

Lin, Li-Chiang (林立強)

Associate Professor

B.S. in Chemical Engineering
National Taiwan University, 2006
M.S. in Chemical Engineering
National Taiwan University, 2007
Ph.D. in Chemical Engineering
University of California, Berkeley, 2014
Postdoctoral Researcher
Materials Science and Engineering
Massachusetts Institute of Technology, 2014

Research and Professional Interests

Molecular Simulation
Nanoporous Materials
Gas Adsorption and Separation
Membrane Separation

Journal Papers

1. Jamali, S.H.; Vlugt, T.J.H & **Lin, L.-C.*** Atomistic Understanding of Zeolite Nanosheets for Water Desalination, *J. Phys. Chem. C*, 121, 11273-11280, 2017. *** Selected as the ACS Editors' Choice and featured as the cover of the issue
2. **Lin, L.-C.**; Paik, D. & Kim, J. Understanding Gas Adsorption in MOF-5/Graphene Oxide Composite Material, *Phys. Chem. Chem. Phys.*, 19, 11639-11644, 2017.
3. Deshpande, N.; Pattanaik, L.; Whitaker, M.W.; Yang, C.-T.; **Lin, L.-C.** & Brunelli, N.A. Selectively Converting Glucose to Fructose Using Immobilized Tertiary Amines, *J. Catal.*, 353, 205-210, 2017.
4. Van der Mynsbrugge, J.; Janda, A.; Mallikarjun Sharada, S.; **Lin, L.-C.**; Van Speybroeck, V.; Head-Gordon, M. & Bell, A. Theoretical Analysis of the Influence of Pore Geometry on Monomolecular Cracking and Dehydrogenation of n-Butane in Brønsted-Acid Zeolites, *ACS Catal.*, 7, 2685-2697, 2017.
5. Liou, K.-H.; Kang, D.-Y.* & **Lin, L.-C.*** Investigating the Potential of Single-walled Aluminosilicate Nanotubes in Water Desalination, *ChemPhysChem*, 18, 179-183, 2017. ***Featured as the back cover of the issue
6. Becker, T.; Heinen, J.; Dubbeldam, D.; **Lin, L.-C.** & Vlugt, T. Polarizable Force Fields for CO₂ and CH₄ Adsorption in M-MOF-74, *J. Phys. Chem. C*, 121, 4659-4673, 2017.
7. Janda, A.; Vlasisavljevich, B.; Smit, B.; **Lin, L.-C.*** & Bell, A.T.* Effects of Zeolite Pore and Cage Topology on Thermodynamics of n-Alkane Adsorption at Brønsted Protons in Zeolites at High Temperature, *J. Phys. Chem. C*, 121, 1618-1638, 2017.
8. Cho, E.H. & **Lin, L.-C.*** Systematic Molecular Model Development with Reliable Charge Distributions for Gaseous Adsorption in Nanoporous Materials, *J. Mater. Chem. A*, 6, 16029-16042, 2018.
9. Lim, J.R.; Yang, C.-T.; Kim, J. & **Lin, L.-C.***, Transferability of CO₂ Force Fields for Prediction of Adsorption Properties in All-Silica Zeolites, *J. Phys. Chem. C*, 122, 10892-10903, 2018.
10. Becker, T.; Luna-Triguero, A.; Vicent-Luna, J.M.; **Lin, L.-C.**; Dubbeldam, D.; Calero, S. & Vlugt, T. Potential of Polarizable Force Fields for Predicting the Separation Performance of Small Hydrocarbons in M-MOF-74, *Phys. Chem. Chem. Phys.*, 20, 28848-28859, 2018.

11. Becker, T.; **Lin, L.-C.**; Dubbeldam, D. & Vlugt, T. Polarizable Force Field for CO₂ in M-MOF-74 Derived from Quantum Mechanics, *J. Phys. Chem. C*, 122, 24488-24498, 2018.
12. Bien, C.E; Chen, K.K.; Chien, S.-C.; Reiner, B.R.; **Lin, L.-C.**; Wade, C.R.* & Ho, W.S.W. A Bioinspired Metal-Organic Framework for Trace CO₂ Capture, *J. Am. Chem. Soc.*, 140, 12662-12666, 2018.
13. Zou, C. & **Lin, L.-C.*** Exploring the Potential and Design of Zeolite Nanosheets as Pervaporation Membranes for Ethanol Extraction, *Chem. Commun.*, 54, 13200-13203, 2018. *** Featured as the inside front cover of the issue
14. Yang, C.-T.; Kshiragar, A.R; Charaf Eddin, A.; **Lin, L.-C.*** & Poloni, R.* , Tuning Gas Adsorption by Metal Node Blocking in Photoresponsive Metal-Organic Frameworks, *Chem. Eur. J.*, 24, 15167-15172, 2018. *** Featured as the frontispiece of the issue
15. Lyu, Q.; Sun, S.; Li, C.; Hu, S.* & **Lin, L.-C.***, Rational Design of Two-dimensional Hydrocarbon Polymer as Ultrathin-film Nanoporous Membranes for Water Desalination, *ACS Appl. Mater. Interfaces*, 10, 18778-18786, 2018.
16. Chen, Y.-R.; Liou, K.-H.; Kang, D.-Y.; Chen, J.-J. & **Lin, L.-C.***, Investigation of the Water Adsorption Properties and Structural Stability of MIL-100(Fe) with Different Anions, *Langmuir*, 34, 4180-4187, 2018.
17. Yang, C.-T.; Janda, A.; Bell, A.T.* & **Lin, L.-C.***, Atomistic Investigations of the Effects of Si/Al Ratio and Al Distribution on the Adsorption Selectivity of n-Alkanes in Brønsted-Acid Zeolites, *J. Phys. Chem. C*, 122, 9397-9410, 2018. *** Featured as the cover of the issue
18. Cho, J.W.; **Lin, L.-C.***, & Grossman, J.C.* Role of Structural Defects in the Water Adsorption Properties of MOF-801, *J. Phys. Chem. C*, 122, 5545-5552, 2018.
19. Van der Mynsbrugge, J.; Janda, A.; **Lin, L.-C.**; Van Speybroeck, V.; Head-Gordon, M. & Bell, A.T. Understanding Brønsted-Acid Catalyzed Monomolecular Reactions of Alkanes in Zeolite Pores by Combining Insights from Experiment and Theory, *ChemPhysChem*, 19, 341-358, 2018. *** Featured as the cover of the issue and highlighted in the cover profile
20. Su, C.-Y.; Lyu, Q.; Kang, D.-Y.*; Yang, Z.-H.; Lam, C. H.; Chen, Y.-H.; Lo, S.-C.; Hua, C.-C.* & **Lin, L.-C.*** Hexagonal Superalignment of Nano-objects with Tunable Separation in a Dilute and Spacer-free Solution, *Phys. Rev. Lett.*, 123, 238002, 2019.
21. Cho, E.H. & **Lin, L.-C.*** Electrostatic Potential Optimized Molecular Models for Molecular Simulations: CO, CO₂, COS, H₂S, N₂, N₂O, and SO₂, *J. Chem. Theory Comput.*, 15, 6323-6332, 2019.
22. Kan, M.-Y.; Shin, J. H.; Yang, C.-T.; Chang, C.-K.; Lee, L.-W.; Chen, B.-H.; Lu, K.-L.; Lee, J. S.*; **Lin, L.-C.*** & Kang, D.-Y.* Activation-Controlled Structure Deformation of Pillared-Bilayer Metal-Organic Framework Membranes for Gas Separations, *Chem. Mater.*, 31, 7666-7677, 2019.
23. Sinha, P.; Datar, A.; Jeong, C.; Deng, X.; Chung, Y. G. & **Lin, L.-C.*** Surface Area Determination of Porous Materials Using the Brunauer-Emmett-Teller (BET) Method: Limitations and Improvements, *J. Phys. Chem. C*, 123, 20195-20209, 2019.
24. Lyu, Q.; Deng, X.; Hu, S.; **Lin, L.-C.*** & Ho, W.S.H. Exploring the Potential of Defective UiO-66 as Reverse Osmosis Membranes for Desalination, *J. Phys. Chem. C.*, 123, 16118-16126, 2019.

25. Yu, Y.; Chien, S.-C.; Sun, J.; Hettiaratchy, E.C.; Myers, R.C.; **Lin, L.-C.*** & Wu, Y.* Excimer-Mediated Intermolecular Charge Transfer in Self-Assembled Donor-Acceptor Dyes on Metal Oxides, *J. Am. Chem. Soc.*, 141, 8727-8731, 2019.
26. Cho, E.H.; Lyu, Q. & **Lin, L.-C.*** Computational Discovery of Nanoporous Materials for Energy- and Environment-related applications, *Mol. Sim.*, 45, 1122-1147, 2019.
27. Yu, Y.; Click, K. A.; Chien, S.-C.; Sun, J.; Curtze, A.; **Lin, L.-C.*** & Wu, Y.* Decoupling pH-Dependence of Flat-Band Potential in Aqueous Dye-Sensitized Electrodes, *J. Phys. Chem. C*, 123, 8681-8687, 2019.
28. Mohona, T.M.; Gupta, A.; Masud, A.; Chien, S.-C.; **Lin, L.-C.**; Nalam, P.C. & Aich, N. Aggregation Behavior of Inorganic 2D Nanomaterials Beyond Graphene: Insights from Molecular Modeling and Modified DLVO Theory, *Environ. Sci. Technol.*, 53, 4161-4172, 2019.
29. Deshpande, N.; Cho, E.H.; Spanos, A.P.; **Lin, L.-C.** & Brunelli, N.A. Tuning Molecular Structure of Tertiary Amine Catalysts for Glucose Isomerization, *J. Catal.*, 372, 119-127, 2019.
30. Janda, A.; **Lin, L.-C.**; Vlaisavljevich, B.; Van der Mynsbrugge, J.; Bell, A.T. RE: "Impact of Zeolite Structure on Entropic-Enthalpic Contributions to Alkane Monomolecular Cracking: An IR Operando Study" by S. A. Kadam, H. Li, R. F. Wormsbacher, A. Travert, *Chem. Eur. J.*, 25, 7225-7226, 2019.
31. Cho, E.H.; Deng, X.; Zou, C. & **Lin, L.-C.*** Machine Learning-Aided Computational Study of Metal-Organic Frameworks for Sour Gas Sweetening, *J. Phys. Chem. C*, 124, 27580-27591, 2020.
32. Deng, X.; Zou, C.; Han, Y*; **Lin, L.-C.*** & Ho, W.S.* Computational Evaluation of Carriers in Facilitated Transport Membranes for Post-Combustion Carbon Capture, *J. Phys. Chem. C*, 124, 25322-25330, 2020.
33. Zou, C. & **Lin, L.-C.*** Potential and Design of Zeolite Nanosheets as Pervaporation Membranes for Ethanol Extraction, *Ind. Eng. Chem. Res.*, 59, 12845-12854, 2020.
34. Chang, T.-A.; Hsu, W.-J.; Hung, T.-H.; Hu, S.-W.; Tsao, H.-K.; Zou, C.; **Lin, L.-C.**; Kang, Y.-H.; Chen, J.-J. & Kang, D.-Y. Toward Long-lasting Low-haze Anti-fog Coatings through the Deposition of Zeolites, *Ind. Eng. Chem. Res.*, 59, 13042-13050, 2020.
35. Datar, A.; Chung, Y.G.* & **Lin, L.-C.*** Beyond the BET Analysis: the Surface Area Prediction of Nanoporous Materials Using a Machine Learning Method, *J. Phys. Chem. Lett.*, 11, 5412-5417, 2020.
36. Lyu, Q.; Kang, D.-Y.; Hu, S.* & **Lin, L.-C.*** Exploiting Interior Surface Functionalization in Reverse Osmosis Desalination Membranes to Mitigate Permeability-selectivity Trade-off: Molecular Simulations of Nanotube-based Membranes, *Desalination*, 491, 114537, 2020.
37. Zou, C.; Penley, D. R.; Cho, E.H. & **Lin, L.-C.*** Efficient and Accurate Charge Assignments via a Multilayer Connectivity-based Atom Contribution (m-CBAC) Approach, *J. Phys. Chem. C*, 124, 11428-11437, 2020.
38. Risplendi, F.; Raffone, F.; **Lin, L.-C.**; Grossman, J.C. & Cicero, G. Fundamental Insights on Hydration Environment of Boric Acid and Its Role in Separation from Saline Water, *J. Phys. Chem. C*, 124, 1438-1445, 2020.
39. Shin, J.H.; Kan, M.-Y.; Oh, J.-W.; Yu, H.J.; **Lin, L.-C.**; Kim, J.-H.; Kang, D.-Y. & Lee.

- J.S. Solubility Selectivity-enhanced SIFSIX-3-Ni-containing Mixed Matrix Membranes for Improved CO₂/CH₄ Separation Efficiency, *J. Membr. Sci.*, 633, 119390, 2021.
40. Liu, Y.; Lyu, Q.; Wang, Z.; Sun, Y.; Li, C.; Sun, S.; **Lin, L.-C.*** & Hu, S.* A Post-synthetically Functionalized COF sponge with Flame Retardancy as Absorbent for Spilled Oil Recovery, accepted, *J. Mater. Sci.*, 56, 13031-13042, 2021.
 41. Cho, E.H. & **Lin, L.-C.*** Nanoporous Materials Recognition via 3D Convolutional Neural Networks: Prediction of Adsorption Properties, *J. Phys. Chem. Lett.*, 12 (9), 2279-2285, 2021.
 42. Datar, A.; Witman, M. & **Lin, L.-C.*** Improving Computational Assessment of Porous Materials for Water Adsorption Applications via Flat Histogram Methods, *J. Phys. Chem. C*, 125, 4253-4266, 2021.
 43. Chiou, D.-S.; Yu, H. J.; Hung, T.-H.; Lyu, Q.; Chang, C.-K.; Lee, J. S.*; **Lin, L.-C.*** & Kang, D.-Y.* Highly CO₂ Selective Metal-Organic Framework Membranes with Favorable Coulombic Effect, *Adv. Funct. Mater.*, 31, 2006924, 2021.
 44. Hsieh, Y.-H.; Zou, C.; Chen, J.-J.*; **Lin, L.-C.*** & Kang, D.-Y.* Pillared-bilayer Metal-organic Framework Membranes for Dehydration of Isopropanol, *Microporous Mesoporous Mat.*, 326, 111344, 2021.
 45. An, H.; Cho, K.Y.; Lyu, Q.; Chiou, D.-S.; Nam, K.J.; Kang, K.-Y.*; **Lin, L.-C.*** & Lee, J.S.* Facile Defect Engineering of Zeolitic Imidazolate Frameworks Towards Enhanced C₃H₆/C₃H₈ Separation Performance, *Adv. Funct. Mater.*, 32, 2105577, 2021.
 46. Hung, T.-H.; Deng, X.; Lyu, Q.; **Lin, L.-C.*** & Kang, K.-Y.* Coulombic Effect on Permeation of CO₂ in Metal-organic Framework Membranes, *J. Membr. Sci.*, 639, 119742, 2021.
 47. Guo, J.-C.; Zou, C.; Chen, J.-J.*; **Lin, L.-C.*** & Kang, K.-Y.* NaP1 Zeolite Membranes with High Selectivity for Water-alcohol Pervaporation, *J. Membr. Sci.*, 639, 119762, 2021.
 48. Kan, M.-Y.; Lyu, Q.; Chu, Y.-H.; Hsu, C.-C.; Lu, K.-L.; **Lin, L.-C.***; Kang, D.-Y.* Suppressing Defect Formation in Metal-organic Framework Membranes via Plasma-assisted Synthesis for Gas Separations, *ACS Appl. Mater. Interfaces*, 13, 41904-41915, 2021.
 49. Hu, J.; Gu, X.; **Lin, L.-C.***; Bakshi, B.* Toward Sustainable Metal-Organic Frameworks for Post-Combustion Carbon Capture by Life Cycle Assessment and Molecular Simulation, *ACS Sustain. Chem. Eng.*, 9, 12132-12141, 2021.
 50. Hung, T.-H.; Lyu, Q.; **Lin, L.-C.*** & Kang, K.-Y.* Transport-Relevant Pore Limiting Diameter for Molecular Separations in Metal-Organic Framework Membranes, *J. Phys. Chem. C*, 125, 20416-20425, 2021.
 51. Datar, A.; Witman, M.; **Lin, L.-C.*** Monte Carlo Simulations for Water Adsorption in Porous Materials: Best Practices and New Insights, *AIChE J.*, 67, e17447, 2021. *** Featured in the “2021 AIChE Futures” issue
 52. Yang, C.-T.; Deng, X.; **Lin, L.-C.*** In Silico Screening of Zeolites for Highly Selective Adsorption of Central C-C Bonds Toward More Effective Alkane Cracking, *Ind. Eng. Chem. Res.*, 60, 15174-15183 2021. *** Featured in “I&EC Research 2021 Class of Influential Researchers - The Americas”
 53. Chen, T.-Y.; Deng, X.; **Lin, L.-C.**, Ho, W.S.W.* New Sterically Hindered Polyvinylamine-containing Membranes for CO₂ Capture from Flue Gas, *J. Membr. Sci.*,

645, 120195, 2022.

54. Wang, X.; Lyu, Q.; Tong, T.; Sun, K.; **Lin, L.-C.**; Tang, C.Y.; Yang, F.; Guiver, M.D.*; Quan, X.*; Dong, Y.* Robust Ultrathin Nanoporous MOF Membrane with Intra-crystalline Defects for Fast Water Transport, *Nature Communications*, 13, 266, 2022.
55. Hung, T.-H.; Xu, Z.-H.; Kang, K.-Y.; **Lin, L.-C.*** Chemistry-encoded Convolutional Neural Networks for Predicting Gaseous Adsorption in Porous Materials, *J. Phys. Chem. C*, 126, 2813-2822, 2022.
56. Fu, M.; Deng, X.; Wang, S.-Q; Yang, F.; **Lin, L.-C.***; Zaworotko, M.J.*; Dong, Y.* Scalable Robust Nano-porous Zr-based MOF adsorbent with High-Capacity for Sustainable Water Purification, *Sep. Purif. Technol.*, 288, 120620, 2022.
57. Datar, A.; Witman, M.; **Lin, L.-C.*** Responses to Comments on “Monte Carlo Simulations for Water Adsorption in Porous Materials: Best Practices and New Insights”, *AIChE J.*, DOI: 10.1002/aic.17684, in press, 2022.
58. Deng, X.; Han, Y.*; **Lin, L.-C.***; Ho, W.S.W.* Computational Prediction of Water Sorption in Facilitated Transport Membranes, *J. Phys. Chem. C*, 126, 3661-3670, 2022.

Conference Papers

1. Yang, C.-T.; Eddin, A.C.; Poloni, R. & **Lin, L.-C.***, Atomistic Understandings of the CO₂ Uptake Difference in Photo Responsive Metal-Organic Frameworks, 2017 AIChE Annual Meeting, Minnesota, USA, 2017.
2. **Lin, L.-C.***; Jamali, S.H. & Vlught, T.J.H., Molecular Dynamics Simulations of Zeolite Nanosheets for Water Desalination, 2017 AIChE Annual Meeting, Minnesota, USA, 2017.
3. Co-chair, “Molecular Simulation of Adsorption II” session, 2017 AIChE Annual Meeting, Minnesota, USA, 2017.
4. Deshpande, N.; Pattanaik, L.; Whitaker, M.; Yang, C.-T.; **Lin, L.-C.** & Brunelli, N., Designing Immobilized Tertiary Amine Catalysts for Selective Isomerization of Glucose to Fructose, 2018 AIChE Annual Meeting, Pittsburgh, USA, 2018.
5. Brunelli, N.; Deshpande, N.; Kobayashi, T.; Yang, C.-T.; Cho, E.H.; Whitaker, M.; Parulkar, A.; Pruski, M. & **Lin, L.-C.**, Tuning the Molecular Design of Tertiary Amine Catalysts on Amorphous Mesoporous Silica Supports for Selective Glucose Isomerization and Acid-Base Cooperative Reactions, 2018 AIChE Annual Meeting, Pittsburgh, USA, 2018.
6. Cho, E.H. & **Lin, L.-C.***, Molecular Model Development with Reliable Charge Distributions for Gaseous Adsorption in Nanoporous Materials, 2018 AIChE Annual Meeting, Pittsburgh, USA, 2018.
7. Zou, C. & **Lin, L.-C.***, Computationally Investigating Zeolite Nanosheets as Pervaporation Membranes for Ethanol Extraction and the Role of Membrane Surfaces, 2018 AIChE Annual Meeting, Pittsburgh, USA, 2018.
8. Co-chair, “Molecular Simulation of Adsorption II” session, 2018 AIChE Annual Meeting, Pittsburgh, USA, 2018.
9. **Lin, L.-C.***, Computational Discovery of Nanoporous Materials for Energy-related Applications, 13th International Conference on Fundamentals of Adsorption, Cairns,

Australia, 2019.

10. Brunelli, N.; Deshpande, N.; Kobayashi, T.; Yang, C.-T; Cho, E.H.; Pruski, M. & **Lin, L.-C.**, Enhancing Acid-Base Cooperative Catalytic Activity of Aminosilica Materials through Tuning the Micropore Volume, 2019 AIChE Annual Meeting, Florida, USA, 2019.
11. Cho, E.H. & **Lin, L.-C.***, Molecular Models with Accurate Descriptions in Electrostatic Potential for Molecular Simulations of Adsorption, 2019 AIChE Annual Meeting, Florida, USA, 2019.
12. Brunelli, N.; Deshpande, N.; Cho, E.H.; Kane, A. & **Lin, L.-C.**, Impact of Surface Loading on Catalytic Activity of Regular and Low Micropore SBA-15 in the Knoevenagel Condensation, 2019 AIChE Annual Meeting, Florida, USA, 2019.
13. Hu, J.; **Lin, L.-C.*** & Bakshi, B., Toward Sustainable Metal-Organic Frameworks for Post-Combustion Carbon Capture – Identifying Improvement Opportunities by Molecular Simulation and Life Cycle Assessment, 2019 AIChE Annual Meeting, Florida, USA, 2019.
14. Datar, A.; Sinha, P.; Jeong, C.; Deng, X.; Chung, Y.G. & **Lin, L.-C.***, Surface Area Determination of Metal-Organic Frameworks (MOFs) Using the Brunauer-Emmett-Teller (BET) Method: Limitations and Improvements, 2019 AIChE Annual Meeting, Florida, USA, 2019.
15. Zou, C. & **Lin, L.-C.***, Large-Scale Computational Study of Zeolite Nanosheets as Pervaporation Membranes for Ethanol Extraction, 2019 AIChE Annual Meeting, Florida, USA, 2019.
16. **Lin, L.-C.***, Computational Study of Zeolite Nanosheets for Filtration Applications, 2020 International Symposium on Porous Materials (ISPM), virtual meeting, 2020.
17. Cho, E.H.; Deng, X.; & **Lin, L.-C.***, Machine Learning-Aided Discovery and Design of Metal-Organic Frameworks for Sour Gas Sweetening, 2020 AIChE Annual Meeting, virtual meeting, 2020.
18. Zou, C.; Penley, D.R.; Cho, E.H. & **Lin, L.-C.***, Multi-Layer Connectivity-Based Atom Contribution (m-CBAC) Approach: Fast and Accurate Charge Assignments to MOFs for Adsorption Simulations, 2020 AIChE Annual Meeting, virtual meeting, 2020.
19. Deng, X.; Zou, C.; Han, Y.; **Lin, L.-C.*** & Ho, W.S.W., Computational Evaluation of Carriers in Facilitated Transport Membranes for Post-Combustion Carbon Capture, 2020 AIChE Annual Meeting, virtual meeting, 2020.
20. Chen, T.-Y.; Deng, X.; **Lin, L.-C.** & Ho, W.S.W., Improved Synthesis of Sterically Hindered Poly(N-methyl-N-vinylamine) Membrane for Post-Combustion Carbon Capture, 2020 AIChE Annual Meeting, virtual meeting, 2020.
21. Han, Y.; Deng, X.; **Lin, L.-C.** & Ho, W.S.W. Facilitated Transport Membranes with Tunable Amine–CO₂ Chemistry for Hydrogen Purification, 2020 AIChE Annual Meeting, virtual meeting, 2020.
22. Brunelli, N.; Deshpande, N.; Cho, E.H. & **Lin, L.-C.**, Selective Glucose Isomerization to Fructose Using a Heterogeneous Immobilized Tertiary Amine with Tuned Molecular Design, 2020 AIChE Annual Meeting, virtual meeting, 2020.
23. Han, Y.; Deng, X.; **Lin, L.-C.** & Ho, W.S.W., New Facilitated Transport Membranes for Hydrogen Purification from Coal-Derived Syngas, 2020 AIChE Annual Meeting, virtual meeting, 2020.
24. Chen, T.-Y.; Deng, X.; **Lin, L.-C.** & Ho, W.S.W., Improved Synthesis of Sterically Hindered Polyvinylamine and Its Application in Facilitated Transport Membranes for CO₂ Capture from Flue, 2020 AIChE Annual Meeting, virtual meeting, 2020.

25. Datar, A.; Chung, Y.G. & **Lin, L.-C.***, Surface Area Prediction of Nanoporous Materials Using Machine Learning Methods, 2020 AIChE Annual Meeting, virtual meeting, 2020.
26. Chair, “Diffusion, Transport, and Dynamics in Adsorption Systems” session, 2020 AIChE Annual Meeting, virtual meeting, 2020.
27. Co-chair, “Molecular and Data Science Modeling of Adsorption” session, 2020 AIChE Annual Meeting, virtual meeting, 2020.
28. **Lin, L.-C.***, Computational Study of Porous Materials for Water Adsorption Applications, 2021 *International Symposium on Porous Materials (ISPM)*, Japan, **2021**. (Invited talk, attended virtually)
29. **Lin, L.-C.***, Computational Materials Discovery for Reverse Osmosis Desalination and Water Harvesting, 2021 KICChE Annual Meeting, South Korea, **2021**. (Invited talk, attended virtually)
30. Belding, J. & **Lin, L.-C.***, Molecular Dynamics Evaluation of Differing Pore Geometry in Nanoporous Membranes for Reverse Osmosis Desalination, 2021 AIChE Annual Meeting, Massachusetts, USA, 2021.
31. Brunelli, N.; Deshpande, N.; **Lin, L.-C.** & Cho, E.H., Selective Glucose Isomerization to Fructose Using a Heterogeneous Immobilized Tertiary Amine with Tuned Molecular Design, 2021 AIChE Annual Meeting, Massachusetts, USA, 2021.
32. Yang, C.-T.; Pandey, I.; Chen, C.-C.; Howe, J. & **Lin, L.-C.***, Deep Learning Molecular Force Field for Gaseous Adsorption in Metal-Organic Frameworks with Open-Metal Sites, 2021 AIChE Annual Meeting, Massachusetts, USA, 2021.
33. Pandey, I.; Yang, C.-T.; **Lin, L.-C.**; Chen, C.-C. & Howe, J., Understanding Carbon Monoxide Binding and Interactions in M-MOF-74 (M = Mg, Mn, Ni, Zn), 2021 AIChE Annual Meeting, Massachusetts, USA, 2021.
34. Datar, A.; Witman, W. & **Lin, L.-C.***, Improving Computational Assessment of Water Adsorption to Enable Large-Scale Screening of Porous Materials for Water Harvesting, 2021 AIChE Annual Meeting, Massachusetts, USA, 2021.
35. Chair, “Molecular and Data Science Modeling of Adsorption” session, 2021 AIChE Annual Meeting, Massachusetts, USA, 2021.

Honors and Others

1. I&EC Research 2021 Class of Influential Researchers - The Americas (2021)
2. World’s Top 2% of Scientists List, Elsevier (2021)
3. AIChE (American Institute of Chemical Engineers) Futures (2021)
4. Yushan Young Scholar Award, Ministry of Education, Taiwan (2021)
5. Alumni Award for Distinguished Teaching, The Ohio State University, USA (2021)
6. Early Career Editorial Board, Separation and Purification Technology (Elsevier, 2021 – present)
7. World’s Top 2% of Scientists List, Elsevier (2020)
8. Charles E. MacQuigg Award for Outstanding Teaching, College of Engineering, The Ohio State University, USA (2020)
9. Lumley Research Award, College of Engineering, The Ohio State University, USA (2020)

10. Scialog Fellow for Negative Emissions Science (2020)
11. Inaugural Holder of the Umit S. Ozkan Professorship, The Ohio State University, USA (2019-2021)
12. Excellence in Publications Award (triennial), International Adsorption Society (IAS) (2019)

