HAO LIU

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EDUCATION

PhD in Chemistry *Lubbock, TX*
Texas Tech University *Expected Dec 2025*
Fields: Organic, Chirality, Medicinal and Bioorganic Chemistry， Polymer chemistry
Committees: Guigen Li (Chair) & Krempner Clemens

BS in Chemical Engineering *Fredericton, Canada*
University of New Brunswick *2018*

PUBLICATIONS

Peer-Reviewed Journal Publications

- Yuan, Q., Yan, J. X., **Liu, H.**, Maleka, D. M., Augusto Eichelmann, E., Villanueva, O., ... & Li, G. Aggregation-Induced Asymmetric Synthesis of 2, 3-Dihydrobenzofurans by [4+1] Annulation with Substituted Salicyl N-Phosphonyl Imines. *European Journal of Organic Chemistry* **2025**, 2500426.
- Phan, M., **Liu, H.**, Delgado, L. M., Faleke, H. O., Zhang, S., Cozzolino, A. F., ... & Li, G. The Synthesis and Property Study of NH-Ac-Anchored Multilayer 3D Polymers. *Molecules* **2025**, *30*(9), 1981.
- Xu, Ting, Yu Wang, Shengzhou Jin, Anis U. Rahman, Xianghua Yan, Qingkai Yuan, **Hao Liu** et al. "Amino turbo chirality and its asymmetric control." *Research* **2024***, 7, 0474.*
- Wang, Y.; Xu, T.; Jin, S.; Wang, J.; Yuan, Q.; **Liu, H**.; Tang, Y.; Zhang, S.; Yan, W.; Jiao, Y.; Li, G. Design and Asymmetric Control of Orientational Chirality by Using the Combination of C(sp2) - C(sp) Levers and Achiral N - Protecting Group. *Chemistry - a European Journal* **2024**, *30* (28).
- Xu, T.; Wang, J.-Y.; Wang, Y.; Jin, S.; Tang, Y.; Zhang, S.; Yuan, Q.; **Liu, H**.; Yan, W.; Jiao, Y.; Yang, X.-L.; Li, G. C(sp)-C(sp) Lever-Based Targets of Orientational Chirality: Design and Asymmetric Synthesis. *Molecules* **2024**, *29* (10), 2274.
- Chandrashekar, H. B., Dolui, P., Li, B., Mandal, A., **Liu, H**., Guin, S., & Maiti, D。Ligand-Enabled δ-C (sp^3)− H Borylation of Aliphatic Amines. *Angewandte Chemie International Edition **2021***, *60*(33), 18194-18200.
- Yang, K., Song, M., **Liu, H.**, & Ge, H. Palladium-catalyzed direct asymmetric C–H bond functionalization enabled by the directing group strategy. *Chemical Science* **2020**, *11*(47), 12616-12632.

Patents

- Yan, S., Cheng, H., Zhang, Y., Liu, J., Shen, J., Gu, S., Ma, X., Chen, D., Zhang, Y., Wei, J., **Liu, H.**, & Shen, Y. (2017). Method for continuously synthesizing N, N-diethyl-m-methyl benzamide. (Patent No. CN107840805A).
- Ding, X., Zhang, Y., Xue, P., Liu, J., Shen, J., Gu, S., Ma, X., Chen, D., **Liu, H.**, & Shen, Y.

(2018). A synthetic 1- (3-ethoxy-4-methoxy) phenyl-2-methanesulfonyl-ethylamine method. (Patent No. CN108752248A).

- Yan, S., Wu, F., **Liu, H.**, Shen, Y., Zhang, Y., Liu, J., Shen, J., Gu, S., Ma, X., Chen, D., Zhang, Y., & Wei, J. (2018). A method for phase transfer catalysis Synthesis of di-tert-butyl ester using. (Patent No. CN108794335A).
- Zhang, Y., Cheng, H., Yan, S., Liu, J., Shen, J., Gu, S., Ma, X., Chen, D., Zhang, Y., Wei, J., **Liu, H.**, & Shen, Y. (2017). Method for continuously preparing m-toluic acid by adopting tubular reactor. (Patent No. CN107903165A).

TEACHING EXPERIENCE

Instructor, Department of Chemistry & Biochemistry, Texas Tech University

- CHEM 1105 Experimental Chemical Basics *Fall* 2019
- CHEM 1106 Chemistry Experiments That Matter *Fall* 2019
- CHEM 3105 Experimental Organic Chemistry I 2020
- CHEM 3106 Experimental Organic Chemistry II 2021-2025

RESEARCH EXPERIENCE

Research Assistant, Texas Tech University *Lubbock, US*
Supervisor: Prof. Guigen Li *2019-resent*

- Project: Multi-Layer 3D Chirality
- Sponsor: National Science Foundation, Welch Foundation
- Focused on novel chiral frameworks, characterized by unique C2 and pseudo C2 symmetry, achieved through enantioselective synthesis and aggregation-induced emission.

Research Assistant, Changzhou University *Changzhou, China*
Supervisor: Prof. Yue Zhang *2017-2018*

- Project 1: Method for continuously synthesizing N, N-diethyl-m-methyl benzamide
- Project 2: Method for synthesizing 1-(3-ethoxy-4-methoxy) phenyl-2-methanesulfonyl ethylamine.
- Project 3: A method for phase transfer catalysis Synthesis of di-tert-butyl ester using
- Project 4: Method for continuously preparing m-toluic acid by adopting tubular reactor
- Sponsor: Changzhou University
- Contributed to the group by successfully completing four industrial patents.

Project Team Member, University of New Brunswick *Fredericton, Canada*
Supervisor: Prof. Kripa Singh *2017-2018*

- Project: Sludge Dewatering System
- Sponsor: University of New Brunswick
- Contributed to the design of a sludge dewatering system for a paper-making company, including material selection, device design, and simulated sludge testing.

PROFESSIONAL TRAINING

TA Training Workshop *08/23-08/24/2019*
Covered a variety of fundamental chemistry experimental topics, including:

- Teaching Ethics
- Classroom Accommodation and Resources for Students with Disabilities
- Planning and Communicating Class Expectations
- Safety in the Lab

SKILLS

Languages	Chinese (Native), English (Fluent)
Software	Chemdraw, MestReNova, Origin, Matlab, Aspen, Soldwork
Lab Instrumentation	NMR, GPC, HPLC, Polarimeter, LC-MS, GC-MS

PROFESSIONAL REFERENCES

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