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Professor

B.S. in Chemical Engineering
National Taiwan University, 1994
Ph.D. in Chemical Engineering
University of Delaware, 2000

Research and Professional Interests
Applied Computational Chemistry
Statistical Thermodynamics
Renewable Energy

Journal Papers

1. T. Vikramaditya and **S. T. Lin**, "Limitations of Global Hybrids in Predicting the Geometries and Torsional Energy Barriers of Dimeric Systems and the Role of Hartree Fock and DFT Exchange", *Journal of Computational Chemistry*, (2019), (SCI,EI)

2. Y.-R. Tsai and **S.-T. Lin**, "Prediction and Reasoning for the Occurrence of Lower Critical Solution Temperature in Aqueous Solution of Ionic Liquids", *Industrial & Engineering Chemistry Research* 58, 10064−10072, (2019), (SCI,EI)

3. S. S. P. Sivajothi, **S.-T. Lin** and P. K. Maiti, "Efficient Computation of Entropy and Other Thermodynamic Properties for Two-Dimensional Systems Using Two-Phase Thermodynamic Model", *Journal of Physical Chemistry B* 123, 180-193, (2019), (SCI,EI)

4. T.-C. Liu and **S.-T. Lin**, "A new approach for developing exact local composition models for lattice fluids", *Journal of the Taiwan Institute of Chemical Engineers* 96, 63-73, (2019), (SCI,EI)

5. T.-C. Liu and **S.-T. Lin**, "Exact Local Composition Model for Two-Dimensional Lattice Fluids", *Industrial & Engineering Chemistry Research* 58, 20779-20787, (2019), (SCI,EI)

6. H. H. Liang, J. Y. Li, L. H. Wang, **S. T. Lin** and C. M. Hsieh, "Improvement to PR plus COSMOSAC EOS for Predicting the Vapor Pressure of Nonelectrolyte Organic Solids and Liquids", *Industrial & Engineering Chemistry Research* 58, 5030-5040, (2019), (SCI,EI)

7. C. H. Li, C. C. Tsai, M. Y. Liao, Y. A. Su, **S. T. Lin** and C. C. Chueh, "Stable, color-tunable 2D SCN-based perovskites: revealing the critical influence of an asymmetric pseudo-halide on constituent ions", *Nanoscale* 11, 2608-2616, (2019), (SCI,EI)

8. H. H. Hsu, C. H. Huang and **S. T. Lin**, "New Data Structure for Computational Molecular Design with Atomic or Fragment Resolution", *Journal of Chemical Information and Modeling* 59, 3703-3713, (2019), (SCI,EI)

9. L. S. Chu, D. T. Wu and **S. T. Lin**, "Theory and Kinetic Monte Carlo Simulation of Guest Molecule Transport in sI Clathrate Hydrates Based on Cage Hopping", *J. Phys. Chem. C* 123, 11233-11243, (2019), (SCI,EI)

10. C. K. Chang and **S. T. Lin**, "Extended Pitzer–Debye–Hückel Model for Long-Range Interactions in Ionic Liquids", *J. Chem. Eng. Data*, accepted, (2019), (SCI,EI)

11. 蘇子芳, 陳彥安 and **林祥泰**, "生活中發現 氣體水合物的舞台", *科學發展* 563, 58-65, (2019)

12. 蔡宗哲, 謝介銘, 梁興豪 and **林祥泰**, "應用狀態方程式預測藥物在超臨界二氧化碳的溶解度", *化工會刊* 66, 24-39, (2019)

13. 章絜鈞, 汪上曉, 康嘉麟, 許軒豪, 黃承軒 and **林祥泰**, "以深度學習模型預測量子力學性質及活性係數", *化工會刊* 66, 75-83, (2019)

14. **林祥泰**, "化工熱力學的新發展專輯前言", *化工會刊* 66, 1-2, (2019)

15. 余柏毅, 蔡昌哲 and **林祥泰**, "全自動熱力學物性預測與程序設計上的應用", *化工會刊* 66, 48-57, (2019)

16. L. H. Wang, C. M. Hsieh and **S. T. Lin**, "Prediction of Gas and Liquid Solubility in Organic Polymers Based on the PR plus COSMOSAC Equation of State", *Industrial & Engineering Chemistry Research* 57, 10628-10639, (2018), (SCI,EI)

17. J. Vrabec, M. Bernreuther, H. J. Bungartz, W. L. Chen, W. Cordes, R. Fingerhut, C. W. Glass, J. Gmehling, R. Hamburger, M. Heilig, M. Heinen, M. T. Horsch, C. M. Hsieh, M. Hulsmann, P. Jager, P. Klein, S. Knauer, T. Koddermann, A. Koster, K. Langenbach, **S. T. Lin**, P. Neumann, J. Rarey, D. Reith, G. Rutkai, M. Schappals, M. Schenk, A. Schedemann, M. Schonherr, S. Seckler, S. Stephan, K. Stobener, N. Tchipev, A. Wafai, S. Werth and H. Hasse, "SkaSim - Scalable HPC Software for Molecular Simulation in the Chemical Industry", *Chem. Ing. Tech.* 90, 295-306, (2018), (SCI,EI)

18. T. Vikramaditya, J. D. Chai and **S. T. Lin**, "Impact of non-empirically tuning the range-separation parameter of long-range corrected hybrid functionals on ionization potentials, electron affinities, and fundamental gaps", *Journal of Computational Chemistry* 39, 2378-2384, (2018), (SCI,EI)

19. Z.-Y. Lin, D. T. Wu and **S.-T. Lin**, "Equilibrium and Transport Properties of Methane at the Methane/Water Interface with the Presence of SDS", *J. Phys. Chem. C* 122, 29259−29267, (2018), (SCI,EI)

20. H. H. Hsu, C. H. Huang and **S. T. Lin**, "Fully Automated Molecular Design with Atomic Resolution for Desired Thermophysical Properties", *Industrial & Engineering Chemistry Research* 57, 9683-9692, (2018), (SCI,EI)

21. Y. A. Chen, C. K. Chu, Y. P. Chen, L. S. Chu, **S. T. Lin** and L. J. Chen, "Measurements of diffusion coefficient of methane in water/brine under high pressure", *Terr. Atmos. Ocean. Sci.* 29, 577-587, (2018), (SCI,EI)

22. C. Y. Chen, L. H. Wang, C. M. Hsieh and **S. T. Lin**, "Prediction of solid-liquid-gas equilibrium for binary mixtures of carbon dioxide plus organic compounds from approaches based on the COSMO-SAC model", *J. Supercrit. Fluids* 133, 318-329, (2018), (SCI,EI)

23. C. K. Chang, W. L. Chen, D. T. Wu and **S. T. Lin**, "Improved Directional Hydrogen Bonding Interactions for the Prediction of Activity Coefficients with COSMO-SAC", *Industrial & Engineering Chemistry Research* 57, 11229-11238, (2018), (SCI,EI)

24. T. Vikramaditya and **S.-T. Lin**, "Assessing the Role of Hartree-Fock Exchange, Correlation Energy and Long Range Corrections in Evaluating Ionization Potential and Electron Affinity in Density Functional Theory", *Journal of Computational Chemistry*

38, 1844–1852, (2017), (SCI,EI)

25. H. Lo, M.-T. Lee and **S.-T. Lin**, "Water Vacancy Driven Diffusion in Clathrate Hydrates: Molecular Dynamics Simulation Study", *J. Phys. Chem. C* 121, 8280–8289, (2017), (SCI,EI)

26. B.-S. Lee and **S.-T. Lin**, "Prediction and Screening of Solubility of Pharmaceuticals in Single- and Mixed-Ionic Liquids using COSMO-SAC model", *AIChE Journal* 63, 3096–3104, (2017), (SCI,EI)

27. B.-S. Lee and **S.-T. Lin**, "The Origin of Ion-Pairing and Redissociation of Ionic Liquid", *Journal of Physical Chemistry B* 121, 5818–5823, (2017), (SCI,EI)

28. R. Fingerhut, W.-L. Chen, A. Schedemann, W. Cordes, J. Rarey, C.-M. Hsieh, J. Vrabec and **S.-T. Lin**, "Comprehensive Assessment of COSMO-SAC Models for Predictions of Fluid-Phase Equilibria", *Industrial & Engineering Chemistry Research* 56, 9868–9884, (2017), (SCI,EI)

29. W.-L. Chen and **S.-T. Lin**, "Explicit consideration of spatial hydrogen bonding direction for activity coefficient prediction based on implicit solvation calculations", Physical *Chemistry Chemical Physics* 19, 20367-20376, (2017), (SCI,EI)

30. L. Yang, C.-W. Chang and **S. T. Lin**, "A Novel Multiscale Approach for Rapid Prediction of Phase Behaviors with Consideration of Molecular Conformations", *AIChE Journal* 62, 4047–4054, (2016), (SCI,EI)

31. J. Y. Wu, L. J. Chen, Y. P. Chen and **S. T. Lin**, "Molecular dynamics study on the nucleation of methane + tetrahydrofuran mixed guest hydrate", *Physical Chemistry Chemical Physics* 18, 9935-9947, (2016), (SCI,EI)

32. C.-K. Chu, **S.-T. Lin**, Y.-P. Chen, P.-C. Chen and L.-J. Chen, "Chain length effect of ionic liquid 1-alkyl-3-methylimidazolium chloride on the phase equilibrium of methane hydrate", *Fluid Phase Equilibria* 413, 57-64, (2016), (SCI,EI)

33. Y.-P. Chen, L.-J. Chen, **S.-T. Lin** and M. Tang, "Measurement for the Dissociation Conditions of Methane and Carbon Dioxide Hydrate in the Presence of Additive Materials", *MRS Advances* 1, 1013-1019, (2016),

34. W.-L. Chen, C.-M. Hsieh, L. Yang, C.-C. Hsu and **S.-T. Lin**, "A Critical Evaluation on the Performance of COSMO-SAC Models for Vapor-Liquid and Liquid-Liquid Equilibrium Predictions based on Different Quantum Chemical Calculations", *Industrial & Engineering Chemistry Research* 55, 9312–9322, (2016), (SCI,EI)

35. C.-S. Chen and **S.-T. Lin**, "Prediction of pH Effect on the Octanol-Water Partition Coefficient of Ionizable Pharmaceuticals", *Industrial & Engineering Chemistry Research* 55, 9284–9294, (2016), (SCI,EI)

36. L. Yang and **S. T. Lin**, "Rapid prediction of solvation free energy and vapor pressure of liquid and solid from molecular dynamics simulation", *Aiche Journal* 61, 2298-2306, (2015), (SCI,EI)

37. J. Y. Wu, L. J. Chen, Y. P. Chen and **S. T. Lin**, "Molecular Dynamics Study on the Equilibrium and Kinetic Properties of Tetrahydrofuran Clathrate Hydrates", *J. Phys. Chem. C* 119, 1400-1409, (2015), (SCI,EI)

38. J. Y. Wu, L. J. Chen, Y. P. Chen and **S. T. Lin**, "Molecular Dynamics Study on the Growth Mechanism of Methane Plus Tetrahydrofuran Mixed Hydrates", *J. Phys. Chem. C* 119, 19883-19890, (2015), (SCI,EI)

39. L. H. Wang, C. M. Hsieh and **S. T. Lin**, "Improved Prediction of Vapor Pressure for Pure Liquids and Solids from the PR plus COSMOSAC Equation of State", *Industrial & Engineering Chemistry Research* 54, 10115-10125, (2015), (SCI,EI)

40. T. J. Lin and **S. T. Lin**, "Theoretical study on the torsional potential of alkyl, donor, and acceptor substituted bithiophene: the hidden role of noncovalent interaction and backbone conjugation", *Physical Chemistry Chemical Physics* 17, 4127-4136, (2015), (SCI,EI)

41. J. C. Lee, J. D. Chai and **S. T. Lin**, "Assessment of density functional methods for exciton binding energies and related optoelectronic properties", *Rsc Advances* 5, 101370-101376, (2015), (SCI,EI)

42. B. S. Lee and **S. T. Lin**, "Screening of ionic liquids for CO2 capture using the COSMO-SAC model", *Chemical Engineering Science* 121, 157-168, (2015), (SCI,EI)

43. B. S. Lee and **S. T. Lin**, "A Priori Prediction of Dissociation Phenomena and Phase Behaviors Ionic Liquids", *Industrial & Engineering Chemistry Research* 54, 9005 - 9012, (2015), (SCI,EI)

44. P. K. Lai and S. T. Lin, "Internal Coordinate Density of State from Molecular Dynamics Simulation", Journal of Computational Chemistry 36, 507-517, (2015), (SCI,EI)

45. Y. W. Juan, M. Tang, L. J. Chen, S. T. Lin, P. C. Chen and Y. P. Chen, "Measurements for the equilibrium conditions of methane hydrate in the presence of cyclopentanone or 4-hydroxy-4-methyl-2-pentanone additives", Fluid Phase Equilibria 386, 162-167, (2015), (SCI,EI)

46. C.-K. Chu, P.-C. Chen, Y.-P. Chen, S.-T. Lin and L.-J. Chen, "Inhibition effect of 1-ethyl-3-methylimidazolium chloride on methane hydrate equilibrium", Journal of Chemical Thermo*dynamics* 91, 141-145, (2015), (SCI,EI)

Conference Papers

1. 黃晨軒, and **林祥泰**, Fully Automated Molecular Design with Atomic Resolution for Desired Thermophysical Properties. 台灣化學工程學會第 66 屆年會, 東海大學, 2019.

2. 王柏偉, and **林祥泰**, Molecular Dynamics Simulation Study on the Effect of Urea to the Equlibrium and Kinetic Properties of Methane and CO2 Hydrates. 台灣化學工程學會第 66 屆年會, 東海大學, 2019.

3. 林祥泰, 分子模擬與人工智慧在化學工程上的應用. 數位管理 x 研發創新跨界論壇, 台北寒舍艾美酒店, 2019. (invited)

4. 李政廷, and 林祥泰, A Unified Model for the Activity Coefficient of Electrolyte and Nonelectrolyte Solutions. 台灣化學工程學會第 66 屆年會, 東海大學, 2019.

5. 劉德謙, and 林祥泰, An Exact Local Composition Model for Two-Dimensional Lattice Fluids. 台灣化學工程學會第 66 屆年會, 東海大學, 2019.

6. C-C Tsai, B-Y Yu, and S-T Lin, A Novel Way to Perform Process Design with Missing Thermodynamic Parameters. 2019 Symposium on Process Systems Engineering, Xitou Nature Education Area, 2019.

7. C-C Tsai, and S-T Lin, Process Design with ASPEN PLUS when Some or All Experimental Data are not Available. 台灣化學工程學會第 66 屆年會, 東海大學, 2019.

8. V Talapunur, and S-T Lina, Understanding the Role of Hartree-Fock and DFT Exchange in Altering Torsional Energies and Molecular Geometries. The 18th Asian Chemical Congress, Taipei, 2019.

9. A Sum, and S-T Lin, Developing of a Universal Activity Correlation for Strong Electrolyte Systems. International Conference on Properties and Phase Equilibria for Product and Process Design, Vancouver, Canada, 2019.

10. T-C Liu, and S-T Lin, Exact Local Composition Model for Two-Dimensional Lattice Fluids. 2019 Symposium on Process Systems Engineering, Xitou Nature Education Area, 2019.

11. H-F Liu, and S-T Lin, Heat Capacity of Liquids from Classical Molecular Dynamic Simulations and the Two-Phase Thermodynamic Model. 台灣化學工程學會第 66 屆年會, 東海大學, 2019.

12. H-F Liu, and S-T Lin, Quantum Corrections to Heat Capacity of Liquids from Classical Molecular Dynamic Simulations and the Two-Phase Thermodynamic Model. The 5th International Conference on Molecular Simulation, Lotte Hotel Jeju, Jeju, Korea, 2019.

13. S-T Lin, A Priori Prediction of Thermodynamic Properties and Phase Behaviors of Fluids and Its Applications. 台灣化學工程學會第 66 屆年會, 東海大學, 2019. (invited)

14. H-H Liang, C-M Hsieh, and **S-T Lin**, Accuracy of PR+COSMOSAC EOS in Predicting Vapor Pressure with Artificial Neural Network. 台灣化學工程學會第 66 屆年會, 東海大學, 2019.

15. Jie-Jiunchang, J-L Kang, DS-H Lwong, C-H Chou, H-H Hsu, C-H Huang, and **S-T Lin.** Machine Learning of Molecular Classification and Quantum Mechanical Calculations. Paper presented at: 29th European Symposium on Computer Aided Process Engineering; Jun 16-19, 2019; Eindhoven, The Netherlands.

16. H-H Hsu, C-H Huang, and **S-T Lin**, Fully Automated Molecular Design for Specialty Chemicals. The 5th International Conference on Molecular Simulation, Lotte Hotel Jeju, Jeju, Korea, 2019. (invited)

17. Y-H Ho, and **S-T Lin**, Interfacial Properties of Methane Hydrate and Water via Molecular Dynamics Simulations. 2019 Symposium on Process Systems Engineering, Xitou Nature Education Area, 2019.

18. T Ya-Ruei, H Chiung-Hui, and **S-T Lin**, Prediction of phase behaviors of LCST-type ionic liquids in aqueous solution based on COSMO-SAC model. 2018 熱力學暨程序系統工程研討會議程, 成功大學化工系館, 2018.

19. C-C Tsai, and **S-T Lin**, A Novel Approach for Process Design When Some or All Experimental Thermodynamic Data are Missing. 6th International Symposium on Processes Intensification, NTU, Taipei, 2018.

20. A Sum, and **S-T Lin**, Developing of a Universal Activity Correlation for Strong Electrolyte Systems. TWENTIETH SYMPOSIUM ON THERMOPHYSICAL PROPERTIES, Boulder, CO, USA, 2018.

21. A Sum, and **S-T Lin**, Developing of a Universal Activity Correlation for Strong Electrolyte Systems. 2018 AIChE Annual Meeting, Pittsburg, USA, 2018.

22. Z-Y Lin, D Wu, and **S-T Lin**, Equilibrium and Transport Properties of Methane at the Methane-Water Interface with the Presence of SDS. 台灣化學工程學會第 65 屆年會, 雲林科技大學, 2018.

23. Z-Y Lin, and **S-T Lin**, The Promotion of Gas Hydrate Formation Upon Addition of Sodium Dodecyl Sulfate: A Molecular Dynamics Simulation Study. 台灣化學工程學會第 65 屆年會, 雲林科技大學, 2018.

24. **S-T Lin**, 預測固體溶質於超臨界二氧化碳之溶解度. 第十七屆超臨界流體技術應用與發展研討會, 明志科技大學, 2018. (invited)

25. **S-T Lin**, The Two-Phase Thermodynamic Approach for Absolute Entropy and Free Energy from Molecular Dynamics Simulations. Recent Advances in Molecular Simulations, Indian Institute of Science, Bangalore, 2018. (invited)

26. **S-T Lin**, Introduction to the Two-Phase Thermodynamic Approach for Obtaining Absolute Entropy and Free Energy from Molecular Dynamics Simulations. Soft Matter Winter School at Institute of Physics, Academia Sinica, 2018. (invited)

27. H-E Lai, and **S-T Lin**, Prediction of Vapor-Liquid Interfacial Tension of Fluids Using the Peng-Robinson Equation of State and Excess Free Energy based Mixing Rules. 台灣化學工程學會第 65 屆年會, 雲林科技大學, 2018.

28. H-H Hsu, C-H Huang, and **S-T Lin**, Fully Automated Molecular Design with Atomic Resolution for Desired ThermophysicalProperties. 2018 熱力學暨程序系統工程研討會議程, 成功大學化工系館, 2018.

29. H-H Hsu, C-H Huang, and **S-T Lin**, Fully Automated Molecular Design with Atomic Resolution for Desired Properties. 2018 AIChE Annual Meeting, Pittsburg, USA, 2018.

30. L-S Chu, DT Wu, and **S-T Lin**, Diffusion of Methane in sI Hydrates: A Kinetic Monte Carlo and Theoretical Study. 2018 AIChE Annual Meeting, Pittsburg, USA, 2018.

31. C-K Chang, W-L Chen, DT Wu, and **S-T Lin**, A Novel Approach for the Determination

of Directional Hydrogen Bonding Interactions for the COSMO-SAC Model based on Molecular Electrostatic Potentials. 2018 AIChE Annual Meeting, Pittsburg, USA, 2018.

32. **S-T Lin**, Artificial Intelligence for Molecular Design. 台灣化學工程學會第 64 屆年會, 台北科技大學, 2017. (invited)

33. M-T Lee, H Lo, and **S-T Lin**, Molecular Dynamics Simulation for Defect Driven Phenomena: Diffusion of Guest Molecules & CO2-CH4 Replacement in Clathrate Hydrates. The 9th International Conference on Gas Hydrates, Denver, USA, 2017.

34. H-H Hsu, C-H Huang, and **S-T Lin**, Atom-Based Computer-Aided Molecular Design with Genetic Algorithm and Simulated Annealing Algorithm. 台灣化學工程學會第 64 屆年會, 台北科技大學, 2017.

35. B-Z Hsieh, R-M Wu, DS Wong, W-Y Sean, M-J Lee, C-S Su, Y-C Liao, **S-T Lin**, L-J Chen, and Y-P Chen, Development of Reservoir Engineering Technologies for the Exploitation of Natural Gas Hydrates. 2017 International Conference on Gas Hydrate in Continental Margins, GIS NTU Convention Center, National Taiwan University, Taipei, 2017.

36. R Fingerhut, W-L Chen, A Schedemann, W. Cordes, J Rarey, C-M Hsieh, J Vrabec, and **S-T Lin**, Studie zur Vorhersagequalität von COSMO-SAC Modellen für fluide Phasengleichgewichte. Thermodynamik-Kolloquium 2017, Dresden, 2017.

37. 37. R Fingerhut, W-L Chen, A Schedemann, W Cordes, J Rarey, C-M Hsieh, **S-T Lin**, and J Vrabec, A Comprehensive Assessment of COSMO-SAC Models for Predictions of Fluid Phase Equilibria. Thermodynamics 2017 Edinburgh, Scotland, 2017.

38. 38. L-S Chu, and **S-T Lin**, Mechanism of Gas Replacement in sI CH4-CO2 Hydrate System via Molecular Dynamics and Kinetic Monte Carlo Simulation. 2017 International Conference on Gas Hydrate in Continental Margins, GIS NTU Convention Center, National Taiwan University, Taipei, 2017.

39. 39. YC Chiu, CY Wu, BZ Hsieh, and **ST Lin**, Coupled Geomechanics and Fluid Flow Modeling on Gas Production from Hydrate Deposits: A Case Study in Taiwan. The 9th International Conference on Gas Hydrates, Denver, USA, 2017.

40. 40. L-H Wang, and **S-T Lin**, Prediction of Gas Sorption Isotherms in Organic Polymer Systems by PR+COSMOSAC Equation of State. 2016 熱力學暨程序系統工程研討會議, 溪頭自然教育園區, 2016.

41. 41. H Lo, and **S-T Lin**, Mechanism for the Replacement of CH4 in Methane Hydrates with CO2 in the Solid Phase. AIChE annual meeting, San Francisco, 2016.

42. 42. **S-T Lin**, Reservoir Engineering Simulation for Gas Hydrate Recovery Offshore Southwest Taiwan. Korea-Taiwan Gas Hydrate Workshop, Korea Institute of Geology, Mining & Materials (KIGAM), 2016.

43. 43. M-H Lin, and **S-T Lin**, Improved 2PT method for calculating thermodynamic properties from molecular dynamics simulations. 2016 熱力學暨程序系統工程研討會議, 溪頭自然教育園區, 2016.

44. 44. B-S Lee, and **S-T Lin**, Simultaneous Prediction of Dissociation and Phase Behaviors of Ionic Liquid Solutions. The 4th International Conference on Molecular Simulation, Shanghai Jiao Tong University, Shanghai, 2016. (invited)

45. 45. W-L Chen, and **S-T Lin**, A Novel Approach of Modeling Orientational Hydrogen Bonding Interactions in Associating Fluids with the COSMO-SAC Activity Coefficient Model. AIChE annual meeting, San Francisco, 2016.

46. 46. W-L Chen, and **S-T Lin**, The Refinement of COSMO-SAC Model for Associating Fluids. 2016 熱力學暨程序系統工程研討會議, 溪頭自然教育園區, 2016.

47. 47. L Yang, K-Y Yeh, and **S-T Lin**, Rapid Characterization and Validity Quantum Isotope Effect Between Light and Heavy Water through Two-Phase Thermodynamics Model. AIChE annual meeting, Salt Lake City, 2015.

48. 48. L Yang, C-W Chang, and **S-T Lin**, A Novel Multiscale Approach for Prediction of Thermodynamics Properties Based on Distribution of Molecular Conformations. AIChE annual meeting, Salt Lake City, 2015.

49. 49. J-Y Wu, and **S-T Lin**, Nucleation of CH4+THF Mixed Guest Hydrate from Molecular Dynamic Simulations. 2015 international symposium for advanced materials research, Sun-Moon Lake Teacher's Hotel, 2015.

50. 50. J-Y Wu, and **S-T Lin**, Nucleation and Growth of CH4+THF Mixed Guest Hydrates from Molecular Dynamic Simulations. Clathrate Hydrates Fundamentals: Bridging Molecular Structures to Microscopic Properties and Behavior, Telluride, CO, USA, 2015.

51. 51. L-H Wang, and **S-T Lin**, Prediction of Vapor and Sublimation Pressure for Pure Compounds from the Modified PR+Cosmosac Equation of State. AIChE annual meeting, Salt Lake City, 2015.

52. 52. H Lo, and **S-T Lin**, Can Molecular Dynamics Simulations Provide a Quantitative Description for the Rate of Methane Hydrate Dissociation? 台灣化學工程學會第 62 屆年會, 義守大學, 2015.

53. 53. H Lo, and **S-T Lin**, Can Molecular Dynamics Simulations Provide a Quantitative Description for the Rate of Methane Hydrate Dissociation? Clathrate Hydrates Fundamentals: Bridging Molecular Structures to Microscopic Properties and Behavior, Telluride, CO, USA, 2015.

54. 54. **S-T Lin**, From First Principles to Fluid Phase Equilibria. The 8th Sino-US Joint Conference of Chemical Engineering, Shanghai, 2015. (keynote)

55. 55. **S-T Lin**, Direct and Rapid Calculation of Entropy and Free Energy from Molecular Dynamics Simulations. RCAS Mini Symposium: Advanced experimental and computational approaches for liquid phase calorimetry, Taipei, 2015. (invited)

56. 56. **S-T Lin**, Replacement of CH4 in Methane Hydrates with CO2: Some Insights from Molecular Dynamics Simulations. The 5th TaiGer Meetings: Sites Selection, Taipei, Taiwan, 2015.

57. 57. B-S Lee, and **S-T Lin**, A Priori Prediction of Phase Behaviors of Ionic Liquids. International Workshop Molecular Modelling and Simulation: Science, Engineering and Industrial Applications, DECHEMA-House · Frankfurt, 2015. (Plenary)

58. 58. B-S Lee, and **S-T Lin**, Ion-Pairing and Redissociation of Ionic Liquid. AIChE annual meeting, Salt Lake City, 2015.

59. 59. Y-P Chen, L-J Chen, **S-T Lin**, and M Tang. Measurement for the Dissociation Conditions of Methane and Carbon Dioxide Hydrate in the Presence of Additive Materials. Paper presented at: MRS Advances2015.

60. 60. W-L Chen, and **S-T Lin**, Improved COSMO-SAC for Polar Nonhydrogen Bonding Species. AIChE annual meeting, Salt Lake City, 2015.

61. 61. C-W Chang, L Yang, and **S-T Lin**, First Principle Prediction of Equilibrium Constant of Esterification Reactions. 台灣化學工程學會第 62 屆年會, 義守大學, 2015.

Book Chapter

1. **S.T. Lin** and C.M. Hsieh, Obtaining Thermodynamic Properties and Fluid Phase Equilibria without Experimental Measurements, in *Application of Thermodynamics to Biological and Materials Science*, Mizutani Tadashi (Ed). 2011, 459-482. Intech.

Honors and Others

1. 指導學生蔡昌哲同學，獲得 2019 年台灣化學工程學會 66 週年年會壁報論文競賽-輸送組優勝

2. 指導學生劉曉丰同學，獲得 2019 年台灣化學工程學會 66 週年年會壁報論文競賽-熱力及界面工程組優勝

3. 指導學生梁興豪同學，獲得 2019 年台灣化學工程學會 66 週年年會壁報論文競賽-熱力及界面工程組優勝

4. 指導學生林姿妤同學，獲科技部 107 年度大專生研究計畫創作獎 (2019)

5. 指導學生張峻愷同學，獲達興材料第八屆研究生獎學金 (2019)

6. 指導學生林姿妤同學，獲 2018 年台灣化學工程學會 65 週年年會英語口頭報告競賽論文競賽佳作

7. 指導學生林姿妤同學，獲得 2018 年台灣化學工程學會 65 週年年會壁報論文競賽-熱力及界面工程組佳作

8. 指導學生許軒豪與黃晨軒獲台大化工系 106 學年度學士專題競賽金牌 (2018)

9. 指導學生黃晨軒獲台大 106 學年度學士班學生論文院長獎 (2018)

10. 台灣大學 105 學年度教學傑出教師 (2017)

11. 指導學生張峻愷同學，獲科技部 105 年度大專生研究計畫創作獎 (2017)

12. 論文被 Physical Chemistry Chemical Physics 選為期刊封底(2017)

13. 指導學生陳威霖，獲得 2016 達興材料博士班獎學金

14. 共同主持的氣體水合物研究團隊研究成果榮登 Physical Chemistry Chemical Physics 期刊封面，2016

15. Editorial Board of Journal of the Taiwan Institute of Chemical Engineers (2015)

16. 論文被 Journal of Computational Chemistry 選為期刊封面(2015)

17. 王立行同學/指導教授**林祥泰**教授台灣化學工程學會 61 週年年會英語口頭報告競賽論文競賽-輸送/熱力/綠色化工/環保 C1 組佳作 (2014)

18. 趙紘毅指導教授**林祥泰**教授台灣化學工程學會 61 週年年會英語口頭報告競賽論文競賽-輸送/熱力/綠色化工/環保 C2 組佳作 (2014)

19. 陳威霖指導教授**林祥泰**教授台灣化學工程學會 61 週年年會壁報論文競賽-熱力及界面工程組佳作 (2014)

20. 趙紘毅、駱璇同學/指導教授**林祥泰**教授 2014GIMS12 會議獲得學生海報第二名

21. American Chemical Society, associate member (2000 至今)

22. American Institute of Chemical Engineers, life member

23. 台灣化工學會終身會員