. J. Kim and Y.S. Lin, " Synthesis and oxygen permeation properties of thin YSZ/Pd composite membranes", *AIChE J.*, 46, 1521-1539(2000)
83. R. Sondhi, Y.S. Lin and F. Alvarez, "Crossflow filtration of chromium hydroxide suspension by ceramic membranes: fouling and its minimization by backpulsing", *J. Membrane Sci.*, 174, 111-122 (2000)
84. Y. Zeng and Y.S. Lin, "Oxygen permeation and oxidative coupling of methane in yttria doped bismuth oxide membrane reactor", *Journal of Catalysis*, 193, 58-64 (2000)
85. J. Dong, W. Liu and Y.S. Lin, "Multicomponent hydrogen/hydrocarbon separation by MFI- type zeolite membranes", *AIChE J.*, 46, 1957-1966 (2000)
86. Z. Yang and Y.S. Lin, "Sol-gel synthesis of silicalite/ γ -alumina granules", *Ind. Eng. Chem. Res.*, 39, 4944-4948 (2000)

-2001-

87. G. Buelna and Y.S. Lin, "Preparation of spherical alumina and copper oxide coated alumina sorbents by improved sol-gel granulation process", *Microporous and Mesoporous Materials*, 42, 67-76 (2001)
88. J. Garcia-Martinez, D. Cazorla-Amoros, A. Linares-Solano, Y.S. Lin, "Synthesis and characterization of zeolites type MFI supported on carbon materials", *Microporous and Mesoporous Materials*, 42, 255-268 (2001)
89. Y. Zeng and Y.S. Lin, "Oxidative coupling of methane on improved fluorite-structured bismuth oxide membrane reactors", *AIChE J.*, 47, 436-444 (2001)
90. Y. Zeng and Y.S. Lin, "Synthesis and properties of copper and samarium doped yttria-bismuth oxide powders and membranes", *J. Materials Sci.*, 36, 1271-1276 (2001)
91. M. Pan and Y.S. Lin, "Template-free secondary growth synthesis of MFI type zeolite membranes", *Micropor. Mesopor. Mater.*, 43, 319-327 (2001)
92. Y. Zeng, F.T. Akin and Y.S. Lin, "Oxidative coupling of methane on fluorite-structured samarium-yttrium-bismuth oxide", *Appl. Catal. A*, 213, 33-45 (2001)
93. B.A. McCool and Y.S. Lin, "Nanostructured thin palladium-silver membranes: effects of grain size on gas permeation properties", *J. Materials Sci.*, 36, 3221-3227 (2001)
94. X. Qi, F.T. Akin, Y.S. Lin, "Ceramic-glass based high temperature seals for dense ionic conducting ceramic membranes", *J. Membrane Sci.*, 193, 185-193 (2001)
95. Y.S. Lin, "Microporous and dense inorganic membranes: Current status and prospective", *Separation and Purification Technology*, 25, 39-55 (2001)
96. F.T. Akin, Y.S. Lin, Y. Zeng, "A comparative study on oxygen permeation and oxidative coupling of methane in disk-shaped and tubular dense membrane reactors", *Ind. Eng. Chem. Res.*, 40, 5908-5916 (2001)

-2002-

97. C.A. Cooper and Y.S. Lin, "Microstructural and gas separation properties of CVD modified mesoporous γ -alumina membranes", *J. Membrane Sci.*, 195, 35-50 (2002)
98. J.C. Diniz Da Costa, G.Q. Lu, V. Rudolph and Y.S. Lin, "Novel molecular sieve silica (MSS) membranes: characterization and permeation of single-step and two-step sol-gel membranes", *J. Membrane Sci.*, 198, 9-21 (2002)
99. F.T. Akin and Y.S. Lin, "Controlled oxidative coupling of methane on ionic conducting ceramic membrane reactors", *Catalysis Letters*, 78 (1-4), 239-243 (2002)
100. Z. Yang, Y.S. Lin and Y. Zeng, "High-temperature sorption process for air separation and oxygen removal", *Ind. Eng. Chem. Res.*, 41, 2775-2784 (2002)
101. L.Y. Piao, Y.D. Li, J.L. Chen, L. Chang, J.Y.S. Lin, "Methane decomposition to carbon nanotubes and hydrogen on an alumina supported nickel aerogel catalyst", *Catalysis Today*, 74(1-2), 145-155, (2002)
102. F.T. Akin and Y.S. Lin, "Oxidative coupling of methane in a dense tubular membrane with high yields", *AIChE J.*, 48 (10), 2298-2307 (2002)
103. F.T. Akin and Y.S. Lin, "Selective oxidation of ethane to ethylene in a dense tubular membrane reactor", *J. Membrane Sci.*, 209, 457-467 (2002)
104. Z. Yang and Y. S. Lin, "A semi-empirical equation for oxygen non-stoichiometry of perovskite-type ceramics", *Solid State Ionics*, 150, 245-254 (2002)
105. Y.S. Lin, I. Kumakiri, B.N. Nair, H. Alsyouri, "Microporous Inorganic Membranes", *Separation and Purification Methods*, 32(2), 229-379 (2002)

-2003-

106. Z. Ye, H. Alsyouri, S. Zhu, Y.S. Lin, "Catalyst impregnation and ethylene polymerization with mesoporous particle supported nickel-diimine catalyst", *Polymer*, 44, 969-980, (2003)
107. G. Buelna, Y. S. Lin, L. Liu and J.D. Litster, "Structural and mechanical properties of nanostructured granular alumina catalysts", *Ind. Eng. Chem. Res.*, 42, 442-447 (2003)
108. Z. Yang and Y.S. Lin, "Equilibrium of oxygen sorption on perovskite type ceramic sorbents", *AIChE J.*, 49, 793-798 (2003)

- 109.X. Qi, Y.S. Lin, C.T. Holt, S.L. Swartz, "Electric conductivity and oxygen permeability of modified cerium oxides", *J. Materials Sci.*, 38, 1073-1079 (2003)
- 110.J. Dong, E. A. Pyzant, M. Z.C. Hu, D. W. DePaoli, and Y.S. Lin, "Synthesis of MFI-type zeolite membranes on porous γ -alumina supports by wet gel crystallization in vapor phase", *J. Materials Sci.*, 38, 979-985 (2003)
- 111.C. Cooper, Y.S. Lin, M. Gonzalez, "Synthesis and characterization of LIX-84 non-covalently bound silica sorbents for metal ion recovery", *Ind. Eng. Chem. Res.*, 42, 1253-1260 (2003)
- 112.J.-I. Ida and Y.S. Lin, "Mechanism of high temperature CO₂ sorption on lithium zirconate", *Environmental Science and Technology*, 37, 1999-2004 (2003)
- 113.H. M. Alsayouri and Y.S. Lin, "Effects of synthesis conditions on macroscopic and microscopic properties of ordered mesoporous silica fibers", *Chemistry of Materials*, 15, 2033-2039 (2003)
- 114.Y.K. Kao, L. Lei and Y.S. Lin, "Optimum operation of oxidative coupling of methane in porous ceramic membrane reactor", *Catal. Today*, 82, 255-273 (2003)
- 115.Z. Ye, S. Zhu, W. J. Wang, H. M. Alsayouri, Y.S. Lin, "Morphological and mechanical properties of nascent polyethylene fibers produced via extrusion polymerization with metallocene catalyst supported on MCM-41 particles", *Journal of Polymer Science, Polymer Physics*, 41, 2433-2443 (2003)
- 116.H. M. Alsayouri, C. Langheinrich, Y.S. Lin, Z. Ye and S. Zhu, "Cyclic CVD modification of straight pore alumina membranes", *Langmuir*, 19, 7307-7314 (2003)
- 117.R. Xiong, J.-I. Ida and Y.S. Lin, "Kinetics of carbon dioxide sorption on potassium doped lithium zirconate", *Chemical Engineering. Sci.*, 58, 4377-4385 (2003)
- 118.Z.H. Yang and Y.S. Lin, "High temperature oxygen sorption in fixed-bed packed with perovskite-type ceramic sorbents", *Ind. Eng. Chem. Res.*, 42, 4376-4381 (2003)
- 119.H. Wang, W. Yang Y. Cong, X. Zhu, Y.S. Lin, "Structure and oxygen permeability of a dual-phase membrane", *J. Membrane Sci.*, 224 (1-2): 107-115 OCT 15 2003 (2003)
- 120.G. Buelna and Y.S. Lin, "Combined removal of SO₂ and NO using sol-gel derived copper oxide coated alumina sorbents/catalysts", *Environmental Technol.*, 24 (9): 1087-1095 (2003)
-2004-
- 121.C.A. Cooper, Y.S. Lin, M. Gonzalez, "Separation properties of surface modified silica supported liquid membranes for divalent metal removal/recovery", *J. Membrane Sci.*, 229, 11-25 (2004)
- 122.F.T. Akin and J.Y.S. Lin, "Oxygen permeation through oxygen ionic conducting ceramic membranes with downstream chemical reactions", *J. Membrane Sci.*, 231, 133-146 (2004)
- 123.J.-I. Ida, R. Xiong and Y.S. Lin, "Synthesis and CO₂ sorption properties of pure and modified lithium zirconate", *Separation and Purification Technology*, 36, 41-51(2004)
- 124.W. Yuan, Y.S. Lin, W.S. Yang, "Molecular sieving MFI type zeolite membranes for pervaporation separation of xylene isomers", *J. American Chemical Society*, 126 (15), 4776-4777 (2004)
- 125.V.V. Guliants, M.A. Carreon and Y.S. Lin, "Ordered mesoporous and macroporous inorganic films and membranes", *J. Membrane Sci.*, 235 (1-2): 53-72 (2004)
- 126.G. Buelna and Y.S. Lin, "Characteristics and desulfurization-regeneration properties of sol-gel-derived copper oxide on alumina sorbents", *Separation and Purification Technology*, 39 (3), 167-179, (2004)
- 127.H. Zou, Y.S. Lin, N. Rane and T. He, "Synthesis and properties of nanosized ceria powders and high concentration ceria sols", *Ind. Eng. Chem. Res.*, 43 (12), 3019-3025 (2004)
- 128.H. Zou and Y.S. Lin, "Structural and surface chemical properties of sol-gel derived TiO₂-ZrO₂ oxides", *Applied Catalysis: A General*, 265 (1), 35-42 (2004)
- 129.S. Kim, V.V. Guliants, J. Ida, Y.S. Lin, "Ordered mesoporous silica membranes for CO₂ separation from flue gas", *Int. J. Environ. Pollution*, 4, 21-31 (2004)
- 130.H.Y. Gao, Y.S. Lin, Y.D. Li and B.Q. Zhang, "Chemical stability and its improvement of palladium-based metallic membranes", *Ind. Eng. Chem. Res.*, 43 (22), 6920-6930(2004)

- 131.A. Huang, Y.S. Lin, W. Yang, “Synthesis and properties of A-type zeolite membranes by secondary growth method with vacuum seeding”, *J. Membrane Sci.*, 245, 41–51 (2004)
- 132.H. Jiang, B. Zhang, Y.S. Lin, Y. Li, “Synthesis of zeolite membranes”, *Chinese Science Bulletin (English Ed.)*, 49 (24): 2547-2554 (2004)
- 133.A. Huang, J. Liu, Y.S. Li, Y.S. Lin, and W.S. Yang (2004), “Preparation of A-type zeolite membranes on nonporous metal supports by using electrophoretic technique”, *Chinese Science Bulletin (English Ed)*, 49, 1226-1230 (2004)
- 2005-
- 134.Z. Yang and Y.S. Lin, “Synergetic thermal effects for oxygen sorption and order-disorder transition on perovskite-type oxides”, *Solid State Ionics*, 176, 89-96 (2005)
- 135.W. Mi, J.Y.S. Lin, Y. Li and B. Zhang, “Synthesis of vertically aligned carbon nanotube films on macroporous alumina substrates”, *Micropor. Mesopor. Mater.*, 81, 185-189 (2005)
- 136.N. Rane, H. Zou, G. Buelna and J.Y.S. Lin, “Sol-gel synthesis and properties of unsupported and supported mesoporous ceria membranes”, *J. Membrane Sci.*, 256 (1-2), 89-97 (2005)
- 137.X.F. Liu, B.Q. Zhang, Y.S. Lin, “Gas diffusion in bi-disperse porous catalyst pellets”, *Chin. J. Chem. Eng.*, 13, 471-476 (2005)
- 138.S. Kim, J.-I. Ida, V.V. Gulians, J.Y.S. Lin, “Tailoring pore properties of MCM-48 silica for selective adsorption of CO₂”, *J. Phys. Chem., B*, 109 (13), 6287-6293 (2005)
- 139.H. Gao, J.Y.S. Lin, Y. Li and B. Zhang, “Electroless plating synthesis, characterization and permeation properties of Pd-Cu membranes supported on ZrO₂ modified porous stainless steel”, *J. Membrane Sci.*, 43, 6920-6930 (2005)
- 140.H. M. Alsayouri and J.Y.S. Lin, “Gas diffusion and microstructural properties of ordered mesoporous silica fibers”, *J. Phys. Chem. B*, 109, 13623-13629 (2005)
- 141.S. J. Chung, D. Li, J. H. Park, J.-I. Ida, I. Kumakiri and J.Y.S. Lin, “Dual-phase inorganic metal-carbonate membrane for high temperature carbon dioxide separation”, *Ind. Eng. Chem. Res.*, 44, 7999-8006 (2005)
- 2006-
- 142.S. Cheng, V. K. Gupta, and J.Y.S. Lin: “Synthesis and hydrogen permeation properties of thin proton-conducting ceramic membranes”, *Solid State Ionics*, 176, 2653-2662, (2005)
- 143.Q. Yang, Y.S. Lin, M. Bulow, “High temperature sorption separation of air for producing oxygen-enriched carbon dioxide stream”, *AIChE J.*, 52, 574-581 (2006)
- 144.Y.S. Lin, “Inorganic membranes for gas separation and purification”, *Membranes*, 31, 170-173 (2006)
- 145.Q. Yang and J.Y.S. Lin, “Fixed-bed performance for production of oxygen enriched carbon dioxide stream by perovskite-type ceramic sorbent”, *Separation and Purification Technology*, 49, 27-35 (2006)
- 146.P. Kumar, J. Ida, S. Kim, V.V. Gulians, J.Y.S. Lin, “Ordered mesoporous membranes: Effects of support and surfactant removal conditions on membrane quality”, *J. Membrane Sci.*, 279, 539-547 (2006)
- 147.H.Y. Gao, Y.D. Li, J.Y.S. Lin, B.Q. Zhang, “Characterization of zirconia modified porous stainless steel supports for Pd membranes”, *J. Porous Mater.*, 13, 419-426 (2006)
- 148.Q.H. Yin, Z.H. Yang and Y.S. Lin, “Effects of grain microstructure on oxygen transport in perovskite-type oxides”, *J. Materials Sci.*, 41, 4865-4870 (2006)
- 149.Q. Yang and Y.S. Lin, “Kinetics of carbon dioxide sorption on perovskite type metal oxides”, *Ind. Eng. Chem. Res.*, 45, 6302-6310 (2006)
- 150.H.M. Alsayouri, D. Li, Y.S. Lin and S.P. Zhu, “Counter diffusion self-assembly synthesis of nanostructured silica membranes”, *J. Membrane Sci.*, 282, 266-275 (2006)
- 151.H. Verweij, Y.S. Lin, and J. Dong, “Micro-porous silica and zeolite membranes for hydrogen purification”, *MRS Bull.*, 31, 756-764 (2006)

- 152.X. Wang, B.Q. Zhang, X. Liu and J.Y.S. Lin, "Synthesis of *b*-oriented TS-1 films on chitosan-modified α - Al_2O_3 substrates", *Advanced Materials*, 18, 3261-3265 (2006)
- 153.Q. Yin and Y.S. Lin, "Effect of dopant addition on oxygen sorption properties of La-Sr-Co-Fe-O perovskite type oxide", *Adsorption*, 12, 329-338 (2006)
- 154.M. Kanezashi, J. O'Brien and Y.S. Lin, "Template-free synthesis of silicalite membranes: permeation characteristics and thermal stability improvement", *J. Membrane Sci.*, 286 (1-2): 213-222 (2006)
-2007-
- 155.Q. Yin and Y.S. Lin, "Beneficial effect of order-disorder phase transition on oxygen transport properties of perovskite-type oxides", *Solid State Ionics*, 178, 83-89 (2007)
- 156.C.A. Cooper and Y.S. Lin, "Synthesis and characterization of silicalite powders and membranes with micro-meso bimodal pores", *J. Materials Sci.*, 42, 320-327 (2007)
- 157.H. Zhang, X. Meng, Y. Li and Y. S. Lin "MCM-41 overgrown on Y composite zeolite as support of Pd-Pt catalyst for polyaromatic Compounds Hydrogenation", *Ind. Eng. Chem. Res.*, 46, 4186-4192 (2007)
- 158.M. Kanezashi, J. O'Brien and Y.S. Lin, "Thermal stability improvement of MFI-type zeolite membranes: Effect of YSZ intermediate layer", *Microporous and Mesoporous Materials*, 103, 302-308 (2007)
- 159.J. O'Brien-Abraham, M. Kanezashi and Y.S. Lin, "A comparative study on permeation and mechanical properties of random and oriented MFI-type zeolite membranes", *Microporous and Mesoporous Materials*, 105, 140-148 (2007)
- 160.K. Zhang, H. Gao, Z. Rui, Y.S. Lin, Y.D. Li, "Preparation of thin composite membranes and application to hydrogen/nitrogen separation", *Chin. J. Chem. Eng.*, 15, 643-647(2007)
- 161.Q. Yang and Y. S. Lin "An Improved Sorbent for High Temperature, Production of Oxygen Enriched Carbon Dioxide Stream", *Ind. Eng. Chem. Res.*, 46, 6025-6031 (2007)
- 162.W.L. Mi, Y.S. Lin, and Y. Li, "Synthesis and gas permeation properties of vertically oriented nanocarbon membranes", *J. Membrane Sci.*, 304, 1-7 (2007)
-2008-
- 163.X.T. Wei and Y.S. Lin, "Protonic and electronic conductivities of terbium doped strontium cerates", *Solid State Ionics*, 178, 1804-1810 (2008)
- 164.J.S. Li, X.T. Wei, Y.S. Lin and D. Su, "Synthesis of ordered mesoporous silica membranes containing iron oxide nanocrystallites", *J. Membr. Sci.*, 312, 186-192(2008)
- 165.Q. Yin, J. Kniep, Y.S. Lin, "Oxygen sorption properties of SrCoFeO_x ", *Chem Eng. Sci.*, 63, 2211-2218 (2008)
- 166.M. Kanezashi, J. O'Brien-Abraham, Y.S. Lin and K. Suzuki, "Gas permeation through DDR-type zeolite membranes at high temperatures", *AIChE J.*, 54(6), 1478-1486(2008)
- 167.Z.B. Rui, Y.D. Li, K. Zhang, Y.S. Lin "Simulation of methane conversion to syngas in a membrane reactor Part I: A model including product oxidation", *Inter. J. Hydrogen Energy*, 32, 2246-2253 (2008)
- 168.J. O'Brien-Abraham, M. Kanezashi and Y.S. Lin, "Effects of adsorption induced microstructural changes on separation of xylene isomers through MFI-type zeolite membranes", *J. Membranes Sci.*, 320 (1-2) 505-513 (2008)
- 169.J. Sunarso, S. Liu, J. C. Diniz da Costa, W.A. Meulenber, S. Baumann, J. M. Serra, Y. S. Lin, "Mixed Ionic-Electronic Conducting (MIEC) ceramic-based membranes for oxygen separation", *J. Membrane Sci.*, 320 (1-2), 13-41 (2008)
- 170.Z.B. Rui, Y.D. Li, K. Zhang, Y.S. Lin "Simulation of methane conversion to syngas in a membrane reactor Part II: Model Prediction", *Internat. J. Hydrogen Energy*, 33, 2501-2506 (2008)
- 171.X.T. Wei, T. Wei, H. Xiao and Y.S. Lin "Nano-structured Pd-long period fiber grating integrated optical sensor for hydrogen detection", *Sensors and Actuators, B. Chemical*, 134, 687-693 (2008)
- 172.J.S. Li and Y.S. Lin, "Facile synthesis of ordered mesoporous silica with high γ - Fe_2O_3 loading via sol-gel process", *J. Materials. Sci.*, 43, 6359-6365 (2008)

- 173.J. Dong, Y.S. Lin, M. Kanezashi, “Microporous inorganic membranes for high temperature hydrogen purification”, *J. Appl. Phys.*, 104, 121301 (2008)
- 174.M. C. Duke, S. J. Pas, A. J. Hill, Y. S. Lin and J. C. Diniz da Costa, “Exposing the molecular sieving architecture of amorphous silica using positron annihilation spectroscopy”, *Advanced Func. Mater.*, 18, 3818-3826(2008)
- 175.Q. Yin, J. Kniep, Y.S. Lin, “High Temperature air separation by perovskite-type oxide sorbents-heat effect minimization”, *Chem. Eng. Sci.*, 63, 5870-5675 (2008)
- 2009-
- 176.Z. Rui, Y.D. Li and Y.S. Lin, “Analysis of oxygen permeation through dense ceramic membranes with chemical reactions of finite rate”, *Chemical Engineering Sci.*, 64, 172-179 (2009)
- 177.K. Zhang , X.T. Wei , Z. Rui, Y.D. Li, Y.S. Lin, “Effect of metal-support interface on hydrogen permeation through palladium membranes”, *AIChE J.*, 55, 630-639 (2009)
- 178.K. Zhang, H.Gao, Z. Rui, P. Liu, Y.D. Li and Y.S. Lin, “High-temperature stability of palladium membranes on porous metal supports with different intermediate layers”, *Ind. Eng. Chem. Res.*, 48, 1880-1886 (2009)
- 179.M. Kanezashi and Y.S. Lin, “Gas permeation and diffusion characteristics of MFI-type zeolite membranes at high temperatures”, *J. Chem. Phys. C*, 113, 3767-3774 (2009)
- 180.Y.S. Lin, Q. Yang and J.-I. Ida “High temperature sorption of carbon dioxide on perovskite-type oxide”, *J. Taiwan. Inst. Chem. Eng.*, 40, 276-280 (2009)
- 181.M.C. Duke, J. O’Brien-Abraham, N. Milne, Y.S. Lin, J. C. Da Costa, “Seawater desalination performance of MFI type zeolite membranes made by secondary growth”, *Separation and Purification Technology*, 68, 343-350 (2009)
- 182.Y.D. Li, Z.B. Rui, C. Xia, M. Anderson, Y.S. Lin, “Performance of ionic conducting ceramic/carbonate composite material as solid oxide fuel cell electrolyte and CO₂ permeation membrane”, *Catalysis Today*, 148, 303-309 (2009)
- 183.J. Sunarso, S. Liu, Y. S. Lin and J. C. D. da Costa: “Oxygen permeation performance of BaBiO₃ ceramic membranes, *J. Membr. Sci.*, 344, 281-287 (2009)
- 184.Z. Rui, M. Anderson, Y.S. Lin, Y. Li, "Modeling and analysis of carbon dioxide permeation through ceramic-carbonate dual phase membranes", *J. Membrane Sci.*, 345, 110-118 (2009)
- 185.Z.X. Zhao, Z. Li and Y.S. Lin, “Adsorption and diffusion of carbon dioxide on metal-organic framework (MOF-5)”, *Ind. Eng. Chem. Res.*, 48, 10015-10020 (2009)
- 186.X. Wei, J. Kniep, Y.S. Lin, “Hydrogen permeation through terbium doped strontium cerate membranes enabled by presence of reducing gas in the downstream “, *J. Membrane Sci.*, 345, 201-206 (2009)
- 2010-
- 187.J. O’Brien-Abraham and Y.S. Lin, “Effect of isomorphous metal substitution in zeolite framework on pervaporation xylene-separation performance of MFI-type zeolite membranes”, *Ind. Eng. Chem. Res.*, 49, 809-816 (2010)
- 188.S.K. Seshadri, H.M. Alsyouri and Y.S. Lin, “Counter diffusion self-assembly synthesis of ordered mesoporous silica membranes in straight pore supports”, *Micropor. Mseopor. Mater.*, 129, 228-237 (2010)
- 189.X.T Wei, T. Wei, J.S. Li, X.W. Lan, H. Xiao and Y. S. Lin *Strontium cobaltite coated optical sensors for high temperature carbon dioxide detection”, *Sensors and Actuators B* , 144, 260-266 (2010)
- 190.J. Kniep, Q. Yin, I. Kamakuri, Y.S. Lin, “Electronic conductivity and oxygen permeation properties of SrCoFeO_x membranes”, *Solid State Ionics*, 180, 1633-1639 (2010)
- 191.J. Kniep, and Y.S. Lin, “Effect of zirconium doping on hydrogen permeation through strontium cerate membranes”, *Ind. Eng. Chem. Res.*, 49, 2768-2774 (2010)

- 192.A.L. Qiao, K. Zhang, Y. Tian, L.L. Xie, H.J. Luo, Y.S. Lin, Y.D. Li, "Hydrogen separation through palladium-copper membranes on porous stainless steel with sol-gel derived ceria as diffusion barrier", *Fuel*, 89, 1274-1279 (2010)
- 193.Z. Rui, Y. Li and Y.S. Lin, "SrCo_{0.8}Fe_{0.2}O_{3-δ} sorbent for high-temperature production of oxygen-enriched carbon dioxide stream", *Fuel*, 89, 1429-1434 (2010)
- 194.L. Lang, X. Liu, L. Zhang, Y.S. Lin, B. Zhang, "Direct evidence for the evolutionary mechanism of zeolite monolayer on substrate surface in hydrothermal reaction", *Langmuir.*, 26, 5895-5900 (2010)
- 195.B. Zhu, L. Zou, A. Hill, Y. S. Lin, X.R. Hu, H. Wang, M. Duke, "Structural and chemical influences of functionalized MFI type zeolites on their performance as seawater desalination membranes", *J. Mater. Chem.*, 20, 4675-4683 (2010)
- 196.M. Anderson and Y.S. Lin, "Ceramic-carbonate dual phase membrane for carbon dioxide separation", *J. Membr. Sci.*, 357, 122-129 (2010)
- 197.D. Wang, T. Silbaugh, R. Pfeffer, Y. S. Lin, "Removal of emulsified oil from water by inverse fluidization of hydrophobic aerogels", *Powder Technol.*, 203, 298-309 (2010)
- 198.X. F. Zhu, H. B. Wang, and Y. S. Lin, "Effect of the membrane quality on gas permeation and cvd modification of mfi-type zeolite membranes", *Ind. Eng. Chem. Res.*, 49, 10026-10033 (2010)
- 199.C. L. Eggen, Y.S. Lin, T. Wei, H. Xiao, "Detection of lipid bilayer membranes formed on silica fibers by double-long period fiber grating laser refractometry", *Sensors & Actuators B*, 150, 734-741 (2010)
- 200.Y. Jin, Z.B. Rui, Y. Tian, Y.S. Lin, Y.D. Li, "Sequential simulation of dense oxygen permeation membraen reactor for hydrogen production from oxidative steam reforming of ethanol with ASPEN PLUS", *Internat. J. Hydrogen Eng.*, 35, 6691-6698 (2010)
-2011-
- 201.D. Li, Y.S. Lin, V. V. Guliants, "Synthesis and characterization of ordered meso-macro-porous silica membranes on a porous alumina support", *Tsinghua Sci. Technol.*, 15, 337-384 (2010)
- 202.S. K. Seshadri and Y. S. Lin, "Synthesis and water vapor separation properties of pure silica and aluminosilicate MCM-48 membranes", *Separation and Purification Technology*, 76, 261-267 (2011)
- 203.X.T. Wei, T. Wei, J.S. Li, X.W. Lan, H. Xiao and Y. S. Lin "Terbium doped strontium cerate enabled long period fiber gratings for high temperature sensing of hydrogen", *Sensors and Actuators, B-Chemical*, 152, 214-219 (2011)
- 204.D. Wang, E. McLaughlin, R. Pfeffer, Y. S. Lin, "Aqueous phase adsorption of toluene in a packed and fluidized bed of hydrophobic aerogels", *Chem. Eng. J.*, 168, 1201-1208 (2011)
- 205.H.B. Wang and Y.S. Lin, "Effects of synthesis conditions on MFI zeolite membrane quality and catalytic cracking deposition modification results", *Micropor. Mesopor. Mater.*, 142, 481-488 (2011)
- 206.Z. Rui, H.B. Ji and Y.S. Lin, "Modeling and analysis of ceramic-carbonate dual phase membrane reactor for carbon dioxide reforming with methane", *Internat. J. Hydrogen Eng.*, 36, 8292-8300 (2011)
- 207.J. Sunarso, S. Liu, Y.S. Lin, J.C. Diniz da Costa, "High performance BaBiScCo hollow fiber membranes for oxygen transport", *Energy & Environmental Sci.*, 4, 2516-2519 (2011)
- 208.J. Kniep and Y.S. Lin, "Partial oxidation of methane and oxygen permeation in SrCoFeO_x membrane reactor with different catalysts", *Ind. Eng. Chem. Res.*, 50, 7841-7948 (2011)
- 209.B. Lu and Y.S. Lin, "Sol-gel synthesis and characterization of mesoporous yttria stabilized zirconia membranes with graded pore structure", *J. Materials Sci.*, 46, 7056-7066 (2011)
- 210.Z. Zhao, X.L. Ma, Z. Li and Y.S. Lin, "Synthesis, characterization and gas transport properties of MOF-5 membranes", *J. Membrane Sci.*, 382, 82-90 (2011)
- 211.D. Wang, E. McLaughlin, R. Pfeffer, Y.S. Lin, "Adsorption of organic compounds in vapor, vapor and aqueous solution phase on hydrophobic aerogels", *Ind. Eng. Chem. Res.*, 50, 12177-12185 (2011)
- 212.J. Kniep, M. Anderson and Y.S. Lin, "Autothermal reforming of methane in a proton-conducting ceramic membrane reactor", *Ind. Eng. Chem. Res.*, 50, 12426-12432 (2011)

-2012-

- 213.H.B. Wang and Y.S. Lin, “Effects of water vapor on gas permeation and separation properties of MFI zeolite membranes at high temperatures”, *AIChE J.*, 58, 153-162 (2012)
- 214.H. B. Wang and Y.S. Lin “Synthesis and modification of ZSM-5/silicalite bilayer membrane with improved hydrogen separation performance”, *J. Membrane Sci.*, 396, 128-137 (2012)
- 215.A. Zolochovsky, A. V. Grabovskiy, L. Parkhomenko, Y.S. Lin, “Coupling effects of oxygen surface exchange kinetics and membrane thickness on chemically induced stresses in perovskite-type membranes”, *Solid State Ionics*, 212, 55-65 (2012)
- 216.Z. Rui, J. Ding, L. Fang, Y.D. Li and Y.S. Lin, “YBaCo₄O_{7+δ} sorbent for oxygen-enriched carbon dioxide stream production at a low-temperature”, *Fuel.*, 94, 191-196 (2012)
- 217.X. Dong, K. Huang, S. Liu, R. Ren, W. Jin, Y. S. Lin “Synthesis of zeolitic imidazolate framework-78 molecular-sieve membrane: defects formation and elimination”, *J. Material Chem.*, 22, 19222-19227 (2012)
- 218.M. Anderson, H.B. Wang and Y.S. Lin, “Inorganic membranes for carbon dioxide and nitrogen separation”, *Review Chem. Eng.*, 28, 101-121 (2012)
- 219.Z.B. Rui, M. Anderson, Y.D. Li, Y.S. Lin, “Ionic conducting ceramic and carbonate dual phase membranes for carbon dioxide separation”, *J. Membrane Sci.*, 417-418, 174-182 (2012)
- 220.D. Wang, E. McLaughlin, R. Pfeffer, Y. S. Lin, “Adsorption of oils from pure liquid and oil-water emulsion on hydrophobic silica aerogels”, *Separation and Purification Technology*, 99, 28-35 (2012)
- 221.T. T. Norton, Y.S. Lin, “Transient oxygen permeation and surface catalytic properties of lanthanum cobaltite membrane under oxygen-methane gradient”, *Ind. Eng. Chem. Res.*, 51, 12917-12925 (2012)
- 2013-
- 222.X.L. Dong and Y.S. Lin, “Synthesis of organophilic ZIF-71 membrane for pervaporation solvent separation”, *Chem. Commun.*, 49, 1196-1198 (2013)
- 223.Z.X. Zhao, X.L. Ma, A. Kasik, Z. Li, Y.S. Lin, “Gas separation properties of thin metal organic framework (MOF-5) Membranes”, *Ind. Eng. Chem. Res.*, 52, 1102-1108 (2013)
- 224.Y.S. Lin and M.C. Duke, “Recent progress in polycrystalline zeolite membrane research”, *Current Opinion in Chem. Eng.*, 2, 1-8 (2013)
- 225.B. Zhu, C.M. Doherty, X. Hu, A. J. Hill, L. Zou, Y. S. Lin and M. Duke “Designing hierarchical porous features of ZSM-5 zeolites via Si/Al ratio and their dynamic behaviour in seawater ion complexes”, *Microp. Mesop. Mater.*, 173, 78-85 (2013)
- 226.M. Anderson and Y.S. Lin, “Carbon dioxide separation and dry reforming of methane for synthesis of syngas by a dual-phase membrane reactor”, *AIChE J.*, 59, 2207-2218 (2013)
- 227.N. Linneen, R. Pfeffer and Y.S. Lin, “CO₂ capture using particulate silica aerogel immobilized with tetraethylenepentamine”, *Microp. Mesop. Mater.*, 176, 123-131 (2013)
- 228.X.L. Ma, B.K. Lin, X.T. Wei, J. Kniep, Y.S. Lin, “Gamma-alumina supported carbon molecular sieve membrane for propylene/propane separation”, *Ind. Eng. Chem. Res.*, 52, 4297-4305 (2013)
- 229.B. Lu, Y.S. Lin, “Synthesis and characterization of thin ceramic-carbonate dual-phase membranes for carbon dioxide separation”, *J. Membr. Sci.*, 444, 402-411 (2013)
- 230.A. Yadav, M.L. Lind, X.L. Ma, Y.S. Lin “Nanocomposite silicalite-1/polydimethylsiloxane membranes for pervaporation of ethanol from dilute aqueous solutions”, *Ind. Eng. Chem. Res.*, 52, 5207-5212(2013)
- 231.D. Liu, Z. Li, H. Xi, Y.S. Lin, “Adsorption and separation of CH₄/H₂ in MIL-101s by Molecular Simulation Study”, *Chem. Eng. Sci.*, 98, 246-254 (2013)
- 232.S. Seshadri, H. M. Alsayouri, Y.S. Lin, “Ordered mesoporous silica fibers: effects of synthesis conditions on fiber morphology and length”, *J. Mater. Sci.*, 48, 7042-7054 (2013)
- 233.X.L. Dong, J. Ortiz-Landeros, Y.S. Lin, “An asymmetric tubular ceramic-carbonate dual phase membrane for high temperature CO₂ separation”, *Chem. Commun*, 49, 9654-9656 (2013)

234. N. N. Linneen, R. Pfeffer, Y. S. Lin, "Amine distribution and carbon dioxide sorption performance of amine coated silica aerogel sorbents: effect of synthesis methods". *Ind. Eng. Chem. Res.* 52, 14671-14679 (2013)
235. F.Q. Chen, W.Y. Jin, D. Cheng, X.L. Zhan and Y.S. Lin, "Fabrication of AC@ZSM-5 core-shell particles and their performance in Fischer-Tropsch synthesis", *J. Chem. Technol, Biotechnol*, 88, 2133-2140 (2013)
236. J. Ortiz-Landeros, T. Norton and Y.S. Lin "Effects of support pore structure on carbon dioxide permeation of ceramic-carbonate dual-phase membranes", *Chem. Eng. Sci.*, 104, 891-898 (2013)
237. H. M. Alsayouri, M. A. Abu Daabes, A. Allassali and Y. S. Lin, "Ordered mesoporous silica prepared by quiescent interfacial growth method - Effects of Reaction Chemistry", *Nanoscale Research Letters*, 8 (484), 1-15 (2013)
238. M. Wiehn, T.J. Levario, K. Staggs, N. Linneen, Y. Wang, R. Pfeffer, Y.S. Lin, and D. R. Nielsen, "Adsorption of Short-Chain Alcohols by Hydrophobic Silica Aerogels", *Ind. Eng. Chem. Res.*, 52, 18379-18385(2013)
- 2014-
239. A. Kasik and Y.S. Lin, "Organic solvent pervaporation properties of MOF-5 membranes", *Separ. Purif. Technol.*, 121, 38-45 (2014)
240. D.F. Liu, X.L. Ma, H. Xi, Y. S. Lin "Gas transport properties and propylene/propane separation characteristics of ZIF-8 membranes". *J. Membr. Sci.*, 451, 85-93 (2014)
241. H.B. Wang, X.L. Dong and Y.S. Lin, "Highly stable bilayer MFI zeolite membranes for high temperature hydrogen separation", *J. Membr. Sci.*, 450, 425-432 (2014)
242. S. Seshadri and Y.S. Lin, "Defect-sealing synthesis of vertically oriented ordered mesoporous silica membranes", *J. Mater. Sci.*, 49, 905-914 (2014)
243. B. Zhu, Z. Hong, N. Milne, C. M. Doherty, L. Zou, Y.S. Lin, A. J. Hill, X. Gu and M. Duke, "Desalination of seawater ion complexes by MFI-type zeolite membranes: temperature and long term stability", *J. Membr. Sci.*, 453, 126-135 (2014)
244. C. Ji, Y. Tian, Yongdan Li and Y.S. Lin, "Thin oriented AFI zeolite membranes for molecular sieving separation", *Micropor. Mesopor. Mater.*, 186, 80-83 (2014)
245. Y. Liu, J. Liu, Y.S. Lin and M. Chang, "Effects of water vapor and trace gas impurities in flue gas on CO₂/N₂ separation using ZIF-68", *J. Phys. Chem.C.*, 118, 6744-6751 (2014)
246. T.T. Norton, J. Ortiz-Landeros and Y.S. Lin, "Stability of La-Sr-Co-Fe oxide-carbonate dual-phase membranes for carbon dioxide separation at high temperatures", *Ind. Eng. Chem. Res.*, 53, 2432-2440 (2014)
247. H. Yin, J. Wang, Z. Xie, J. Yang, J. Bai, J. Lu, Y. Zhang, D. Yin, J.Y. S. Lin, "Highly permeable and selective amino-functionalized [Al(OH)(OCH)(H₂N-BDC)]·xH₂O CAU-1 membrane for CO₂/N₂ separation", *Chem. Commun.*, 50, 3599-3701 (2014)
248. T.T. Norton, Bo Lu and Y.S. Lin, "Carbon dioxide permeation properties and stability of samarium-doped-ceria carbonate dual-phase membranes", *J. Membr. Sci.*, 467, 244-252(2014)
249. T.T. Norton and Y.S. Lin, "Ceramic-carbonate dual-phase membrane with improved chemical stability for carbon dioxide separation at high temperature", *Solid State Ionics*, 263, 172-179 (2014)
250. B. Lu, Y.S. Lin, "Asymmetric thin samarium doped cerium oxide-carbonate dual-phase membrane for carbon dioxide separation", *Ind. Eng. Chem. Res.*, 53, 13459-13466 (2014)
251. Y. Liu, A. Kasik, N. Linneen, J. Liu, Y.S. Lin, "Adsorption and diffusion of carbon dioxide on ZIF-68", *Chem. Eng. Sci.*, 118, 32-40 (2014)
252. N.N. Linneen, R. Pfeffer, Y.S. Lin, "CO₂ adsorption performance for amine grafted particulate silica aerogels", *Chem. Eng. J.*, 254, 190-197 (2014)
- 2015-
253. A. Kasik, X. Dong, Y.S. Lin, "Synthesis and Stability of Zeolitic Imidazolate Framework-68 Membranes", *Micropor. Mesopor. Mater.*, 204, 99-105 (2015)

254. X.L. Ma, H. Wang, H. Wang, J. O'Brien-Abraham, Y.S. Lin, "Pore Structure Characterization of Supported Polycrystalline Zeolite Membranes by Positron Annihilation Spectroscopy", *J. Membr. Sci.*, 477, 41-48 (2015)
255. Y.S. Lin, "Metal-organic framework membranes for industrial separation applications", *Curr. Opinion Chem. Eng.*, 8, 21-28 (2015)
256. X. L. Dong, H.B. Wang, Z. Rui, Y.S. Lin, "Tubular dual-layer MFI zeolite membrane reactor for hydrogen production from water-gas shift reaction: Experimental and modeling studies", *Chem. Eng. J.* 268, 219-229 (2015)
257. H. Zhang, D. Liu, Y. Yao, B. Zhang, Y.S. Lin, "Stability of ZIF-8 Membranes and Crystalline Powders in Water at Room Temperature", *J. Membr. Sci.*, 485, 103-111 (2015)
258. Y. Liu, J. Liu, Y.S. Lin, "Strong binding site molarity of MOFs and its effect on CO₂ adsorption", *Micropor. Mesopor. Mater.*, 8, 21-28 (2015)
259. C.L. Eggen, P.M. McAfee, Y. Jin, Y.S. Lin, "Surface Roughness and Chemical Properties of Porous Inorganic Films", *Thin Solid Films*, 591, 111-118 (2015)
260. X.L. Ma, S. Williams, X. Wei, J. Kniep, Y.S. Lin, "Propylene/Propane Mixture Separation Characteristics and Stability of Carbon Molecular Sieve Membranes", *Ind. Eng. Chem. Res.* 54, 9824-9831 (2015)

-2016-

261. X.L. Ma, Y.S. Lin, X. Wei, J. Kniep, "Ultra-thin Carbon Molecular Sieve Membrane for Propylene/Propane Separation", *AIChE J.*, 62, 491-499 (2015)
262. W. Mi, G. Sharma, X.L. Dong, Y. Jin, Y.S. Lin, "Electrode-supported thin α -alumina separators for lithium-ion Batteries", *J. Power Sources*, 305, 209-216 (2016)
263. Y. Jin, Z. Rui, T. Ye, Y.S. Lin, Y.D. Li, "Autothermal Reforming of Ethanol in Dense Oxygen Permeation Membrane Reactor", *Catal. Today*, 264, 214-220 (2016)
264. X.L. Dong, Y. Jin and Y.S. Lin, "Zeolite coated Polypropylene Separators with Tunable Surface Properties For Lithium-Ion Batteries", *Mesopor. Micropor. Mater.*, 226, 406-414 (2016) (2015)
265. A. Kasik, J. B. James, Y.S. Lin, "Synthesis of ZIF-68 Membrane on a ZnO Modified α -Alumina Support by a Modified Reactive Seeding Method", *Ind. Eng. Chem. Res.*, 55, 2831-2839 (2016)
266. L. Yu, Y. Jin, Y.S. Lin, "Ceramic Coated Polypropylene Separators for Lithium-Ion Batteries with Improved Safety: Effects of High Melting Point Organic Binder", *RSC Advances*. 6, 40002-40009 (2016)
267. Y. Liu, J. Hu, X.L. Ma, J. Liu, Y. S. Lin, "The Mechanism of CO₂ Adsorption in Mg/DOBDC at High CO₂ Loading", *Fuel*, 181, 340-346 (2016)
268. Z. Rui, J.B. James, A. Kasik, Y.S. Lin, "Novel metal-organic framework membrane process for high purity CO₂ production: A case study with IRMOF-1 membrane", *AIChE J.*, 62, 3836-3841 (2016)
269. J.B. James, Y.S. Lin, "Kinetics of ZIF-8 Thermal Decomposition in Inert, Oxidizing and Reducing Environments", *J. Phys. Chem. C*, 120, 14015-14026 (2016)
270. J.Y.S. Lin, "Molecular sieves for gas separation", *Science*, 353, 121-122 (2016)
271. A. Ibrahim, Y.S. Lin, "Pervaporation separation of organic mixtures by MOF-5 membranes", *Ind. Eng. Chem. Res.*, 55, 8652-8659 (2016)
272. X.L. Dong and Y.S. Lin, "Catalyst-free ceramic-carbonate dual phase membrane reactor for hydrogen production from gasifier syngas", *J. Membr. Sci.*, 520, 907-913 (2016)

-2017-

273. J. Sunarso, S.S. Hashim, Y.S. Lin, S. Liu, "Membranes for Helium Recovery: An Overview On The Context, Materials And Future Directions", *Sept. Purif. Tech.*, 176, 335-383 (2017)
274. H. Zhang, J.B. James, M. Zhao, Y. Yao, Y. Zhang, B. Zhang, Y.S. Lin, "Improving Hydrostability of ZIF-8 Membranes via Surface Ligand Exchange", *J. Membr. Sci.*, 532, 1-8 (2017)
275. J.B. James, Y.S. Lin, "Thermal Stability of ZIF-8 Membranes for Gas Separations", *J. Membr. Sci.*, 532, 9-19 (2017)

- 276.L. Yu, J. Miao, Y. Jin and Y.S. Lin, "A Comparative Study on Coating Polypropylene Separator with Different Inorganic Materials for Lithium-Ion Batteries", *Frontier Chem. Sci. & Eng.*, 11, 346-352 (2017)
- 277.G. Sharma, Y. Jin, Y.S. Lin," Lithium-Ion Batteries with Alumina Separator for Improved Safety", *J. Electrochem. Soc.*, 164, A1184-A1191 (2017)
- 278.H.-C. Wu, Y.S. Lin, "Air Separation by Perovskite Sorbents with Oxygen Vacancy Order-Disorder Phase Transition", *Ind. Eng. Chem. Res.*, 56, 6057-6064 (2017)
- 279.T. Chen, B. Yu, Y. Zhao, Y.Li, Y.S. Lin, "Carbon Dioxide Permeation through Ceramic-carbonate Dual-Phase Membrane-Effects of Sulfur Dioxide", *J. Membr. Sci.*, 254, 477-484 (2017)
- 280.J. James, J. Wang, L. Meng, Y.S. Lin, "ZIF-8 Membrane Ethylene/Ethane Transport Characteristics in Single and Binary Gas Mixture", *Ind. Eng. Chem. Res.*, 56, 7567-7575 (2017)
- 281.S. Liu, L.-C. Ma, C.-H. Chen, C. Chen, Y.S. Lin," Highly Gas Permeable, Ultrathin Teflon AF2400/ γ -Alumina Composite Hollow Fiber Membranes for Dissolved Gas Analysis", *J. Membr. Sci.*, 540, 243-250 (2017)
- 282.T. Chen, H.-C. Wu, Y. Li, Y.S. Lin, "Poisoning Effect of H₂S on CO₂ Permeation of Samarium-Doped-Ceria/Carbonate Dual-Phase Membrane", *Ind. Eng. Chem. Res.*, 56, 14662-14669 (2017)
-2018-
- 283.A. Ibrahim, Y.S. Lin, "Gas Permeation and Separation Properties of Large-Sheet Stacked Graphene Oxide Membranes", *J. Membr. Sci.*, 550, 238-245 (2018)
- 284.B. Shan, J. James, M. Armstrong, E. Close, P. Letham, K. Nikkhah, Y.S. Lin, B. Mu, "Influences of Deprotonation and Modulation on Nucleation and Growth of UiO-66: Intergrowth and Orientation", *J. Phys. Chem. C*, 122, 2200-2206 (2018)
- 285.Z. Rui, J.B. James, Y.S. Lin, "Highly CO₂ Perm-selective Metal-organic Framework Membranes through CO₂ Annealing Post-treatment", *J. Membr. Sci.*, 555, 97-104 (2018)
- 286.C.H. Chen, L. Meng, K.L. Tung, Y.S. Lin, "Effect of Substrate Curvature on Microstructure and Gas Permeability of Hollow Fiber MFI Zeolite Membranes", *AIChE J.*, 64, 3419-3428 (2018)
- 287.M. Xu, S.G. Deng, H-C Wu and Y.S. Lin, "Simulation and Optimization of Pressure Swing Adsorption Process for High-Temperature Air Separation by Perovskite Sorbents", *Chem. Eng. J.*, 354, 62-74 (2018)
- 288.A. Ibrahim, Y.S. Lin, "Synthesis of Graphene Oxide Membranes on Polyester Substrate by Spray Coating for Gas Separation", *Chem. Eng. Sci.*, 190, 212-319 (2018)
- 289.X. Dong, H.-C. Wu, Y. S. Lin, "CO₂ permeation through asymmetric thin tubular ceramic-carbonate dual-phase membranes", *J. Membr. Sci.*, 564, 73-81(2018)
- 290.J. Miao, C. Chen, Y.S. Lin, "Metal Oxide Nanoparticles with Dopant-Segregation-Induced Core-Shell Structure: Gas Sensing Properties", *J. Phys. Chem. C*, 122, 21322-21329 (2018)
- 291.F. Banihashemi, L. Meng, A.A. Babaluo, Y.S. Lin, "Xylene Vapor Permeation in MFI Zeolite Membranes Made by Templated and Template-Free Secondary Growth of Randomly Oriented Seeds: Effects of Xylene Activity and Microstructure", *Ind. Eng. Chem. Res.*, 57, 16059-16068 (2018).
-2019 -
- 292.F. Banihashemi, A.F.M. Ibrahim, A.A. Babaluo and Y.S. Lin, "Template-free synthesis of highly b-oriented MFI-type zeolite thin films by seeded secondary growth", *Angew Chem, Intern. Ed.*, 58, 2519-2523 (2019)
- 293.Y.S. Lin, "Inorganic Membranes for Process Intensification: Challenges and Perspective", *Ind. Eng. Chem. Res.*, 58, 5787-5796 (2019)
- 294.H. Zhang, M. Zhao, Y.S. Lin, "Stability of ZIF-8 in water under ambient conditions", *Microp. Mesop. Mater.*, 279, 201-210 (2019)
- 295.L. Lang, W. Yang, J. Xie., X. Yin, C. Wu, J.Y.S. Lin, "A novel oxidative filtration for dust and tar removal from pilotscale biomass gasification gas", *Biomass & Bioenergy*, 122, 145-155 (2019)
- 296.T. Chen, Z. Wang, S. Das, L. Liu, Y. Li, S. Kawi, Y.S. Lin "A novel study of sulfur-resistance for CO₂ separation through asymmetric ceramic-carbonate dual-phase membrane at high temperature", *J. Membr. Sci.*, 581, 72-81 (2019)

297. A.F.M. Ibrahim, F. Banihashemi, Y.S. Lin "Graphene Oxide Membranes with Narrow Inter-Sheet Galleries for Enhanced Hydrogen Separation". *Chem. Comm.*, 55, 3077-3080 (2019)
298. J. Miao, C. Chen, L. Meng, Y.S. Lin, "Self-assembled monolayer of metal oxide nanosheet and structure and gas sensing property relationship", *ACS Sensors*, 4, 1279-1290 (2019)
299. N. Kanhere, G. Sharma, Z. Sun, Y. Jin, Y.S. Lin, "Alumina Separators for Lithium-ion Batteries - Effect of Particle Size Distribution", *Powder Tech.*, 253, 230-237(2019)
300. W. Ji, L. Yang, Z. Rui, X. Wang, M. Tang, Y. Tong, J.Y.S. Lin, "Strategy for Stabilizing Noble Metal Nanoparticles without Sacrificing Active Sites", *Chem. Comm.*, 55, 6846-6849 (2019)
301. S. Wang, J. Liu, K. Rafiz, Y. Jin, Y. Li, Y.S. Lin, "An on-line transient study on gassing mechanism of lithium titanate batteries", *J. Electrochem. Soc.*, 166 (16), A4150-A4157 (2019) -2020-
302. K. Rafiz, Y. Jin, Y.S. Lin, "Performance of Electrode-Supported Silica Membrane Separators in Lithium-Ion Batteries", *Sustainable Energy & Fuels*, 4, 1254-1264 (2020)
303. A.F.M. Ibrahim, K.P.R. Dandamudi, S. Deng, Y.S. Lin, "Pyrolysis of Hydrothermal liquefaction Algal Biochar for Hydrogen Production in a Membrane Reactor", *Fuel*, 265, 116935 (2020)
304. H.-C. Wu, Z. Rui, Y.S. Lin, "Hydrogen production with carbon dioxide capture by dual-phase ceramic-carbonate membrane reactor via steam reforming of methane", *J. Membr. Sci.*, 598, 117780 (2020)
305. T.J. Chen, Z. Wang, J. Hu, M.H. Wai, S. Kawi, Y.S. Lin, "High CO₂ permeability of ceramic-carbonate dual-phase hollow fiber membrane at medium-high temperature", *J. Membr. Sci.*, 597, 117770 (2020)
306. J.B. James, L. Lang, L. Meng, Y.S. Lin, "Post-Synthetic Modification of ZIF-8 Membranes via Membrane Surface Ligand Exchange for Light Hydrocarbon Gas Separation Enhancement", *ACS Applied Materials & Interf.*, 12, 3893-3902 (2020)
307. J. Miao, C. Chen, Y.S. Lin, "Humidity independent hydrogen sulfide sensing performance achieved with monolayer film of CuO nanosheets", *Sensor & Actuators B: Chemical*, 309, 127785 (2020)
308. L.-C. Ma, C. Chen, C.-H. Chen, K.-L. Tung, Y.S. Lin, "Gas transport properties of Teflon AF2400/ceramic composite hollow fiber membranes in dissolved gas-in-oil extraction", *Ind. Eng. Chem. Res.*, 59, 5392-5401 (2020)
309. S. Wang, K. Rafiz, J. Liu, Y. Jin, J.Y.S. Lin, "Effects of lithium dendrites on thermal runaway and gassing of LiFePO₄ batteries", *Sustainable Energy & Fuels*, 4, 2342-2351 (2020)
310. H.-C. Wu, G. Nile, Y.S. Lin, "Mixed-conducting ceramic-carbonate dual-phase membranes: gas permeation and counter-permeation", *J. Membr. Sci.*, 605 (2020) 118093
311. Z. Wang, J. Xu, S. Patil, T. Chen, Y. Deng, N. Dewangan, L. Meng, J.Y.S. Lin, S. Kawi, "High H₂ permeable SAPO-34 hollow fiber membrane for the potential application of propane dehydrogenation at high temperature", *AIChE Journal*, 66 (9), e16279 (2020)
312. F. Banihashemi, G. Bu, A. Thaker, D. Williams, J.Y.S. Lin, B.L. Nannenga "Beam-sensitive metal-organic framework structure determination by microcrystal electron diffraction", *Ultramicroscopy*, 216, 113048 (2020)
313. Z. Wang, T. Chen, N. Dewangan, Z. Li, S. Das, S. P. Z. Li, J. Y. S. Lin, S. Kaw, "Catalytic mixed conducting ceramic membrane reactors for methane conversion", *Reaction Chem. Eng.*, 5, 1868-1891 (2020)
314. J. Miao and J.Y.S. Lin, "Nanometer-Thick Films of Aligned ZnO Nanowires Sensitized with Au Nanoparticles for Few-ppb-Level Acetylene Detection", *ACS Applied Nano Materials*, 3 (9), 9174-918 (2020)
315. Q. Ma, K. Mo, S. Gao, Y. Xie, J. Wang, H. Jin, A. Feldhoff, S. Xu, J.Y.S. Lin, Y. Li, Ultrafast Semi-Solid Processing of Highly Durable ZIF-8 Membranes for Propylene/Propane Separation, *Angewandte Chemie Intern. Ed*, 59, 1-7 (2020)
316. K. Rafiz, J.Y.S. Lin, "Safe Li-ion batteries enabled by completely inorganic electrode-coated silicalite separators", *Sustainable Energy & Fuels*, 4, 5783-5794 (2020)

-2021-

- 317.S.M. Mirfendereski, J.Y.S. Lin, “High-performance MFI zeolite hollow fiber membranes synthesized by double-layer seeding with variable temperature secondary growth”, *J. Membr. Sci.*, 618, 118574 (2021)
- 318.L. Lang, F. Banihashemi, J.B. James, J. Miao, J.Y.S. Lin, “Enhancing Selectivity of ZIF-8 Membranes by Short-Duration Post-synthetic Ligand-Exchange Modification”, *J. Membr. Sci.*, 619, 118743 (2021)
- 319.L. Meng, O. Ovalle-Encinia, J.Y.S. Lin, “Catalyst-Free Ceramic–Carbonate Dual-Phase Membrane Reactors for High-Temperature Water Gas Shift: A Simulation Study”, *Ind. Eng. Chem. Res.*, 60 (9), 3581-3588 (2021)

-2022-

- 320.O. Ovalle-Encinia, H.C. Wu, T. Chen, J.Y.S. Lin, “CO₂-permselective membrane reactor for steam reforming of methane”, *J. Membr. Sci.*, 641, 119914 (2022)
- 321.O. Ovalle-Encinia and J. Y.S. Lin, “High-pressure CO₂ permeation properties and stability of ceramic-carbonate dual-phase membranes”, *J. Membr. Sci.*, 646, 120249 (2022)
- 322.F. Banihashemi, J.Y.S. Lin, “Synthesis of ZIF-8 Membranes on γ -alumina Supports for Separation of Propylene/Propane Gas Mixture”, *Ind. Chem. Eng. Res.*, 61, 4125-4133(2022)
- 323.F. Banihashemi, J.Y.S. Lin, “B-oriented MFI zeolite membranes for xylene isomer separation-Effect of xylene activity on separation performance”, *J. Membr. Sci.*, 652, 120492 (2022)
- 324.F. Banihashemi, A.F.M. Ibrahim, S. Deng, J.Y.S. Lin, “Pyrolysis and Gasification Characteristics of *Galdieria Sulphuraria* Microalgae”, *BioEnergy Research*, 1-11 (2022)
- 325.K. Rafiz, D.R.L. Murali, J.Y.S. Lin, “Suppressing Lithium Dendrite Growth on Lithium-Ion/Metal Batteries by a Tortuously Porous γ -alumina Separator”, *Electrochem Acta*, 421, 140478 (2022)
- 326.T. Chen, Y. Xu, Y. Zhang, Y. Gong, Y. Zhang, J.Y.S. Lin, “Double-layer ceramic-carbonate hollow fiber membrane with superior mechanical strength for CO₂ separation”, *J. Membr. Sci.*, 658, 120701, (2022)
- 327.O. Ovalle-Encinia and J. Y.S. Lin, “Water-gas shift reaction in ceramic-carbonate dual-phase membrane reactor at high temperatures and pressures”, *Chem. Eng. J.*, 448 (2022) 137653

Book Chapters

- 328.Y.S. Lin and S.G. Deng, “Sol-gel preparation of nanostructured adsorbents”, in “Adsorption and its application in industry and environmental protection”, Ed. A. Dabrowski, Elsevier, *Stud. Surf. Sci. Catal.*, 120: 653-686 Part A (1999)
- 329.Y.S. Lin and R Buxbaum, "Metal membranes", Encyclopedia of Separation Science, Eds I.D. Wilson, D.R. Adlard, M. Cooke and C.F. Poole, Academic Press, London, pp.3365-3372 (2000)
- 330.Y.S. Lin, “Sol-gel thin film synthesis and properties of sorbents and catalysts”, in “Functional Thin Films and Functional Materials”, D. Shi (Ed.), TUP Press and Springer, Berlin, Chap.2, pp53-85 (2003)
- 331.V. K. Gupta, and Y.S. Lin, “Proton-conducting ceramic membranes”, in “Dense ceramic membranes”, Eds, A. Sammauls and M.V. Mundscha, Wiley-VCH, pp.49-76 (2006)
- 332.J. O’Brien-Abraham and Y.S. Lin “Zeolite membrane separations”, in “Zeolites in Industrial Separation and Catalysis”, S. Kulprathipanja (Ed), Wiley-VCH, pp.307-327 (2010)
- 333.Y.S. Lin and S. Seshadri, “Preparation chemistry of inorganic membranes”, in “Modern Inorganic Synthetic Chemistry”, Eds. R. Xu, W. Yan, W. Pang, Q. Huo, Elsevier, Chapter 22, pp.507-524 (2011)
- 334.J. Kniep and Y.S. Lin, “Oxygen- and hydrogen-permeable dense ceramic membranes”, in “Solid State Electrochemistry I, Fundamentals, Materials and Their Applications”, Ed V.V. Kharton, Springer, Chapter 10, pp.467-500 (2011)

335. B. Zhu, M. Duke, B.P. Ladewig, J. C. D. da Costa, Y.S. Lin, "Ceramic membranes for molecular level separations in gas and liquid processing", *Encyclopedia of Chemical Processing*, Taylor & Francis, pp.1-16, (2010).
336. J. O'Brien-Abraham, M. Duke and Y.S. Lin, "Xylene separation performance of composition-gradient MFI zeolite membranes", in "Inorganic, Polymer and Composite Membranes – Structure, Function and Other Correlations", Eds. S.T. Oyama and S.M. Stagg-Williams, Elsevier, pp.195-212 (2011)
337. H.B. Wang, X.L. Dong, Y.S. Lin, "Membrane reactors for hydrogen production from coal" in "Membrane Reactors for Energy Applications and Basic Chemical Production", Elsevier, pp.143-186 (2015)
338. X.L. Ma and Y.S. Lin, "Preparation chemistry of inorganic membranes", Chapter 23, in "Modern Inorganic Synthetic Chemistry", 2nd Ed., Eds. R. Xu, Y. Xu, Elsevier, Chapter 23, pp.669-685 (2017)

REFEREED PROCEEDINGS AND SYMPOSIUM SERIES ARTICLES

339. Y.H. Ma and Y.S. Lin, "Adsorption of liquid hydrocarbons in silicalite", *AIChE Symp. Seri.*, 1(242), 39-44 (1985)
340. Y.H. Ma and Y.S. Lin, "Adsorption and diffusion of liquids in silicalite using HPLC", *AIChE Symp. Seri.*, 83(259), 1-10 (1987)
341. Y.S. Lin and Y.H. Ma, "Diffusion and adsorption of aqueous ethanol, propanols and butanols in silicalite by HPLC", *ACS Symp. Seri.*, Vol. 368, pp.453-66 (1988)
342. Y.H. Ma, Y.S. Lin and H.L. Fleming, "Adsorption and diffusion of polar and nonpolar liquids in aluminas by HPLC", *AIChE Symp. Seri.*, 84(264), 1-12 (1988)
343. Y.S. Lin, L.G.J. de Haart, K.J. de Vries and A.J. Burggraaf, "Thin Electrolyte layers for SOFC via modification of ceramic membranes by CVD and EVD", *Proc. of 1st Internat. Symposium on Solid Oxide Fuel Cells*, Ed. S.C. Singhal, The Electrochem. Soc. (Pennington, NJ), pp.67-70 (1989)
344. Y.S. Lin, K.J. de Vries and A.J. Burggraaf, "CVD modification of ceramic membranes: simulation and preliminary results", *Journal de Phys., Colloq.*, 50, 861-872 (1989)
345. Y.S. Lin and Y.H. Ma, "A comparative study of adsorption and diffusion of alcohols from aqueous solution and vapor alcohols in silicalite", *Proc. of 8th Internat. Conference on Zeolites*, Eds. P.A. Jacobs and R.A. van Santen, Elsevier (Amsterdam), pp.877-886 (1989)
346. Y.S. Lin, "Analysis of CVI process for porous material densification using a continuous model", *Proc. of 11th Internat. Conference on CVD*, Eds. K.E. Spear & G.W. Cullen, The Electrochem. Soc. (Pennington, NJ), pp.532-538 (1990)
347. Y.S. Lin, P. Fransen, K.J. de Vries and A.J. Burggraaf, "Experimental studies on CVD modification of ceramic membranes", *Proc. of 11th Internat. Conference on CVD*, Eds. K.E. Spear & G.W. Cullen, The Electrochem. Soc. (Pennington, NJ), pp.539-545 (1990)
348. Y.H. Ma, Y.S. Lin and H.L. Fleming, "Chromatographic determinations of adsorption and diffusion for liquids in porous solids by HPLC", *Proc. of 3rd Internat. Conference on Fundamentals of Adsorption*, Eds. A.B. Mersmann and S. Scholl, Engineering Foundation (New York), pp.452-464 (1991)
349. W. Wang and Y.S. Lin, "A theoretical analysis on oxidative coupling of methane in tubular dense membrane reactor", *Proc. of 3rd Internat. Conf. on Inorganic Membranes*, Ed., Y.H. Ma, WPI, Worcester, Mass, pp.259-270 (1995)
350. R. Gopalan, C.H. Chang and Y.S. Lin, "Nanopore yttria doped zirconia membranes prepared by sol-gel method", *Proc. of 3rd Internat. Conf. on Inorganic Membranes*, Ed., Y.H. Ma, WPI, Worcester, Mass, pp.167-176 (1995)
351. G. Xomeritakis and Y.S. Lin, "Counter-diffusion CVD in porous media for ceramic membrane preparation or modification", *Proc. of 3rd Internat. Conf. on Inorganic Membranes*, Ed., Y.H. Ma, WPI, Worcester, Mass, pp.401-410 (1995)
352. J. Han and Y.S. Lin, "Oxygen permeation through electrochemical vapor deposited solid oxide membranes", *Proc. of 3rd Internat. Conf. on Inorganic Membranes*, Ed., Y.H. Ma, WPI, Worcester, Mass, pp.529-532 (1995)

353. V. Jayaraman and Y.S. Lin, "Hydrogen permeation through ultrathin metallic membranes", *Proc. of 3rd Internatl. Conf. on Inorganic Membranes*, Ed., Y.H. Ma, WPI, Worcester, pp.533-536 (1995)
354. S.G. Deng and Y.S. Lin, "Sulphation and regeneration of sol-gel derived regenerative sorbent for flue gas desulfurization", *AIChE Symp. Ser.*, 91 (309), 32-39 (1995)
355. G. Xomeritakis and Y.S. Lin, "Fabrication of thin palladium membranes by chemical vapor deposition", *Proc. XIV International Conference on CVD*, Eds. M.D. Allendorf and C. Bernard, The Electrochemical Society, Pennington, NJ, pp.1604-1609 (1997)
356. J. Han and Y.S. Lin, "Electrochemical vapor deposition of thin dense zirconia-yttria-ceria membranes", *Proc. XIV International Conference on CVD*, Eds. M.D. Allendorf and C. Bernard, The Electrochemical Society, Pennington, NJ, pp.393-400 (1997)
357. J. Han, G. Xomeritakis and Y.S. Lin, "Oxygen permeation through thin zirconia-yttria and ceria-zirconia-yttria membranes prepared by EVD", *Proc. of 3rd Internat. Symp. on Ionic and Mixed Conducting Ceramics*, Eds: A. Ramanarayanan, W.L. Worrell, H.L. Tuller, M. Mogensen, and A.C. Khandkar, The Electrochemical Society (PV 97-24), Pennington, NJ, pp.781-788 (1998)
358. X.Qi., S. Cheng, Y.S. Lin, "Modeling and experimental study of hydrogen permeation through proton conducting ceramic membranes", in *Proc. of the Electrochemical Society, (Ionic and Mixed Conducting Ceramics*, Eds: A. Ramanarayanan, W.L. Worrell, and M. Mogensen), Vol. 2001-28, 1-5 (2002)
359. Y.S. Lin and M. Kanezashi, "Gas permeation and diffusion in small and intermediate pore zeolite membranes", *Studies in Surface Science and Catalysis*, 170, 347-854 (2007)
360. S.K. Seshadri, H.M. Alsouri and Y.S. Lin, "Counter-diffusion self assembly synthesis of ordered mesoporous silica membranes", *Studies in Surface Science and Catalysis*, 170, 363-370 (2007)
361. J.L. O'Brien-Abraham, Y.S. Lin and M. Kanezashi, "Effect of microstructure of MFI-type zeolite membranes on separation of xylene isomers", *Studies in Surface Science and Catalysis*, 170, 967-974 (2007)
362. M.C. Duke, S.J. Mee, J.Y.S. Lin, J.C.D. da Costa, "Desalination by recently developed inorganic membranes using reverse osmosis and membrane distillation", *Desalination Research Progress*, 261-274 (2021)

NON-REFEREED PUBLICATIONS

363. Y.S. Lin, L.G.J. de Haart, K.J. de Vries and A.J. Burggraaf, "Modification of ceramic membranes by CVD and EVD for gas separation, catalysis and SOFC application," in "*Euro-Ceramics Vol. 3 - Engineering Ceramics*", Eds. G. de With et al., Elsevier (London), pp.590-595 (1989)
364. H.W. Brinkman, L.G.J. de Haart, Y.S. Lin, K.J. de Vries, A.J. Burggraaf, "Electrochemical Vapour Deposited Zirconia/Yttria Thin Layers on Porous Substrates", in "*Euro-Ceramics II - Electroceramics and Ceramics for Special Applications*", (Eds.) G. Ziegler and H. Hausner, Deutsche Keramische Gesellschaft e.V., Germany, pp.2375-79 (1991)
365. L.G.J. de Haart, Y.S. Lin, K.J. de Vries and A.J. Burggraaf, "Membrane-based thin layer SOFC technology- the modified-CVD/EVD process", in "*Brennstoffzellen (SOFC)*," Eds. H. Wendt & V. Plzak, VDI-Verlag, Dusseldorf (Germany), pp.144-152 (1990)
366. K.J. de Vries, Y.S. Lin, L.G.J. de Haart and A.J. Burggraaf, "Ceramic Membrane-based thin CVD/EVD grown ceramic electrolyte layers for solid oxide fuel cells," *Proc. 1st Internat. Conf. on Ceramics in Energy Application*, IOP Publishing Ltd. (Sheffield, England), pp.195-201 (1990)
367. Y.S. Lin, J. Meijerink, H.W. Brinkman, K.J. de Vries and A.J. Burggraaf, "Microporous and dense ceramic membranes prepared by CVD and EVD," Key Eng. Materials. (*Proc. 2nd Internat. Conf. Inorg. Membranes*), (Eds.), A.J. Burggraaf, J. Charpin and L. Cot, Trans. Tech. Publ., Switzerland, Vol. 61/62, pp.465-468 (1991)
368. G.J.E. Polhaar, Y.S. Lin, L.G.J. de Haart, K.J. de Vries and A.J. Burggraaf, "Oxygen Permeation through thin dense EVD YSZ membranes", *Materials Science Forum*, Vol.76, pp.111-114 (1991)
369. Y.S. Lin, "Porous and dense inorganic membranes for gas separations", *Preprint Volume of AIChE First Separation Topical Conference*, (Ed. J.L. Humphrey et al.), AIChE, New York, pp.834-39 (1992)

370. Y.K. Kao, L. Luo and Y.S. Lin, “Optimum reactor configuration for oxidative coupling of methane”, *Proc. of 4th International Conference on Inorganic Membranes*, July 14-18, 1996, Gatlinburg. Tenn., Ed., D.E. Fain, pp.416-431 (1996)
371. J. Han and Y.S. Lin, “Oxygen semipermeable ZrO_2 - Y_2O_3 - CeO_2 membranes fabricated by EVD technique”, *Proc. of 4th International Conference on Inorganic Membranes*, July 14-18, 1996, Gatlinburg. Tenn., Ed., D.E. Fain, pp.283-292 (1996)
372. J. Han, Y. Zeng and Y.S. Lin, “Oxygen permeation through δ -phase $Bi_{2-x}Y_x-Ce_yO_3$ membranes”, *Proc. of 4th International Conference on Inorganic Membranes*, July 14-18, 1996, Gatlinburg. Tenn., Ed., D.E. Fain, pp.638-642 (1996)
373. G. Xomeritakis and Y.S. Lin, “Modeling of metallorganic CVD for ceramic membrane modification”, *Proc. of 4th International Conference on Inorganic Membranes*, July 14-18, 1996, Gatlinburg. Tenn., Ed., D.E. Fain, pp.616-621 (1996)
374. G. Xomeritakis and Y.S. Lin, “Fabrication of ceramic-supported metallic membranes by counter-diffusion CVD”, *Proc. of 4th International Conference on Inorganic Membranes*, July 14-18, 1996, Gatlinburg. Tenn. Ed., D.E. Fain, pp.272-282 (1996)
375. Y. Zeng and Y.S. Lin, “A transient TGA study on oxygen permeation properties of mixed-conducting ceramic membranes”, *Proc. of 4th International Conference on Inorganic Membranes*, July 14-18, 1996, Gatlinburg. Tenn., Ed., D.E. Fain, pp.304-312 (1996)
376. Y.S. Lin and Y. Zeng, “Surface catalytic properties of perovskite type ceramic membrane material for oxidative coupling of methane”, *Proc. of 4th International Conference on Inorganic Membranes*, July 14-18, 1996, Gatlinburg. Tenn., Ed., D.E. Fain, pp.382-391 (1996)
377. G. Xomeritakis and Y.S. Lin, “CVD synthesis and gas permeation properties of thin palladium membranes”, *Preprint Volume of AIChE First Separation Topical Conference*, 1997 Los Angeles AIChE Annual Meeting, pp.817-22 (1997)
378. Y. Zeng and Y.S. Lin, “Citrates synthesis of copper oxide doped yttria stabilized bismuth oxide membranes”, *Preprint Volume of AIChE First Separation Topical Conference*, 1997 Los Angeles AIChE Annual Meeting, pp.763-768 (1997)
379. Y.S. Lin, “Mixed-conducting ceramic membranes”, *Proc. of the BCC Membrane Conference on Technology/Planning*, September, BCC Conference (1997)
380. McCool, G. Xomeritakis and Y.S. Lin, “Sputter deposition synthesis and properties of ultrathin metallic membranes”, *Proc. 5th International Conference on Inorganic Membranes*, Nagoya, June 22-26, pp.78-81, 1998
381. Y. Zeng and Y.S. Lin, “An experimental study of oxidative coupling of methane on dense ceramic membrane reactor”, *Proc. 5th International Conference on Inorganic Membranes*, Nagoya, June 22-26, pp.356-57, 1998
382. X. Qi, D. Dionysiou, Y.S. Lin, “Terbium doped strontia ceria perovskite type proton-conducting membranes”, *Proc. 5th International Conference on Inorganic Membranes*, Nagoya, June 22-26, pp.558-91, 1998
383. J. Dong, K. Wegner, Y.S. Lin, “Synthesis of ultrathin silicalite films on porous ceramic supports”, *Proc. 5th International Conference on Inorganic Membranes*, Nagoya, June 22-26, pp.592-95, 1998
384. S. Kim, V.V. Gulians, J. Ida, Y.S. Lin, “Ordered mesoporous silica membranes for CO_2 separation from flue gas”, *Preprints of Symposia - American Chemical Society, Division of Fuel Chemistry* 48(1), 392-393, 2003
385. Q. Yin, I. Kumakiri and Y.S. Lin, A, “Thermal and structure stability of $La_{1-x}Sr_xCo_{1-y}Fe_yO_{3-\delta}$ perovskite-type oxides”, *Proc. 9th Internal. Conf. on Inorganic Membranes*, R. Bredesen and H. Rader (Eds), pp. 731-734, 2006
386. Q. Yang, Q. Yin and Y.S. Lin, “Carbonation Kinetics of Perovskite-Type Ceramics”, *Proc. 9th Internal. Conf. on Inorganic Membranes*, R. Bredesen and H. Rader (Eds), pp. 197-200, 2006
387. M. Kanezashi, J. O’Brien, H. Zou and Y.S. Lin, “Permeation and Separation Characteristics of Silicalite Membranes on Porous Alumina Support by Template-Free Secondary Growth Method”, *Proc. 9th Internal. Conf. on Inorganic Membranes*, R. Bredesen and H. Rader (Eds), pp. 591-594, 2006

388. M. Anderson and Y.S. Lin, "Synthesis and Characterization of Carbonate-Ceramic Dual-Phase Membranes for Carbon Dioxide Separation", *Proc. 9th Internat. Conf. on Inorganic Membranes*, R. Bredeesen and H. Rader (Eds), pp. 678-681, 2006

Patents (9)

1. A.J. Burggraaf and Y.S. Lin, "Method for Manufacturing Ultrathin Inorganic Membranes", *U.S. Patent* 5,160,618 (Issued Nov.3, 1992)
2. M.B.J. Huis in't Veld, R.J.R. Uhlhorn, Y.S. Lin, K. Keizer, A.J. Burggraaf,, "Porous inorganic composite semipermeable membrane and a method of preparation", *US Patent* 5,160,617 (Issued Nov.3, 1992)
3. A.J. Burggraaf, M.B.J. Huis in't Veld, K. KeizerY.S. Lin, , R.J.R. Uhlhorn,, "Composite inorganic porous semipermeable membranes and process for its preparation", *European Patent* 0451755 (Oct.16., 1991)
4. A.J. Burggraaf and Y.S. Lin, "Method for Manufacturing Ultrathin Inorganic Membranes", *European Patent* 050049 (July7, 1993)
5. Y.S. Lin, D.L. MacLean and Y. Zeng, "High Temperature Adsorption Process", *US Patent* 6,059,858 (Issued May 9, 2000).
6. D.R. Acharya, F.R. Fitch, R.H. Clarke, Y.S. Lin, D.L. MacLean, R. Ramachandran, N. Ramprasad, S.S. Tamhankar, Y. Zeng, "Oxy-fuel Combustion Processes", *European Patent* 1327823 (Aug., 10, 2003)
7. Y.S. Lin, D.L. MacLean and Y. Zeng, "Elevated Temperature Adsorption Process", *European Patent* 0913184 (April 12, 2006)
8. Y. Zeng, D.R. Acharya, S.S. Tamhankar, N. Ramprasad, R. Ramachandran, F.R. Fitch, D.L. MacLean, J.Y.S. Lin, R.H. Clarke, "Oxy-fuel Combustion Processes", *US Patent*, 7,303,606 (Issued Dec.4, 2007)
9. J.Y.S. Lin, J. Ortiz-Landeros, X.L. Dong, "Tubular ceramic-carbonate dual-phase membranes and methods of manufacture thereof", *US Patent* 9327231 (May 3, 2016)

Pending

10. J. Miao, J. Lin, "Noble metal decorated ordered metal oxide nanostructure thin films", *US Patent App.* 17/489,639, 2022
11. J. Lin, S.M. Mirfendereski, "Hydrophobic MFI zeolite hollow fiber membranes", *US Patent App.* 17/741,616, 2022
12. A.W. Weimer, L.A.I. Annika, R. Pfeffer, J. Lin, "synthesis process for solid carbon capture materials", *US Patent App.* 17/775,992, 2022

SELECTED SCIENTIFIC PRESENTATIONS

Plenary, Keynote or Invited Lectures in Conferences (48)

1. Y.S. Lin, "Fabrication of ceramic supported ultrathin metallic membranes by sputtering and chemical "Pore size change of ceramic membranes after modification", Invited Lecture, *1992 Spring Meeting of Materials Research Society, San Francisco, April 27-May 1, 1992*
2. Y.S. Lin, "Oxygen permeable dense ceramic membranes: synthesis, oxygen permeation and surface catalytic properties", Invited Lecture, *North American Membrane Society Meeting*, Portland, Oregon, May 20-24, 1995
3. Y.S. Lin, "Fabrication of ceramic supported ultrathin metallic membranes by sputtering and chemical vapor deposition", Keynote Lecture, *1996 International Congress on Membranes*, Yokohama, Japan, Aug.19, 1996
4. Y.S. Lin, "Microporous and dense inorganic membranes: current status and perspective", **Plenary Lecture**, *6th Internl. Conference on Inorganic Membranes*, Montpellier, France, June 27, 2000

5. Y.S. Lin "Mesoporous and microporous inorganic membranes: current status and perspective", Keynote Lecture, *Chemeca 2000, Workshops on Nanomaterials*, Perth, Australia, July 9-12, 2000
6. Y.S. Lin (co-authored F.T. Akin), "Oxidative coupling of methane and oxygen permeation on fluorite structured dense ceramic membranes", Keynote Lecture, *7th International Conf. on Inorganic Membranes*, Dalian, China, June 23-26, 2002
7. Y.S. Lin, "High temperature adsorption processes with perovskite-type oxide sorbents", Keynote Lecture, *4th Pacific Basin Conference on Adsorption Science and Technology*, Tianjin, China, May 22-25, 2006
8. Y.S. Lin, "Synthesis of vertically oriented ordered mesoporous inorganic membranes: progress and challenges", Invited Lecture, *Gordon Research Conference, Membranes: Materials & Processes*, New London, NH, August 6-11, 2006
9. Y.S. Lin, "Microporous and dense inorganic membranes", Invited Lecture, *AIChE Annual Meeting*, paper 83b, San Francisco, CA, Sept. 12-18, 2006
10. Y.S. Lin (co-authored M. Kanezashi), "Gas permeation and diffusion in small and intermediate pore zeolite membranes", Keynote Lecture, *15th International Zeolite Conference*, Beijing, China, Aug.12-17, 2007
11. Y.S. Lin, "Microporous membranes for gas separation", Keynote Lecture, *8th International Conference on Catalysis and Membrane Reactors*, Calcutta, India, Dec. 17-27, 2007
12. Y.S. Lin (co-authored M. Kanezashi, J.L. O'Brien-Abraham), "High-temperature gas permeation characteristics of MFI and DDR type zeolite membranes", Keynote Lecture, *2008 International Conference on Membranes and Membrane Process (ICOM2008)*, Waikiki, Hawaii, July 12-18, 2008
13. Y.S. Lin, "High-temperature inorganic membranes for uses in energy production and carbon dioxide capture", **Plenary Lecture**, *Symp. Advanced Chemical and Membrane Technology – Growth Opportunities in Pharmaceuticals & Life Sciences, Water Reuse, Desalination, and Energy Applications*, National University of Singapore, Singapore, May 5-6, 2009
14. Y.S. Lin, "Zeolite membranes for gas separation - relationship between structure and gas permeation properties", Keynote Lecture, *ACS National Meeting*, San Francisco, Ca, March 18-24, 2010
15. Y.S. Lin, "Gas and liquid permeation through zeolite membranes", **Plenary Lecture**, *Sino-German Conference on Inorganic Membranes with Nano-Design*, Guangzhou, China, March 22-25 (2010)
16. Y.S. Lin (co-authored Z.X. Zhao, T. Rosa, Z. Li), "Secondary growth synthesis and gas permeation properties of metal organic framework membranes", Keynote Lecture, *2010 International Zeolite Membrane Meeting*, Loutraki, Greece, May 23-27, 2010
17. Y.S. Lin, "Zeolite membranes for high temperature gas separations", **Plenary Lecture**, *2010 Chemical Engineering Conference*, Amman, Jordan, Oct.10-13, 2010
18. Y.S. Lin, "Inorganic membranes for power generation and carbon dioxide capture", **Plenary Lecture**, *6th Conference of Aseanian Membrane Society/7th International Membrane Science and Technology Conference*, Sydney, Australia, Nov.22-26, 2010
19. Y.S. Lin, "Inorganic membranes for carbon dioxide capture", Keynote lecture, *2011 International Symposium on Inorganic Membranes*, Hiroshima, Japan, Jan.7, 2011
20. Y.S. Lin, "Microporous crystalline inorganic membranes for gas separation", **Plenary Lecture**, *2011 Taiwan International Conference on Membranes*, Chungyi, Taiwan, May 26, 2011
21. Y.S. Lin, "High Temperature Proton-Conducting Ceramic Membranes for Process Intensification" **Plenary Lecture**, *International Conference on Process Intensification*, Beijing, China, June 26-29, 2011
22. Y.S. Lin, "Ceramic-carbonate dual-phase membrane for high temperature carbon dioxide separation", Keynote lecture, *International Conference on Membrane Materials and Processes (ICOM2011)*, Amsterdam, Netherland, July 24-29, 2011

23. Y.S. Lin, “Zeolite membranes for separation and reaction: from dream to reality”, **Plenary lecture**, 16th National Zeolite Conference, Beijing, China, Oct.9-13, 2011
24. Y.S. Lin, “Adsorption on Silica Aerogels and Metal Organic Frameworks”, Keynote lecture, 6th Pacific Basin Conference on Adsorption Science and Technology (PBAST6), Taipei, Taiwan, 20-23 May, 2012
25. Y.S. Lin (with A. Kasik, F. Zhao and R. Pfeffer) “Pervaporation and gas separation properties of thin metal organic framework membranes”, **Keynote Lecture**, 2012 International Conf. on Inorganic Membranes, Enschede, Netherlands, July 10-14, 2012
26. Y.S. Lin (with H.B. Wang) “Highly stable MFI zeolite membranes for membrane reactor applications”, **Keynote Lecture**, 2012 Internat. Conf. on Inorganic Membranes, Enschede, Netherlands, July 10-14, 2012
27. Y.S. Lin, (with N. Tyler, J. Ortiz-Landers, B. Lu), “High Temperature Membranes for Carbon Dioxide Separation”, **Invited Lecture**, ECI Conference : Advanced Membrane Technology, Singapore, Oct.14-19, 2012
28. Y.S. Lin, “Energy Storage”, **Dinner Speaker**, Chinese American Chemical Society Banquet, AIChE Annual Meeting, Pittsburgh, Penn, Oct.29, 2012
29. Y.S. Lin, “Inorganic membranes for carbon dioxide capture”, **Plenary Lecture**, International Conf. New Separation Technology and Materials Development, Zibo, China, Dec.7-9, 2012
30. Y.S. Lin, “Microporous carbon and ZIF-8 membranes for propylene/propane separation”, **Plenary Lecture**, International Zeolite Membrane Meeting, Jeju, South Korea, June 16-20, 2013
31. Y.S. Lin, Carbon Dioxide Perm-Selective Ceramic-Carbonate Dual-Phase Membranes, **Plenary Lecture**, 13th International Conference on Inorganic Membranes (ICIM2014), Brisbane, Australia, July 6-9, 2014
32. Y.S. Lin, Ceramic-Carbonate Membrane Reactors for Chemical Reactions with Carbon Dioxide Separation, **Keynote Lecture**, 10th International Congress on Membranes and Membrane Processes (ICOM2014), Suzhou, China, July 20-25, 2014
33. Y.S. Lin, “Membranes for energy and environmental uses”, **Plenary Lecture**, Frontier in Chemical Engineering – the 7th Global Chinese Chemical Engineers Symposium, Tianjin, China, July 14, 2015
34. Y.S. Lin, “Mesoporous Inorganic Membranes for Conventional and Non-Conventional Applications”, **Keynote Lecture**, 9th International Mesoporous Materials Symposium (IMMS9), Brisbane, Australia, Aug.17-20, 2015
35. Y.S. Lin, “Perovskite Structured Metal Oxide Sorbents with Oxygen Vacancy Order-Disorder Transition for High Temperature Air Separation”, **Keynote Lecture**, 8th Sino-US Chemical Engineering Conference, Shanghai, China, Oct.11-15, 2015
36. Y.S. Lin, “Carbon Dioxide Permeation Properties of Samarium-Doped-Ceria Carbonate Dual-Phase Membranes”, **Keynote Lecture**, 8th Sino-US Chemical Engineering Conference Shanghai, China, Oct.11-15, 2015
37. Y.S. Lin, “Mixed-Conducting Ceramic Membranes for Separation and Chemical Reaction Applications”, **Plenary Lecture**, 2016 International Conference on Inorganic Membranes, Atlanta, GA, July 10-13, 2016
38. Y.S. Lin, “Stability of ZIF-8 Membranes in Aqueous Solution and Gas Phase”, **Keynote Lecture**, 2016 International Zeolite Membranes Meeting, Dalian, China, Aug.20-23, 2016
39. Y.S. Lin, “Ceramic-carbonate dual phase membranes for carbon dioxide capture”, **Invited Talk**, MRS Spring Meeting, Phoenix, AZ, Feb.5, 2018
40. Y.S. Lin, “Ionic Transport Membranes”, **Keynote Invited Lecture**, 2018 International Conference on Inorganic Membranes, Dresden, Germany, June 18-22, 2018
41. Y.S. Lin “Zeolite membranes for molecular separation: Progress, Challenges and Perspective”, **Distinguished Scientist Lecture**, Singapore National Membrane Consortium Symposium, Singapore, April 23, 2019

42. Y.S. Lin “Graphene Oxide Membranes: Transport Mechanism and Its Implication on 2D Membranes”, **Plenary Lecture**, 2019 National Membrane Technology Youth Innovation Summit, Ningbo, China, April 27, 2019
43. Y.S. Lin “Zeolite Membranes for Industrial Molecular Separation: Progress, Challenges, and Perspective”, **Plenary Lecture**, Taiwan Filtration and Separation Society Annual Meeting, Taipei, Taiwan, May 30, 2019
44. Y.S. Lin “Zeolite Membranes for Molecular Separation”, **Keynote Lecture**, 2019 International Zeolite Membrane Meeting (IZMM2019), Lulea, Sweden, June 18, 2019
45. Y.S. Lin “Post-synthesis ligand-exchange of ZIF-8 membranes: structure modification and separation performance improvement”, **Keynote Lecture**, 2020 International Congress on Membrane Materials and Membrane Processes (ICOM2020), Virtual, Dec. 6-11, 2020
46. Jerry Y.S. Lin “Microporous Inorganic Membranes with Gated Pore Structure”, **Plenary Lecture**, 2022 International Conference on Inorganic Membranes’, Taipei, Taiwan, June 28, 2022
47. Jerry Y.S. Lin “Hydrogen Production in Ceramic-carbonate Dual-phase Membrane Reactors with CO₂Capture” **Plenary Lecture**, 2022 International Conference on Catalytic Membrane Reactors, Tokyo, Japan, Aug 3, 2022
48. Jerry Y.S. Lin “CO₂-Permeable Membrane Reactors for Hydrogen Production with Carbon Capture”, **Plenary Lecture**, The 11th International Science and technology Conference (IMSTEC) 2022, Dec 4-8, Melbourne, Australia

Invited Seminars (206)

1. "Ceramic membranes and their preparation and modification by CVD", Air Products & Chemicals Co., Research Center, Allentown, Penn., USA, Aug.29, 1990
2. "Preparation and modification of ceramic membranes by CVD", Texaco Research Center, Beacon, NY, USA, Aug.31, 1990
3. "Applications of membranes in gas separation and food industries", Nestlè Westreco, Inc., Marysville, Ohio, USA, Oct.15, 1990
4. "Ceramic membrane research for methane conversion applications", Amoco Research Center, Naperville, Illinois, February 9, 1993
5. "Ceramic membrane for gas separations", Westinghouse Science and Technology Center, Pittsburgh, Pennsylvania, March 4, 1993
6. "Preparation of porous and dense ceramic membranes", Department of Materials Science, University of Cincinnati, April 2, 1993
7. "Porous and dense ceramic membranes", Department of Materials Science, University of Science and Technology of China, Hefei, China, September 3, 1993
8. "Ceramic membranes and their R and D", Department of Chemical Technology, South China University of Technology, Guangzhou, China, September 13, 1993
9. "Ceramic membranes for gas separation", Department of Materials Science, Zhejiang University, Hangzhou, September 15, 1993
10. "Ceramic membranes: a grain surface coating method for property improvement", Department of Chemical and Nuclear Engineering, University of New Mexico, Albuquerque, NM, Oct., 26, 1993
11. "Chemical vapor deposition in porous media for inorganic membrane fabrication", Department of Chemical Engineering, Purdue University, West Lafayette, Indiana February 24, 1994,
12. "Ceramic membranes and their uses in environmental processes", Water and Hazardous Waste Treatment Research Division, US EPA, Cincinnati, Ohio, Sept.20, 1994
13. "Sol-Gel synthesis and properties of ceramic membranes and adsorbents", Department of Chemical Engineering, Ohio University, Athens, Ohio, Nov.9, 1994
14. "Sol-gel synthesis of porous adsorbents for gas separation", The BOC Technical Center, Murray Hill, NJ, Feb.2, 1995

15. "Synthesis and properties of ceramic supported ultrathin metallic membranes", Dept. of Chem. Eng., University of Houston, March 10, 1995
16. "Advanced on ceramic membrane research", Department of Materials Science, University of Science and Technology of China, Hefei, Sept., 9, 1995
17. "Synthesis, surface properties and gas permeation of dense inorganic metallic membranes", Department of Chemical Engineering, Nanjing University of Chemical Technology, Nanjing, Sept. 15, 1995
18. "Synthesis and hydrogen permeation through ceramic supported ultrathin metallic membranes", Department of Chemical Engineering, Hong Kong University of Science and Technology, Hong Kong, Sept. 18, 1995
19. "Tailor-designed inorganic materials for separation", Air Products and Chemicals Inc., Allentown, Penn, June 25, 1996
20. "Fabrication of ultrathin metallic membranes by sputter deposition and chemical vapor deposition", The BOC Technical Center, Murray Hill, NJ, July 10, 1996
21. "Ceramic membranes and their applications in food industries", Nestle Research Center, Maryville, Ohio, Aug.9, 1996
22. "CVD fabrication of ceramic-supported metallic membranes", Nanjing University of Chemical Technology, Nanjing, China, Sept., 1, 1996
23. "Mixed-conducting ceramics: catalytic properties and membrane reactor applications for oxidative coupling of methane", Exxon Corporate Research, Annandale, NJ, Oct., 23, 1996
24. "Mixed-conducting perovskite type ceramic membranes: surface catalytic properties for oxidative coupling of methane", Department of Chemical Engineering, University of Massachusetts, Amherst, Feb. 6, 1997
25. "High temperature oxygen separation by sorption process", The BOC Technical Center, Murray Hill, NJ, April 18, 1997
26. "Mixed-conducting ceramics: oxygen permeation and surface catalytic properties", Department of Chemical Engineering, The Ohio State University, Columbus, Ohio, May 1, 1997
27. "Inorganic Membrane Synthesis", North American Membrane Society Workshop, Baltimore, MD, June 1, 1997
28. "Ultrathin metallic membranes by chemical vapor deposition", Chemical Technology Division, Oak Ridge National Laboratory, Oak Ridge, TENN, Sept., 16, 1997
29. "Nanostructured materials for membrane applications", Dept. of Materials Science, University of Cincinnati, Cincinnati, Ohio, Oct. 17, 1997
30. "Inorganic membranes", United Technologies Co. Research Center, Hartford, Conn., Oct.27, 1997
31. "Mixed-Conducting Ceramic Membranes", BCC Membrane Conference on Technology/Planning, Boston, Mass., Oct.28, 1997
32. "CVD Preparation of ultrathin metallic membranes", Dept. of Chem. Eng., Hong Kong University of Science and Technology, Hong Kong, Dec.12, 1997
33. "Inorganic membranes, recent development and future challenges", Dept. of Materials Science, University of Science and Technology of China, Hefei, China, Dec.17, 1997
34. "Recent development and future challenges of inorganic membranes", The BOC Technical Center, Murray Hill, NJ, Jan.29, 1998
35. "Synthesis of ultrathin metallic membranes for hydrogen separation", Dept. Chem. Eng., University of Toledo, OH, March 6, 1998
36. "Nanostructured ceramic adsorbents", Dept. Chem. Eng., University of Tokyo, Tokyo, June 22, 1998
37. "Inorganic membrane research", University of Science and Technology of China, Hefei, China, July 1, 1998
38. "Metallic membranes for hydrogen separation", Dalian Institute of Chemical Physics, Dalian, China, July 3, 1998

39. "Dense ceramic membranes for oxidative coupling of methane", Dalian Institute of Chemical Physics, Dalian, China, July 3, 1998
40. "Dense inorganic membranes for methane conversion", CANMET Natural Gas Consortium Workshop on Methane Conversion, Milan, Italy, Sept. 28, 1998
41. "Tailor-designed nanostructured inorganic membranes for gas separation applications", Sigma Xi Young Investigator Award Lecture, University of Cincinnati, Nov.12, 1998
42. "Synthesis of ultrathin metallic membranes for hydrogen separation", Institute of Membrane Science and Technology, Nanjing Univ. Chemical Technology, Nanjing, China, Nov.18, 1998
43. "Zeolite membranes", Dept. of Materials Science, Univ. of Science and Technology of China, Hefei, Dec.29, 1998
44. "Ceramic supported zeolite membranes", Nanjing Univ. Chemical Technology, Nanjing, China, Dec.30, 1998
45. "Nanostructured materials for separation", Dept. of Chemical Engineering, Tsinghua University, Beijing, Jan.5, 1999
46. "Recent Development in inorganic membranes", Dept. of Chemical Engineering, Tianjin University, Tianjin, China, Jan.6, 1999
47. "Recent development in inorganic membranes: metallic and zeolite membranes", Dept. of Chemical Engineering, Zhejiang University, Hangzhou, China, Jan. 14, 1999
48. "Hydrophobic zeolite membranes", BOC Technical Center, Murray Hill, New Jersey, Feb.16, 1999
49. "Synthesis and properties of ultrathin metallic membranes", Department of Industrial Chemistry, Seikei University, Tokyo, Japan, April 15, 1999
50. "Hydrophobic MFI zeolite membranes: template removal associated microstructure development", Dept. of Chemical and Environmental Engineering, National University of Singapore, Singapore, April 29, 1999
51. "Microstructure of zeolite membrane", Japan Fine Ceramic Center, Nagoya, Japan, May 11, 1999
52. "Template removal associated microstructural development of MFI membranes", Dept. of Chemistry, Chiba University, Chiba, Japan, May 19, 1999
53. "Inorganic membrane synthesis", Workshops in 1999 International Congress on Membranes, Toronto, Canada, June 12, 1999
54. "Synthesis and microstructural properties of thin metallic membranes", Dept. of Chemical Engineering, Hiroshima University, Hiroshima, Japan, June 28, 1999
55. "Thin dense metallic membranes", Dept. of Applied Chemistry (Morooka's lab), Kyushu University, Fukuoka, Japan, June 29, 1999
56. "Hydrophobic zeolites and effects of template removal on their microstructure", Japan Society of Catalysis, Microporous Materials Synthesis Seminar Series, Tokyo, Japan, July 6, 1999
57. "Synthesis and oxygen permeation properties of thin dual phase mixed-conducting inorganic membranes", Dept. Chemical and System Engineering, University of Tokyo, Tokyo, Japan, July 23, 1999
58. "Thin dual-phase inorganic membranes for oxygen separation", Dept. of Chemical Engineering, New Jersey Institute of Technology, Newark, NJ, Nov.22, 1999
59. "Proton-conducting ceramic membranes", Dept. of Chemical Engineering, Case Western Reserve University, Cleveland, Oh, April 25, 2000
60. "Proton-conducting dense ceramic membranes: synthesis and properties", Department of Chemical Processes Engineering, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland, June 30, 2000
61. "Microporous inorganic membranes", Dept. of Chemical Engineering, University of Queensland, Brisbane, Australia, July 20, 2000 (two more other lectures in the same university)
62. "Anisotropic diffusion in zeolite particles by microscope FTIR", Dept. of Chemical Engineering, South China University of Technology, Guangzhou, China, Aug.5, 2000
63. "Anisotropic diffusion in zeolite particles", Dept. of Chemical Engineering, Xiamen University, Xiamen, China, Aug.6, 2000

64. "Zeolite membrane and diffusion in zeolite particles ", Dept. of Chemical Engineering, Tianjin University, Tianjin, China, Aug.14, 2000
65. "CVD modification of nanoporous alumina membranes", Dept. of Chemical Engineering, University of Colorado, Boulder, Colorado, Nov.30, 2000
66. "Nanoporous ceramic membranes", Brockhouse Institute for Materials Research, McMaster University, Hamilton, Ontario, Canada, December 11, 2000
67. "Current Status of Microporous and Dense Inorganic Membranes", The BOC Gases Research Center, Murray Hill, NJ, December 21, 2000
68. "Microporous and dense inorganic membranes", Chemical and Biological Defense Sorbent and Filtration Workshop, Nashville, TN, April 18, 2001
69. "Inorganic membrane synthesis", North American Membrane Society Workshops, Lexington, Ky, May 19-20, 2001
70. "Microstructure of polycrystalline zeolite membranes", Dalian Institute of Chemical Physics, Dalian, China, July 27, 2001
71. "Zeolite membranes", Chemistry Dept., Jilin University, Changchun, China, July 28, 2001
72. "Zeolite membrane for gas separation", Chemical Engineering Dept., South China University of Science and Technology, Guangzhou, China, Aug.6, 2001
73. "Membrane reactor for methane conversion", Chemical Engineering Dept., Tianjin University, Tianjin, China, Aug.7, 2001
74. "Polycrystalline zeolite membranes: synthesis, microstructure and gas separation properties", Dept. of Chemical Engineering, Georgia Institute of Technology, Atlanta, GA, Jan.16, 2002
75. "Proton-electronic conducting ceramic membranes", The BOC Research Center, Murray Hill, NJ, Jan.25, (2002)
76. "Membrane materials and membrane formation", North American Membrane Society Workshop, Long Beach, CA, May 11-12 (2002)
77. "Modified atomic CVD modification of nanoporous alumina membranes", Dalian Institute of Chemical Physics, Dalian, China, August 1, 2002
78. "Anisotropic diffusion in zeolite" Dalian Institute of Chemical Physics, Dalian, China, August 2, 2002
79. "Zeolite membranes", Dept. of Chemical Engineering, Tsinghua University, Beijing, China, Aug. 14, 2002
80. "Zeolite membranes: microstructure and separation properties", Dept. of Chemical Engineering, Zhejiang University, Hangzhou, China, Aug. 15, 2002
81. "Zeolite membranes: microstructure and separation properties", Dept. of Chemical Engineering, Nanjing University of Science and Technology, Nanjing, China, Aug. 20, 2002
82. "Polycrystalline zeolite membranes for gas and liquid separation", Invited Lectures (AA2.1), MRS Symposium, Membranes – Preparation, Properties and Applications, Boston, December 2-5 (2002)
83. "Zeolite membranes", Dept. of Chemical Engineering, Chang Gung University, Tao-Yuan, Taiwan, Dec. 12, 2002
84. "Ionic transport membrane technology for hydrogen production and air separation", Taiwan Economic Institute, Taipei, Taiwan, Dec. 13, 2002
85. "Proton-conducting ceramic membranes with enhanced hydrogen permeation flux", Dept. of Chemical Engineering, Cheng Kung University, Tainan, Taiwan, Dec. 16, 2002
86. "Proton-conducting ceramic membranes with enhanced hydrogen permeation flux", Dept. of Chemical Engineering, National Tsinghua University, Hsinchu, Taiwan, Dec. 17, 2002
87. "CVD modification of nanoporous alumina membranes", Dept. of Chemical Engineering, University of Akron, Akron, Ohio, April 3, 2003
88. "Inorganic Membranes", North American Membrane Society Workshops, Jackson Hole, Wyoming, May 18, 2003

89. “Proton-conducting ceramic membranes”, Dalian Institute of Chemical Physics, Dalian, China, July 18, 2003
90. “Catalysis, Separation and Future Trends in Chemical Engineering”, Henan Academy of Science, Zhengzhou, Henan, August 1, 2003
91. “Proton-conducting ceramic membranes”, Japan Fine Ceramic Center, Nagoya, Japan, Oct. 14, 2003
92. “Dense ceramic membranes with enhanced hydrogen permeation flux”, Noritake Research Center, Nagoya, Japan, Oct.14, 2003
93. “Ionic transport and other membrane technologies for hydrogen production”, Gas Technology Institute, Chicago, IL, Dec.5, 2003
94. “Zeolite membranes for gas separation”, Dept. of Chem. and Petroleum Eng., University of Wyoming, Laramie, March 9, 2004
95. “Polycrystalline zeolite membranes: microstructure and gas separation properties”, Dept. of Chem. and Materials. Sci., Arizona State Univ., Tempe, AZ, April 29, 2004
96. “Inorganic membranes”, North American Membrane Society Workshops, Honolulu, Hawaii, June 26, 2004
97. “Oxidative coupling of methane on catalytically active dense ceramic membranes”, UOP Research Center, Chicago, IL, Sept.22, 2004
98. “Lithium zirconate sorbents for carbon dioxide separation”, Dept. of Chem. Eng., New Mexico State Univ., Las Cruces, April 22, 2005
99. “Inorganic membranes”, North American Membrane Society Workshop, Providence, RI, June 11-15, 2005
100. “Inorganic membranes”, Workshops Organized by 2005 Intern. Conf. on Membranes and Membrane Processes (ICOM2005), Seoul, Korea, Aug.20, 2005
101. “Synthesis of catalysis and membranes”, Workshops on Catalysis Design and Reaction Engineering, Tianjin Univ. (sponsored by Chinese Ministry of Education), Tianjin, China, Aug.24-25, 2005
102. “Carbon dioxide sorption on lithium zirconate”, Dept. of Chemical Engineering, South China University of Technology, Guangzhou, China, Dec. 13, 2005
103. “Novel sorbents for carbon dioxide separation”, Gas Technology Institute, Chicago, IL, Jan. 26, 2006
104. “Fundamentals of carbon dioxide sorption on lithium zirconate”, The BOC Group, Murray Hill, NJ, Jan. 27, 2006
105. “Synthesis and structural properties of ordered mesoporous silica fibers”, Dept. of Chemical Eng., Colorado School of Mines, Golden, Co, Feb.10, 2006
106. “Inorganic Membranes”, North American Membrane Society Workshop, Chicago, IL, May 12-17, 2006
107. “High-temperature sorption processes with perovskite ceramic sorbents”, College of Chemical and Energy Engineering, South China University of Technology, May 24, 2006
108. “Ordered mesoporous silica fibers and membranes”, Dept. of Chemical and Environmental Engineering, University of California, Riverside, Oct., 27, 2006
109. “Zeolite membranes for gas and liquid separation”, Institute of Materials Research, University National Autonomous University of Mexico (UNAM), Mexico City, Mexico, May 25, 2007
110. “Inorganic membranes”, North American Membrane Society Workshop, Orlando, FL, May 13, 2007
111. “Zeolite membranes: applications and challenges”, Corning Inc, Corning, NY, June 19, 2007
112. “Sol-gel synthesis and characterization of nanostructured granular sorbents”, Cabot Research Center, Billerica, MA, Oct. 19, 2007
113. “Vertically oriented carbon nanotube membranes”, College of Engineering, South China Univ. of Technology, Guangzhou, China, Dec.10, 2007

114. “Gas diffusion in zeolite membranes”, Dept. of Chemical Engineering, Indian Institute of Technology, Kharagpur, India, Dec.18, 2007
115. “Microporous inorganic membranes for gas separation”, UOP International Lecture Series, UOP, Chicago, Feb., 28, 2008
116. “Carbon nanotube membranes”, Dept. of Chemical and Biomolecular Engineering, National University of Singapore, Singapore, March 25, 2008
117. “Gas permeation through carbon nanotube membranes”, College of Chemical Engineering, Tianjin University, Tianjin, China, March 28, 2008
118. “Inorganic membranes”, International Congress on Membranes and Membrane Processes Workshop, Waikiki, HI, July 12, 2008
119. “Energy and new separation problems”, Westlake Forum, (Zhejiang University), Hangzhou, China, July 26, 2008.
120. “Carbon nanotube membranes”, Nanomaterials workshop, Zhuhai, China, Jan. 16, 2009
121. “Dual-phase membranes for high-temperature carbon dioxide separation”, Europe Nanomembrane Workshop, Lillestrom, Norway, March 16, 2009
122. “Carbon nanotube membranes”, Department of Mechanical Engineering, Ukraine National University-Kharkov Polytechnic Institute, Kharkiv, Ukraine, March 20, 2009
123. “High-temperature inorganic membranes for uses in energy production and carbon dioxide capture”, Dalian Institute of Chemical Physics, Dalian, China, July 13, 2009
124. “High-temperature gas separation characteristics of zeolite membranes”, Dept. of Polymer Science, Zhejiang Univ., Hangzhou, China, July 15, 2009
125. “Mixed-conducting ceramics: from membranes to adsorptions”, College of Chemistry and Chemical Engineering, South China Univ of Tech., Guangzhou, China, July 17, 2009.
126. “Carbon nanotube membranes”, Nanjing University of Technology, Nanjing, China, July 30, 2009
127. “Perovskite materials from membrane and adsorption applications”, School of Chemical Engineering, Tianjin University, Tianjin, China, Sept. 17, 2009
128. “Can high-temperature membranes address the energy and environment global challenges”, Zhejiang University, Hangzhou, China, June 9, 2010
129. “Inorganic membranes”, Workshops on Materials, National Autonomous University of Mexico (UNAM), June 28-July 2, 2010
130. “High-temperature membranes for uses in electrical power generation and carbon dioxide capture”, School of Electrical and Energy Engineering, Arizona State University, Sept.24, 2010
131. “Zeolite membrane for high-temperature gas separation applications: gas diffusion and permeation properties”, Chem. Eng. Dept., Israel Institute of Technology (Technion), Haifa, Israel, Oct. 12, 2010
132. “Zeolite membranes for gas and liquid separation”, Inorganic Membrane Workshop, Victoria University, Melbourne, Australia, Nov.26, 2010-12-21
133. “Inorganic membrane based fiber optical sensors for high-temperature gas sensing”, National University of Singapore, Singapore. Dec.3, 2010
134. “Fiber optical sensors for high-temperature hydrogen sensing”, South China University of Technology, Guangzhou, China, Dec. 10, 2010
135. “Optical sensors for high-temperature hydrogen detection”, Hiroshima University, Hiroshima, Japan, Jan.8, 2011
136. “Inorganic membranes workshop”, Dept. of Chemical Engineering, Hiroshima University, Hiroshima, Japan, Jan.7-9, 2011
137. “Mixed-conducting metal oxides for air separation: from membranes to adsorption”, Dept. of Chemical and Biological Engineering, University of Houston, Houston, Feb. 11, 2011
138. “Inorganic membranes for carbon dioxide capture”, King Abdulla University of Science and technology, Saudi Arabia, March 19, 2011
139. “Proton-conducting ceramic membranes”, Sichuan University, Chengdu, China, July 4, 2011

140. “Zeolite membranes for separation and reaction”, General Engineering Co., Chengdu, China, July 5, 2011
141. “Proton-conducting ceramic membranes and thin films for chemical reactions and hydrogen sensing”, Tianjin Univ., Tianjin, China, July 14, 2011
142. “Microporous crystalline inorganic membranes for gas separation”, Dept. of Chemical and Biological Engineering, University of Washington, Seattle, WA, Oct.31, 2011
143. “Microporous zeolite and metal-organic-framework membranes for gas separation”, Dept. of Chem. Eng., New Mexico State Univ., Las Cruises, NM, Nov.18, 2011
144. “Adsorption of organic compounds in vapor, liquid and aqueous solution phase on hydrophobic aerogels”, Dept. of Chem. Mol. Eng., National University of Singapore, Singapore, Dec. 14, 2011
145. “Zeolite membranes for gas separation: from dream to reality”, Dept. of Chem. Biomol. Eng., National University of Singapore, Singapore, Dec. 26, 2011
146. “Metalorganic framework membranes”, International Workshops on Nanostructured Porous Materials, Zhuhai, China, Jan.19, 2012.
147. “Adsorption of organic compounds on hydrophobic silica aerogel”, Dept. of Chemical and Environ. Eng., University of Arizona, Tucson, AZ, Feb.6, 2012
148. “Progress on zeolite membranes for gas and liquid separation”, King Abdullah University of Science and Technology, Jeddah, Saudi Arabia, March 6, 2012
149. “High-temperature inorganic membranes for carbon dioxide capture” (**Piercy Lecture**), Dept. of Chem. Engn. Mater. Sci., University of Minnesota, Minneapolis, MN, April 10, 2012
150. “High-temperature inorganic membranes for hydrogen or carbon dioxide separation”, Euromembrane Seminar Series, University of Montpellier, Montpellier, France, April 27, 2012
151. “Zeolite membranes for hydrogen or separation”, Chemical Engineering Laboratory, University of Paul Sabatier, Toulouse, France, May 4, 2012
152. “Metalorganic framework membrane for gas separation”, Chem. Eng. Dept., Dalian University of Technology, Dalian, China, Aug.10, 2012
153. “Gas Separation and Pervaporation Properties of Thin Metal-Organic Framework Membranes”, Dept. of Chemical and Biomolecular Eng., National University of Singapore, Singapore. Oct.10, 2012
154. “High-Temperature Inorganic Membranes for Hydrogen or Carbon Dioxide Separation”, Dept. Earth and Environmental Engineering, Columbia University, New York, NY, October 26, 2012
155. “Zeolite membranes”, General Engineering Inc, Chengdu, China, Dec. 28, 2012
156. “Dense inorganic membranes”, Preconference Workshop, International Zeolite Membrane Meeting, Jeju, South Korea, June 16-20, 2013
157. “Vapor adsorption on hydrophobic aerogel”, Chemical Engineering Dept., Tianjin University, China, July 15, 2013
158. “Liquid adsorption on hydrophobic aerogel”, Desalination Research Institute of Tianjin, Tianjin, China, July 15, 2013
159. “Synthesis of dual-phase membranes for carbon dioxide capture”, China Electrical Power Research Institute, Beijing, Aug.14, 2013
160. “Dual-phase membranes for carbon dioxide capture”, Dept. of Chemical and Biological Engineering, University of South Carolina, Columbia, SC, Oct.23, 2013
161. “Energy Storage”, School of Chem. Eng. and Chemistry, South China Univ. of Techn., Guangzhou, China, Dec.23, 2013
162. “High-temperature membranes for carbon dioxide capture”, Nanoscale Science Seminar, Dept. of Phys., Arizona State University, Tempe, AZ, Feb.10, 2014
163. “Adsorption of gases and liquids on light adsorbents”, Dept. of Chemical and Biological Engineering, Illinois Institute of Technology, Chicago, IL, April 2, 2014

164. “Dual-phase ceramic-carbonate membranes for CO₂ separation”, Dept. of Chemical and Biological Engineering, Colorado School of Mines, Golden, CO, April 25, 2014
165. “Zeolite membranes for gas and liquid separation”, Membrane Workshop, Nanyang Technological University, Singapore, July 28-30, 2014
166. “Inorganic membranes: from air separation to lithium-ion batteries”, China Electrical Power Research Institute, Beijing, China, Aug.18, 2014
167. “Zeolite separation membranes”, Department of Chemical Engineering, Missouri University of Science and Technology, Rolla, MO, Oct.1, 2014
168. “Inorganic membrane research”, ExxonMobil Research Center, Clinton, NJ, Oct.10, 2014
169. “Inorganic membranes for gas separations”, MTR Inc, Fremont, CA, January 16, 2015
170. “Membranes for gas separation”, Department of Chemistry and Chemical Engineering, Beijing University of Technology, July 8, 2015
171. “Inorganic membranes”, Fushun Petroleum Research Institute, Fushun, China, July 9, 2015
172. “Membranes for energy and environmental uses”, Chemical Engineering Dept., Tianjin University, July 15, 2015
173. “Inorganic membranes”, State Smart Grid Research Institute, Beijing, July 23, 2015
174. “Inorganic membranes for carbon dioxide capture”, School of Chemical Engineering, University of Queensland, Brisbane, Australia, Aug.18, 2015
175. “Hydrogen permeable zeolite membranes for carbon dioxide capture”, South China University of Technology, Guangzhou, China, Oct. 16, 2015
176. “Hydrogen permeable zeolite membrane for carbon dioxide capture”, Department of Chemical Engineering, Imperial College, London, UK, Nov.26, 2015
177. “Hydrogen permeable zeolite membrane for carbon dioxide capture”, Department of Chemical Engineering, University College London, London, UK, Nov.27, 2015
178. “Inorganic membranes for energy applications”, Beijing University of Science and Technology, Beijing, China, May 30, 2016
179. “Zeolite membrane for carbon dioxide capture”, Tianjin University, Tianjin, China, June 8, 2016
180. “Key challenges to industrial gas separation applications of inorganic membranes”, DICP Symposium, Dalian Institute of Chemical Physics, Dalian, China, Aug.23, 2016
181. “Zeolite membranes for hydrogen separation and carbon dioxide capture”, Oak Ridge National Lab, Oak Ridge, Tenn, Sept.9, 2016
182. “Dual-phase membranes for carbon dioxide capture”, Dept. Chemical Engineering, Worcester Polytechnic Institute, Worcester, Mass, Sept. 28, 2016
183. “Mixed-conducting ceramic membrane reactors for chemical reactions involving methane”, ExxonMobil Research and Engineering, Clinton, NJ, Oct.21, 2016
184. “Highly stable zeolite membranes for carbon dioxide capture”, Dept. of Chemical and Biomolecular Engineering, Univ. Maryland, College Park, MD, Oct.25, 2016
185. “High-Temperature Zeolite Membrane Reactors for Water Gas Shift Reaction”, College of Chemical Engineering, San Yet-Sun University, Guangzhou, China, Jan.5, 2017
186. “Zeolite Membranes for Carbon Dioxide Capture”, College of Chemical Engineering, Zhejiang University, Hangzhou, China, Jan.9, 2017
187. “Dual-Phase Ceramic-Carbonate Membranes for Carbon Dioxide Capture”, Nanjing Tech University, Nanjing, China, June 26, 2017
188. “Recent Progress in Inorganic Membranes for Gas Separation”, China National Ocean Oil Company (CNOOC) Research Center, Tianjin, China July 7, 2017
189. “Lithium-ion batteries with improved safety for energy storage, University of Science and Technology of China, Hefei, China, Oct.19, 2017
190. “High Temperature CO₂-Permselective Dual-Phase Membranes for Carbon Capture”, National University of Singapore, Singapore, May 22, 2018

191. “Gas Separation Properties of Metal-organic Framework Membranes: A Comparison with Zeolite Membranes”, Dept. Materials and Chemistry, Ningbo University, Ningbo, China, Aug.13, 2018
192. “Microporous Inorganic Membranes for Gas Separations”, Chinese Academy of Science Ningbo Institute of Materials Research, Ningbo, China, Aug.16, 2018
193. “Microporous crystalline inorganic membranes for gas separation”, Dept of Materials Sci and Engineering, Clemson University, Clemson, SC, Sept. 13, 2018
194. “Gas Transport Mechanism of Graphene Oxide Membranes”, Dept. of Materials Sci., National University of Singapore, Singapore, Jan. 2, 2019
195. “Graphene oxide membranes for gas separation”, Dept of Chemistry, University of Texas at San Antonio, San Antonio, TX, April 12, 2019
196. “Zeolite membrane for molecular separation: progress and challenge”, Department of Chemical and Biological Engineering, National University of Singapore, Singapore, April 24, 2019
197. “Graphene oxide membranes transport mechanism”, Workshops on MOF membrane industrial applications, Ningbo University, Ningbo, China, April 28, 2019
198. “Modeling transport process: CO₂ sorption on lithium zirconate”, Ningbo University, Ningbo, China, May 7, 2019
199. “Graphene oxide membranes for gas separation”, Chemistry Dept, East China Normal University, Shanghai, China, May 10, 2019
200. “Graphene Oxide Membranes - Gas Transport Mechanism and Its Implication on 2D Membranes”, Dept. Mechanical Engineering, Hong Kong Polytechnical University, Hong Kong, May 22, 2019
201. “Graphene Oxide Membranes”, Dept. of Water Resources and Environmental Engineering, Tamkang University, Tamkang, Taiwan, May 30, 2019
202. “Stability of ZIF-8 Membranes and MOF Membranes for Industrial Applications”, Dept of Chemical Engineering, South China University of Technology, Guangzhou, China, June 3, 2019
203. “Renewable energy and energy storage – Related Research in Lin Lab”, Arizona Public Services, Phoenix, Arizona, October 21, 2019
204. “Graphene oxide membranes: gas permeation properties and mechanism”, KAUST (King Abdullah Univ. Sci and Tech), Saudi Arabia (Virtual), April 26, 2021
205. “Mechanism of Molecular Separation by Graphene Oxide Membranes and Its Implications on 2D Membranes”, School of Chemical Engineering, Oklahoma State University, Stillwater, OH (Virtual), April 24, 2021
206. “Graphene oxide membranes: gas permeation properties and mechanisms”, Department of Chemical Engineering and Materials Science Distinguished Seminar, Concordia University, Montreal, Canada (Virtual), May 20, 2021
207. “Gas Transport through 2D Structured GO Membranes”, Scientific & Industry Webinar Series, Monash University, Australia, April 19, 2022
208. “Membrane Reactors for Hydrogen Production with Carbon Capture”, Department of Chemical Engineering, Swiss Federal Institute at Lausanne (EPFL), Switzerland, March 3, 2023,

Conference Chairman/Committee Member

1. **Symposium Organizer**, MRS Symposium on Materials for Separation Technology, April 4-8, 1994, San Francisco, CA
2. International Scientific Committee Member, Third International Conference on Inorganic Membranes, July 10-14, 1994, Worcester, Mass
3. Co-chairman, First Globe Conference of Young Chinese Scientists on Catalysis Science and Technology, Sept., 12-15, 1995, Tianjin, China

4. International Scientific Committee Member, Fourth International Conference on Inorganic Membranes, July 14-18, 1996, Gatlinburg, Tenn
5. Organizing Committee Member, 1997 International Conference on Environmental Engineering and Chemical Engineering, Oct. 8-11, 1997, Guangzhou, China
6. **Conference Co-Chairman**, North American Membrane Society Tenth Annual Meeting, May 16-20, 1998, Cleveland, Ohio
7. International Scientific Committee Member, Fifth International Conference on Inorganic Membranes, June 22-26, 1998, Nagoya, Japan
8. Co-Chairman, 2001 ACS National Meeting, Advanced Membrane Materials Symposium, August 26-30, 2001, Chicago, Illinois,
9. International Scientific Committee Member, 7th International Conference on Inorganic Membranes, June 22-25, 2002, Dalian, China
10. Co-Organizer, International Union of Materials Research Society International Congress on Materials for Membrane Separations, Oct.12-13, 2002, Yokohama, Japan
11. **Conference Chair**, 8th International Conference on Inorganic Membranes, July 18-24, 2004, Cincinnati, Ohio
12. **Symposium Chair**: Advances in Fuel Cell Research: Inorganic, Polymeric and BioFuel Cells, 230th ACS Annual Meeting, Washington, DC, Aug., 28-Sept.1, 2005 (Co-Chaired with J.G. Darab, P.N. Pintauro, E. Katz, G. P. Huffman)
13. International Scientific Committee Member, The 4th Pacific Basin Conference on Adsorption Science and Technology, May 22-26, 2006, Tianjin, China
14. International Scientific Committee Member, 9th International Conference on Inorganic Membranes, Lillehammer, Norway, June 25-29, 2006
15. International Scientific Committee Member, 2008 International Conference on Membranes and Membrane Processes, July 12-18, 2008. Waikiki, HI
16. Vice-Chair, Gordon Research Conference on Membrane Materials and Processes, Aug., 11-15, 2008, New London, NH
17. International Scientific Committee Member, 10th International Conference on Inorganic Membranes, Aug.18-21, 2008, Tokyo, Japan
18. International Scientific Committee Member, 9th International Conference on Catalysis and Membrane Reactors, June 29-July 2, 2009, Lyon, France
19. International Scientific Committee Member, 11th International Conference on Inorganic Membranes, July 17 - 22, 2010 in Washington DC, USA
20. **Chair**, Gordon Research Conference on Membrane Materials and Processes, July 25-30, 2010, Colby-Sawyer College, New London, NH
21. International Scientific Committee Member, International Conference on Process Intensification for Sustainable Chemical Industries (ICPI2011), June 26-29, 2011, Beijing, China
22. International Scientific Committee Member, 2011 International Conference on Membranes and Membrane Processes, July 23-29, 2011, Amsterdam, Netherlands
23. Symposium Co-Chair, 6th Sino-US Joint Conference of Chemical Engineering, Symposium Separation and Environmental Technologies, Nov.7-10, 2011, Beijing, China
24. International Scientific Committee Member, 12th International Conference on Inorganic Membranes, July 9 -13, 2012, Enschede, Netherlands
25. International Scientific Committee Members, Inorganic membranes for carbon dioxide capture”, *International Conf. New Separation Technology and Materials Development*, Zibo, China, Dec.7-9, 2012
26. **Chair**, 2013 North American Membrane Society Annual Meeting, Boise, Idaho, June 7-13 2013
27. International Scientific Committee Member: 6th International Zeolite Membrane Meeting, June 15-19, 2013, Jeju Island, Korea
28. International Scientific Committee Member: 11th International Conf. Catalysis in Membrane Reactors, June 23-27, 2013, Porto, Portugal

29. International Scientific Committee Member:, 13th International Conference on Inorganic Membranes (ICIM2014), July 6-9, 2014, Brisbane, Australia,
30. International Scientific Committee Member: 10th International Congress on Membranes and Membrane Processes (ICOM2014), July 20-25, 2014, Suzhou, China
31. International Scientific Committee Member, Engineering with Membranes, May 6-10, 2015, Beijing, China
32. International Scientific Committee Member, International Conference on Catalysis in Membrane Reactor, June 22-25, 2015, Szczecin, Poland
33. International Scientific Committee Member, International Mesoporous Materials Symposium (IMMS9), August 17-20, 2015, Brisbane, Australia
34. International Conference on Inorganic Membranes, Atlanta, GA, July 10-13, 2016
35. International Zeolite Membranes Meeting, Dalian, China, Aug.20-23, 2016
36. Gordon Research Conferences on Membrane Materials and Processes, New London, NH, July 31-Aug.5, 2016 (discussion leader)
37. International Conference on Catalysis in Membrane Reactors, Houston, TX, June 10-13, 2017
38. International Conference on Inorganic Membranes (ICIM2018), Dresden, Germany, June 18-22 (2018)
39. International Conference on Catalysis in Membrane Reactors, Eindhoven, Netherlands, July 8-11, 2019
40. International Zeolite Membranes Meeting, Lucea, Sweden, June 16-20, 2019
41. International Conference in Catalysis in Membrane Reactor, Eindhoven, Netherlands, July 8-11, 2019
42. Materials: Inorganic Materials Session, NAMS Annual Meeting, Pittsburgh, Penn, May 11-15, 2019

DISSERTATION/THESIS ADVISED

Ph.D.

Degree from University of Cincinnati

1. **Shuguang Deng** (Sept. 1992 - March. 1996) *Ph.D. Dissertation: Synthesis and Properties of Nanostructured Adsorbents for Gas, Separation and Environmental Applications (Prof. of ChE, NM State Univ.)*
2. **Jonghee Han** (Sept. 1991 - Dec., 1996), *Ph.D. Dissertation: Dense Oxygen Semipermeable Ceramic Membranes: Synthesis and Properties (Prof. of ChE, KIST, Korea)*
3. **George Xomeritakis** (April., 1993 - June, 1997), *Ph.D Dissertation: Synthesis of Inorganic Membranes by Vapor Deposition Processes: Theory and Experiments (UOP)*
4. **Yongxian Frank Zeng** (Sept. 1993 - March, 1998), *Ph.D Dissertation: Mixed-Conducting Ceramic Materials for Oxidative Coupling Of Methane (Baxter Co)*
5. **Jinsoo Kim** (Sept., 1995- Sept., 1999), *Ph.D. Dissertation: Inorganic Dual-phase Membranes for Oxygen Separation: Synthesis and Properties (Prof. of ChE and Env., Kyunghee Univ., Korea)*
6. **Xiwang Qi** (Dec., 1996-Aug., 2000), *Ph.D. Dissertation: Fast Ionic Conducting Ceramic Membranes: Electrical and Mass Transport properties (GE Fuel Cells, CA)*
7. **Genoveva Buelna** (Sept., 1996- Dec., 2001), *Ph.D. Dissertation: Sol-gel Derived Alumina Supported CuO Sorbents for SOx and NOx Removal (ACS TechCatalyst Inc)*
8. **F. Tulin Akin** (Sept, 1997- June 2002), *Ph.D. Dissertation: Oxidative Coupling of Methane in Tubular Dense Ceramic Membrane Reactor (Bloom Energy, CA)*
9. **Zhaohui Yang** (Sept., 1997- June, 2002), *Ph.D. Dissertation: High-Temperature Adsorption Process for Air Separation (GE Global Research)*
10. **Charlie Cooper** (Sept., 1999- March, 2003), *Ph.D. Dissertation: Synthesis and Characterization of Mixed Matrix Systems for the Removal and Recovery of Divalent Metals from Waste Streams (Fermi Lab)*

11. **Hatem Alsayouri** (Sept., 1999- Nov., 2004), *Ph.D. Dissertation: Synthesis of Ordered Mesoporous Silica and Alumina with Controlled Macroscopic Morphologies* (**Prof., American University of the Middle East**)

Degree from Arizona State University

12. **Qing Yang** (Sept.2001-Dec., 2005), *Ph.D. Dissertation: Carbon Dioxide Interaction with Perovskite-type Oxides and Their Applications in Oxygen Separation*, (**Betachem Inc.**)
13. **Qinhua Yin** (Sept., 2002- Dec. 2006), *Ph.D. Dissertation: High-temperature oxygen sorption on metal oxides with defects as sorbents for air separation* (**SC Materials Inc.**)
14. **Xiaotong Wei** (Sep., 2005-Dec.,2008) *Ph.D. Dissertation: Metal and Ceramic Enabled Long-Period Fiber Gratings Optical Sensors for High-Temperature Monitoring of Hydrogen and Carbon Dioxide* (**MTR Inc**)
15. **Jessica O'Brien** (Sept., 2005-Feb., 2009) *Ph.D. Dissertation: A Study of Microstructure-Property Relationship for MFI-Type Zeolite Membranes for Xylene Separation* (**GE**)
16. **Jay Kniep** (March, 2006- May, 2010), *Ph.D. Dissertation: Synthesis of Mixed-Conducting Membranes with Improved Properties for Membrane Reactor Applications* (**MTR Inc**)
17. **Matthew Anderson** (Dec., 2005- April 2011), *Ph.D. Dissertation: Carbonate-Ceramic Dual-phase Membranes for high-temperature carbon dioxide separation* (**Intel**).
18. **Shriya Seshadri** (Sept., 2005- April 2011) *Ph.D. Dissertation: Synthesis and Characterization of Ordered Mesoporous Silica with Controlled Macroscopic Morphology for Membrane Applications.*(**Intel**)
19. **Carrie Eggen** (Sept., 2005-April 2011) *Ph.D Dissertation: Formation of Biomimetic Membranes on Inorganic Supports of Different Surface Morphology and Macroscopic Geometry* (**Medtronic**)
20. **Ding Wang** (Sept, 2007-Dec.2011) *Ph.D. Dissertation: Separation of Oil and Other Organics from Water Using Inverse Fluidization of Hydrophobic Aerogels* (R. Pfeffer as co-advisor) (**Rhodia**)
21. **Tyler Norton** (Sept, 2009-Oct.,2013) *Ph.D., Dual phase membrane reactor for hydrogen production* (**Intel**)
22. **Bo Lu** (Sept., 2008-May, 2014) *Ph.D, Dissertation: Synthesis and Characterization of Thin Ceramic-Carbonate Dual-Phase Membranes for Carbon Dioxide* (**Bettergy Inc.**)
23. **Nick Linneen** (Aug, 2010-July, 2014) *Ph.D, Dissertation; Synthesis and Carbon Dioxide Adsorption Properties of Amine Modified Particulate Silica Aerogel Sorbents* (co-advised with R. Pfeffer) (**Oak Ridge National Labs**)
24. **Xiaoli Ma** (Sept.2010-May 2015), **Ph.D.**, *Dissertation: Synthesis and Characterization of Microporous Inorganic Membranes for Propylene/Propane Separation* (**University of Minnesota**)
25. **Alexandra Kasik** (Sept. 2011-Dec2015) *Ph.D. Dissertation: Synthesis and Permeation of Large Pore Metal-Organic Framework Membranes* (**Honeywell**)
26. **Joshua James** (Sept., 2013-Dec.2017), *Ph.D., Dissertation: Stability, Transport and Modification of Zeolitic Imidazolate Framework-8 Membranes for Light Hydrocarbon Separations* (**Chevron Research Center**)
27. **Amr Ibrahim** (Jan., 2014-May, 2018), *Ph.D. Dissertation: Synthesis and Gas Transport Properties of Graphene Oxide Membranes* (**Suiz University**)
28. **Han-Chun Wu** (Sept, 2015-Jan., 2020), *Ph.D. Dissertation: Properties of Mixed-Ionic Electronic Ceramics (MIEC) and Their Applications in Oxygen and Hydrogen Production* (**Intel Co.**)
29. **Jiansong Miao** (Sept., 2015-Aug, 2020),*Ph.D. Dissertation: Composition Analysis of Mixture Gas Based on Semiconductor Metal Oxide Gas Sensors* (**Applied Materials**).
30. **Kishen Rafiz** (Sept. 2016-March, 2021), *Ph.D. Dissertation: Electrode-coated Inorganic Separators for High Performance and Safe Lithium-Ion and Lithium-Metal Batteries* (**Intel Co, Portland**)

Degree from Tianjin Universities (as Guest Professor and Joint-Advisor)

31. **H.Y. Gao** (Sept., 2002- Nov., 2004), *Ph.D. Dissertation: Preparation of Pd-Cu Alloy Composite Membranes and Study on Membrane Reactor for Hydrogeneration of Furfural to Furfuryl Alcohol*, (now **Prof. of ChE, Hebei University of Technology**) (Y.D. Li as co-advisor)
32. **H.Y. Jiang** (Sept., 2002- Dec., 2004) *Ph.D. Dissertation: Synthesis, Characterization and membrane Reactor Application of MFI Type Zeolite Membrane*, (**Jilin Petroleum Co**)(B.Q. Zhang as co-advisor)
33. **W.L. Mi** (Sept., 2003- Dec., 2005) *Ph.D. Dissertation: Synthesis and Gas Permeation Properties of Porous Ceramic Supported Carbon nanotube Membranes*, (**Prof. of Thermal Eng., Beijing Univ. of Science and Technology**) (Y.D. Li as co-advisor)
34. **X.F. Liu** (Sept., 2004- April, 2007) *Ph.D. Dissertation: Synthesis of MFI Type Zeolite Membranes and Applications in Selective Ethanol Permeation* (**Prof. of Chem., Tianjin University**) (B.Q. Zhang as co-advisor)
35. **K. Zhang** (Sept., 2003- Sept., 2008) *Ph.D. Dissertation: Application of Dense Palladium and MFI Zeolite Membranes in Hydrogen Separation Process* (**Post-Dr., Georgia Tech**) (Y.D. Li as co-advisor)
36. **Z.B. Rui** (Sept., 2005, Dec., 2009), *Ph.D Dissertation: Application of Ceramic Membrane and Sorbent in High-Temperature Gases Separation and CO₂ Capture* (**Prof. of ChE, Zhongshan Univ.**) (Y.D. Li as co-advisor)
37. **Z.X. Zhao** (Sept., 2005-Dec.2009) (**from South China University of Technology**), *Ph.D Dissertation: MOF membranes for gas separation* (South China University of Technology) (**Prof. of ChE, Guangxi University**) (co-advised with Zhong Li)
38. **Y. Jin** (Aug., 2008-May, 2011), *Ph.D. Dissertation: Application of dense oxygen-permeable membrane reactor in oxidative steam reforming of ethanol to produce hydrogen*, (**Sinopec, Shandong**) (Y.D. Li as co-advisor)
39. **C. Ji** (Aug.2008-Sept., 2011), *Ph.D. Dissertation: Synthesis of Oriented SAPO-5 Membranes* (**China National Offshore Oil Co**) (Y.D. Li as co-advisor)
40. **Y.C. Zhao** (Aug2007-Dec.2012), *Ph.D. Dissertation: The Ionic Conduction In Doped Ceria-Carbonate Composite Electrolytes And The Performance Of Related Fuel Cells* (**Assist Prof. of ChE, Tianjin University**) (co-advised with Y.D. Li)
41. **D.F. Liu** (Aug.2011-Dec.2013) (from South China University of Technology), *Ph.D Dissertation: The ionic conduction in doped-ceria-carbonate composite electrolytes and the performance of related fuel cells* (**Post-Dr, KAUST, Saudi Arabi**) (co-advised with F.X. Xi)
42. **Y. Liu** (Aug.2012,-Oct.,2014) (from Hua Zhong University of Science and Technology), *Ph.D. Dissertation: Post-combustion CO₂ Capture using Metal-Organic Frameworks (MOFs): Experiments and Simulation* (**Post-dr at Georgia Tech**) (co-advised with J. Liu)
43. **Huifeng Zhang** (Aug. 2013-Oct.2017) *Ph.D. Dissertation: Study on hydrolysis of ZIF-8 structure (ZIF-8 crystallites and polycrystalline ZIF-8 membrane) at room temperature and involved mechanism and its improvement in hydrostability* (**Tianjin Ocean Research Institute**) (co-advised with B.Q. Zhang)
44. **Tianjia Chen** (Aug 2014-Sept 2018), *Ph.D. Dissertation: Study on Poisoning Mechanism of Sulfur-Containing Gas on Ceramic-Carbonate Dual Phase Membrane for CO₂ separation* (**Inner Mongolia University of Technology**) (co-advised with Y.D. Li)
45. **Suijun Wang** (Aug., 2016-July, 2020), *Ph.D. Dissertation: Study on Performance Failure of Lithium Ion Batteries via Anodic Side Reactions* (**China Electric Power Research Institute**)

M.S. with Thesis

1. **C.-H. Chang** (Jan. 1992- Nov. 1993), *Thesis: Thermal and Hydrothermal Stability & Its Improvement of Nanostructured Ceramic Membranes*
2. **W. Wang** (Sept. 1991 - April, 1994), *Thesis: Analysis of Dense Ceramic Membrane Reactors for Oxidative Coupling Of Methane*
3. **R. Gopalan** (Sept. 1992 - July, 1994), *Thesis: Role of Dopants on the Thermal Stability Improvement of Porous Titania and Zirconia Membranes*
4. **V. Jayaraman** (Sept. 1992 - March, 1995), *Thesis: Synthesis and Gas Transport Properties of Ultrathin Metallic Membranes*
5. **L. Luo** (Sept. 1994 - June, 1996), *Thesis: Simulation and Optimization of Membrane Reactors for Oxidative Coupling of Methane*(Co-advised with Y.K. Kao)
6. **F. Alvarez** (1993-1996) (part-time M.S.), *Project: Membranes for Environmental Applications*
7. **M. Chandak** (Sept. 1994 - Oct.1996), *Thesis: Sorption and Diffusion of Volatile Organic Compounds in Zeolite and Zeolite Filled Polymer Membranes*
8. **Y. Wang** (Sept. 1994 - Oct., 1996), *Thesis: Synthesis and Modification of Ceramic Membranes for Gas Separation*
9. **Ben McCool** (Dec., 1996- Oct. 1998), *Thesis: Synthesis and hydrogen permeation properties of sputter deposited palladium-silver membranes*
10. **Rishi Sondhi** (Sept., 1997- Sept., 1999), *Thesis: Fouling minimization and regeneration of ceramic membranes by back pulsing*
11. **Charlie Cooper** (April, 1998- Sept., 1999), *Thesis: Atomic layer CVD modification of nanoporous ceramic membranes*
12. **Neelesh Rane** (Sept., 2000- June, 2002), *Thesis: Cerium oxide thin film and membranes*
13. **S. G. Cheng** (Sept. 2000-June, 2003), *Thesis: Proton-conducting ceramic membranes for hydrogen separation*
14. **Rentian Xiong** (Sept., 2001- June, 2003), *Thesis: Novel inorganic sorbent for high-temperature carbon dioxide separation*
15. **S. Kim** (Sept. 2001- Nov., 2003), *Modified ordered mesoporous silica for carbon dioxide separation (co-advised with V. Guliants)*
16. **S. Sanjay** (Sept., 2001-June, 2004), *Methacrylate and Ca-Alginate polymers as barrier coatings for protection and controlled release of vitamin C (co-advised with V. Guliants)*
17. **S.J. Chung** (Sept.,2002-Aug, 2004), *Dual-phase inorganic membrane for high-temperature carbon dioxide separation*
18. **Sarah Gladding** (Dec., 2003-Dec., 2004), *Porous inorganic supported biological membranes for use in ion channeling*
19. **Deepak Singh** (Jan, 2005-May, 2007), *Bilayer lipid membrane structure supported on inorganic materials*
20. **Duo Li** (July., 2005- Dec., 2009), *Ordered 3D mesoporous materials.*
21. **Teresa Rosa** (Sept., 2008- Oct., 2010) *Synthesis of Amine-Modified Aerogel Sorbents and Metal-Organic Framework-5 (MOF-5) Membranes for Carbon Dioxide Separation (co-advised with R. Pfeffer)*
22. **J.Y. Cai** (Sept. 2007-Aug. 2010) *Advanced Materials for Electrochemical Reactors* (co-advised with Don Gervasio)
23. **Ting Pang** (Sept 2011-Aug., 2012) *Design of IGCC Process with zeolite membrane reactor for water gas shift reaction and carbon dioxide capture.*
24. **Amit Yadav** (Sept.2010-Aug., 2012) *Pervaporation of Ethanol/Water mixtures using PDMS Mixed Matrix Membranes (co-advised with Mary Laura Lind)*
25. **Stewart Mann** (Sept., 2012-July, 2014) *Modeling and Analysis on Pervaporation Separation of Composite Zeolite Membranes*
26. **Christopher Bremer** (Sept., 2014-May, 2015) *Dual-Phase Samarium-Doped Ceria and Molten-Carbonate Membrane Reactor Applications to the Water-Gas Shift Reaction: Accurate Reactor Sizing and Cost-Benefit Analysis*

26. **Gaurav Sharma** (Sept., 2014-May, 2016) Improved Synthesis and Thermal Stability of Electrode-supported α -alumina Separator for Lithium Ion Batteries
27. **Suzanne Williams** (Sept, 2014- July, 2016) Experimental and Modeling Study on Pervaporation Separation of Ethanol and Water Mixture by Polycrystalline MFI Zeolite Membranes
28. **Paul McAfee** (May 2016-July, 2017) Inorganic separators for lithium-ion battery
29. **Narayan Kanhere** (Sept, 2015- May, 2017) Optimization of Particle Size of α -Alumina Separator on Performance of Lithium-Ion Batteries
30. **Richard Nile** (Sept, 2018-May, 2019) Dual-phase membranes for CO₂ separation.

In Addition, Lin Supervised over 40 Post-Doctors and Visiting Scholars at Univ. of Cincinnati and ASU.

RESEARCH FUNDING

Lin has received more than **85 grants and contracts** totaling about **\$20 Million** from the federal government (National Science Foundation, Department of Energy, Department of Defense, Environmental Protection Agency), private industrial (BP, BOC/Linde, Exxon, Stage Grid etc), and private funding agencies (Petroleum Research Fund etc) to support his research and educational activities with outputs summarized above.