❖ Personal Information

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❖ Academic Experience

Nov. 2022—Present	Chair Professor of Chemistry, Department of Chemistry Southern University of Science and Technology
Jan. 2018—Nov. 2022	Tenured Full Professor, Department of Chemistry Southern University of Science and Technology
Sept. 2012—Dec. 2017	Tenure-Track Associate Professor, Department of Chemistry Southern University of Science and Technology
Apr. 2010—Aug. 2012	Postdoctoral Fellow, the Scripps Research Institute and The University of Hong Kong with Prof. Dr. Carlos F. Barbas III and Prof. Dr. Chi-Ming Che
Jul. 2004—Aug. 2005	Research Assistant with Prof. Dr. Gang Zhao Shanghai Institute of Organic Chemistry, CAS

❖ Education Qualifications

Sept. 2005—Mar. 2010	PhD, Department of Chemistry with Prof. Dr. Chi-Ming Che, The University of Hong Kong
Sept. 2001—Jun. 2004	MSc, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences in Cooperation with Anhui Normal University with Prof. Dr. Shizheng Zhu and Prof. Dr. Shaowu Wang
Sept. 1997—Jun. 2001	BSc, Department of Chemistry, Anhui Normal University

❖ Research Interests

Asymmetric radical chemistry and Medicinal chemistry

❖ Honor and Award

- New Cornerstone Investigator Program 2025(新基石研究员项目，2025)
- The First-Class Prize of the Natural Science Award of Guangdong Province in 2023 (2023 年度广东省科学技术奖自然科学奖一等奖，2024)
- Boehringer Ingelheim lecturer in Boston College (波士顿学院勃林格殷格翰讲座奖，2024)
- The 2023 XPLORER PRIZE (科学探索奖，2023)
- ACP Lectureship Award (亚洲核心计划讲座奖 (韩国)，2023)
- Youth Chirality Award of CCS (中国化学会青年手性化学奖，2021)
- CAPA Distinguished Faculty Award (Chinese-American Chemistry & Chemical Biology Professors Association) (中美华人教授联合会杰出教授奖，2019)
- ACP Lectureship Award (亚洲核心计划讲座奖 (日本和台湾)，2019)
- The Distinguished Lectureship Award of The Chemical Society of Japan (2017)
- Local-Level Talent of Shenzhen (深圳地方级领军人才，2021)
- Peacock Rewarding Plan (Type B) of Shenzhen (深圳孔雀计划 B 类人才，2013)
- Presidential Excellent Researcher Awards (SUSTech) (校长杰出科研奖，2020)
- Presidential Early Career Researcher Awards (SUSTech) (校长青年科研奖，2019)
- SUSTech Early Career Researcher Awards (SUSTech) (南科大青年科研奖，2017)
- SUSTech Outstanding Researcher Awards (SUSTech) (南科大优秀科研奖，2016)
- Award for Outstanding Research Postgraduate Student (HKU) (2011)

❖ Recent Representative Publications (66)

1. Yu-Feng Zhang;[#] Biao Wang;[#] Zheng Chen;[#] Ji-Ren Liu;[#] Ning-Yuan Yang; Jin-Min Xiang; Juan Liu; Qiang-Shuai Gu; Xin Hong;* **Xin-Yuan Liu*** Asymmetric Amination of Alkyl Radicals with Two Minimally Different Alkyl Substituents. *Science* **2025**, *388*, 283–291.
2. Ji-Jun Chen;[#] Jia-Heng Fang;[#] Xuan-Yi Du;[#] Jia-Yong Zhang; Jun-Qian Bian; Fu-Li Wang; Cheng Luan; Wei-Long Liu; Ji-Ren Liu; Xiao-Yang Dong; Zhong-Liang Li; Qiang-Shuai Gu; Zhe Dong; **Xin-Yuan Liu**.* Enantioconvergent Cu-Catalysed N-Alkylation of Aliphatic Amines. *Nature* **2023**, *618*, 294–300.
3. Li-Wen Fan;[#] Jun-Bin Tang;[#] Li-Lei Wang;[#] Zeng Gao;[#] Ji-Ren Liu;[#] Yu-Shuai Zhang; Dai-Lei Yuan; Li Qin; Yu Tian; Zhi-Chao Chen; Fu Liu; Jin-Min Xiang; Pei-Jie Huang; Wei-Long Liu; Chen-Yu Xiao; Cheng Luan; Zhong-Liang Li; Xin Hong*; Zhe Dong*; Qiang-Shuai Gu*; **Xin-Yuan Liu*** Copper-Catalysed Asymmetric Cross-Coupling Reactions Tolerant of Highly Reactive Radicals *Nat. Chem*. **2025**, DOI: 10.1038/s41557-025-01970-1.
4. Yu Tian;[#] Xi-Tao Li;[#] Ji-Ren Liu;[#] Jian Cheng;[#] Ang Gao;[#] Ning-Yuan Yang; Zhuang Li; Kai-Xin Guo; Wei Zhang; Han-Tao Wen; Zhong-Liang Li; Qiang-Shuai Gu; Xin Hong; **Xin-Yuan Liu**.* A General Copper-Catalysed Enantioconvergent C(sp^3)–S

Cross-Coupling via Biomimetic Radical Homolytic Substitution. *Nat. Chem*. **2024**, *16*, 466–475.

5. Yong-Feng Cheng;[#] Zhang-Long Yu;[#] Yu Tian;[#] Ji-Ren Liu;[#] Han-Tao Wen; Na-Chuan Jiang; Jun-Qian Bian; Guo-Xiong Xu; Dan-Tong Xu; Zhong-Liang Li; Qiang-Shuai Gu;* Xin Hong;* **Xin-Yuan Liu**.* Cu-Catalysed Enantioselective Radical Heteroatomic S–O Cross-Coupling. *Nat. Chem*. **2023**, *15*, 395-404.

6. Fu-Li Wang;[#] Chang-Jiang Yang;[#] Ji-Ren Liu;[#] Ning-Yuan Yang; Xiao-Yang Dong; Ruo-Qi Jiang; Xiao-Yong Chang; Zhong-Liang Li; Guo-Xiong Xu; Dai-Lei Yuan; Yu-Shuai Zhang; Qiang-Shuai Gu;* Xin Hong;* **Xin-Yuan Liu**.* Mechanism-Based Ligand Design for Copper-Catalysed Enantioconvergent C(sp^3)–C(sp) Cross-Coupling of Tertiary Electrophiles with Alkynes. *Nat. Chem.* **2022**, *14*, 949-957.
7. Xiao-Yang Dong;[#] Yu-Feng Zhang;[#] Can-Liang Ma;[#] Qiang-Shuai Gu;[#] Fu-Li Wang;[#] Zhong-Liang Li; Sheng-Peng Jiang; **Xin-Yuan Liu**.* A General Asymmetric Copper-Catalysed Sonogashira C(sp^3)-C(sp) Coupling. *Nat. Chem.* **2019**, *11*, 1158-1166.
8. Jia-Yong Zhang;[#] Ji-Jun Chen;[#] Boming Shen;[#] Jia-Heng Fang; Xuan-Yi Du; Ning-Yuan Yang; Chang-Jiang Yang; Wei-Long Liu; Fu Liu; Zhong-Liang Li; Qiang-Shuai Gu; Zhe Dong; Peiyuan Yu;* **Xin-Yuan Liu*** Copper-Catalysed Enantioconvergent O-Alkylation of Alcohols With Racemic α-Tertiary Haloamides to Access Enantioenriched Hindered Dialkyl Ethers *Nat. Catal.* **2025**, *8*, 919-930.
9. Chang-Jiang Yang;[#] Chi Zhang;[#] Qiang-Shuai Gu;[#] Jia-Heng Fang; Xiao-Long Su; Liu Ye; Yan Sun; Yu Tian; Zhong-Liang Li; **Xin-Yuan Liu**.* Cu-Catalysed Intramolecular Radical Enantioconvergent Tertiary β-C(sp^3)–H Amination of Racemic Ketones. *Nat. Catal.* **2020**, *3*, 539-546.
10. Yong-Feng Cheng;[#] Ji-Ren Liu;[#] Qiang-Shuai Gu;[#] Zhang-Long Yu;[#] Jian Wang; Zhong-Liang Li; Jun-Qian Bian; Han-Tao Wen; Xiao-Jing Wang; Xin Hong;* **Xin-Yuan Liu**.* Catalytic Enantioselective Desymmetrizing Functionalization of Alkyl Radicals via Cu(I)/CPA Cooperative Catalysis. *Nat. Catal.* **2020**, *3*, 401-410.
11. Zeng Gao;[#] Lin Liu;[#] Ji-Ren Liu; Wang Wang; Ning-Yuan Yang; Lizhi Tao; Zhong-Liang Li; Qiang-Shuai Gu;* **Xin-Yuan Liu.*** Copper-Catalysed Synthesis of Chiral Alkynyl Cyclopropanes Using Enantioconvergent Radical Cross-Coupling of Cyclopropyl Halides with Terminal Alkynes. *Nat. Synth.* **2025**, 4, 84-96.
12. Li-Lei Wang;[#] Huan Zhou;[#] Yu-Xi Cao;[#] Chi Zhang; Yang-Qing Ren; Zhong-Liang Li; Qiang-Shuai Gu; **Xin-Yuan Liu**.* A General Copper-Catalysed Enantioconvergent Radical Michaelis–Becker-Type C(sp^3)–P Cross-Coupling. *Nat. Synth.* **2023**, *2*, 430-438.
13. Qiang-Shuai Gu; Zhong-Liang Li; **Xin-Yuan Liu**.* Copper(I)-Catalyzed Asymmetric Reactions Involving Radicals. *Acc. Chem. Res.* **2020**, *53*, 170-181. (**Invited Perspective**)
14. Xiao-Yang Dong; Zhong-Liang Li; Qiang-Shuai Gu; **Xin-Yuan Liu**.* Ligand Development for Copper-Catalyzed Enantioconvergent Radical Cross-Coupling of Racemic Alkyl Halides. *J. Am. Chem. Soc.* **2022**, *144*, 17319-17329. (**Invited Perspective**)
15. Zhong-Liang Li;[#] Gui-Chun Fang;[#] Qiang-Shuai Gu;[#] **Xin-Yuan Liu**.* Recent Advances in Copper-Catalysed Radical-Involved Asymmetric 1,2-Difunctionalization of Alkenes. *Chem. Soc. Rev.* **2020**, *49*, 32-48. (**Invited Review**)
16. Chi Zhang; Zhong-Liang Li; Qiang-Shuai Gu;* **Xin-Yuan Liu**.* Catalytic Enantioselective C(sp^3)–H Functionalization Involving Radical Intermediates. *Nat. Commun.* **2021**, *21*, 475. (**Invited Perspective**)
17. Feng-Ling Qing;* **Xin-Yuan Liu**;* Jun-An Ma;* Qilong Shen;* Qiuling Song;* Pingping Tang.* A Fruitful Decade of Organofluorine Chemistry: New Reagents and Reactions. *CCS Chem.* **2022**, *4*, 2518-2549. (**Invited Perspective**)

18. Chang-Jiang Yang;* Lin Liu; Qiang-Shuai Gu;* **Xin-Yuan Liu.*** Research Progress in Enantioselective Radical Desymmetrization Reactions. *CCS Chem*. **2024**, *6*, 1612–1627. (**Invited Review**)
19. Huan Zhou;[#] Zhong-Liang Li;[#] Qiang-Shuai Gu; **Xin-Yuan Liu**.* Ligand-Enabled Copper(I)-Catalyzed Asymmetric Radical C(sp^3)−C Cross-Coupling Reactions. *ACS Catal.* **2021**, *11*, 7978-7986. (**Invited Perspective**)
20. Xi-Tao Li;[#] Ling Lv;[#] Ting Wang;[#] Qiang-Shuai Gu; Guo-Xing Xu; Zhong-Liang Li; Liu Ye; Xinhao Zhang; Gui-Juan Cheng;* **Xin-Yuan Liu**.* Diastereo- and Enantioselective Catalytic Radical Oxysulfonylation of Alkenes in β,γ-Unsaturated Ketoximes. *Chem* **2020**, *6*, 1692-1706.
21. Fu-Li Wang;[#] Xiao-Yang Dong;[#] Jin-Shun Lin;[#] Yang Zeng; Guan-Yuan Jiao; Qiang-Shuai Gu; Xian-Qi Guo; Can-Liang Ma; **Xin-Yuan Liu**.* Catalytic Asymmetric Radical Diamination of Alkenes. *Chem* **2017**, *3*, 979-990.
22. Fu-Li Wang;[#] Qian Xie; Xiao-Yu Chen; Xue-Man Ye; Ning-Yuan Yang; Jia-Le Deng; Shou-Hao Zhong; Yu-Xuan Zhang; Ji-JunChen;* **Xin-Yuan Liu*** A General Copper-Catalyzed Radical Cross-Coupling of Unactivated Alkyl Halides. *J. Am. Chem. Soc.* **2025**, *147*, 35520–35530.
23. Ying-Jie Li;[#] Zhi-Long Wu;[#] Qiang-Shuai Gu;[#] Tingting Fan;[#] Ming-Hao Duan; Lihong Wu; Yu-Tao Wang; Ji-Peng Wu; Fang-Lei Fu; Fan Sang; Ai-Ting Peng; Yuyang Jiang;* **Xin-Yuan Liu**;* and Jin-Shun Lin* Catalytic Intermolecular Asymmetric [2π + 2σ] Cycloadditions of Bicyclo[1.1.0]butanes: Practical Synthesis of Enantioenriched Highly Substituted Bicyclo[2.1.1]hexanes. *J. Am. Chem. Soc.* **2024**, *146*, 34427-34441.
24. Xuan-Yi Du;[#] Jia-Heng Fang;[#] Ji-Jun Chen;[#] Boming Shen;[#] Wei-Long Liu; Jia-Yong Zhang; Xue-Man Ye; Ning-Yuan Yang; Qiang-Shuai Gu; Zhong-Liang Li;* Peiyuan Yu;* **Xin-Yuan Liu.*** Copper-Catalyzed Enantioconvergent Radical *N*-Alkylation of Diverse (Hetero)aromatic Amines. *J. Am. Chem. Soc.* **2024**, *146*, 9444–9454.
25. Ji-Jun Chen;[#] Jia-Yong Zhang;[#] Jia-Heng Fang;[#] Xuan-Yi Du;[#] Hai-Dong Xia;[#] Bin Cheng;[#] Nan Li; Zhang-Long Yu; Jun-Qian Bian; Fu-Li Wang; Jing-Jing Zheng; Wei-Long Liu; Qiang-Shuai Gu; Zhong-Liang Li; **Xin-Yuan Liu**.* Copper-Catalyzed Enantioconvergent Radical C(sp^3)−N Cross-Coupling of Activated Racemic Alkyl Halides with (Hetero)aromatic Amines under Ambient Conditions. *J. Am. Chem. Soc.* **2023**, *145,* 14686-14696.
26. Zhang-Long Yu;[#] Yong-Feng Cheng;[#] Ji-Ren Liu; Wu Yang; Dan-Tong Xu; Yu Tian; Jun-Qian Bian; Zhong-Liang Li; Li-Wen Fan; Cheng Luan; Ang Gao; Qiang-Shuai Gu;* **Xin-Yuan Liu**.* Cu(I)-Catalyzed Chemo- and Enantioselective Desymmetrizing C−O Bond Coupling of Acyl Radicals. *J. Am. Chem. Soc.* **2023**, *145,* 6535-6545.
27. Xian-Yan Cheng;[#] Yu-Feng Zhang;[#*] Jia-Huan Wang; Qiang-Shuai Gu; Zhong-Liang Li;* **Xin-Yuan Liu**.* A Counterion/Ligand-Tuned Chemo- and Enantioselective Copper-Catalyzed Intermolecular Radical 1,2-Carboamination of Alkenes. *J. Am. Chem. Soc.* **2022**, *144,* 18081-18089.
28. Peng-Fei Wang;[#] Jiao Yu;[#] Kai-Xin Guo;[#] Sheng-Peng Jiang; Ji-Jun Chen; Qiang-Shuai Gu; Ji-Ren Liu; Xin Hong; Zhong-Liang Li;* **Xin-Yuan Liu**.* Design of Hemilabile N,N,N-Ligands in Copper-Catalyzed Enantioconvergent Radical Cross-

Coupling of Benzyl/Propargyl Halides with Alkenylboronate Esters. *J. Am. Chem. Soc.* **2022**, *144*, 6442-6452.

29. Yu-Feng Zhang;[#] Xiao-Yang Dong;[#] Jiang-Tao Cheng;[#] Ning-Yuan Yang; Li-Lei Wang; Fu-Li Wang; Cheng Luan; Juan Liu; Zhong-Liang Li; Qiang-Shuai Gu; **Xin-Yuan Liu**.* Enantioconvergent Cu-Catalyzed Radical C−N Coupling of Racemic Secondary Alkyl Halides to Access α-Chiral Primary Amines. *J. Am. Chem. Soc.* **2021**, *143*, 15413-15419.
30. Sheng-Peng Jiang; Xiao-Yang Dong; Qiang-Shuai Gu; Liu Ye; Zhong-Liang Li;* **Xin-Yuan Liu**.* Copper-Catalyzed Enantioconvergent Radical Suzuki–Miyaura C(sp^3)–C(sp^2) Cross-Coupling. *J. Am. Chem. Soc.* **2020**, *142*, 19652-19659.
31. Xiao-Yang Dong;[#] Jiang-Tao Cheng;[#] Yu-Feng Zhang;[#] Zhong-Liang Li;[#] Tian-Ya Zhan; Ji-Jun Chen; Fu-Li Wang; Ning-Yuan Yang; Liu Ye; Qiang-Shuai Gu; **Xin-Yuan Liu**.* Copper-Catalyzed Asymmetric Radical 1,2-Carboalkynylation of Alkenes with Alkyl Halides and Terminal Alkynes. *J. Am. Chem. Soc.* **2020**, *142*, 9501-9509.
32. Jin-Shun Lin; Tao-Tao Li; Ji-Ren Liu; Guan-Yuan Jiao; Qiang-Shuai Gu; Jiang-Tao Cheng; Yu-Long Guo; Xin Hong;* **Xin-Yuan Liu**.* Cu/Chiral Phosphoric Acid-Catalyzed Asymmetric Three-Component Radical-Initiated 1,2-Dicarbofunctionalization of Alkenes. *J. Am. Chem. Soc.* **2019**, *141*, 1074-1083.
33. Jin-Shun Lin; Xiao-Yang Dong; Tao-Tao Li; Na-Chuan Jiang; Bin Tan; **Xin-Yuan Liu**.* A Dual-Catalytic Strategy To Direct Asymmetric Radical Aminotrifluoromethylation of Alkenes. *J. Am. Chem. Soc.* **2016**, *138*, 9357-9360.
34. Jian Zhang;[#] Shao-Xia Lin;[#] Dao-Juan Cheng; **Xin-Yuan Liu**;* Bin Tan.* Phosphoric Acid-Catalyzed Asymmetric Classic Passerini Reaction. *J. Am. Chem. Soc.* **2015**, *137*, 14039-14042.
35. Ye-Hui Chen; Dao-Juan Cheng; Jian Zhang; Yong Wang; **Xin-Yuan Liu**;* Bin Tan.* Atroposelective Synthesis of Axially Chiral Biaryldiols via Organocatalytic Arylation of 2-Naphthols. *J. Am. Chem. Soc.* **2015**, *137*, 15062-15065.
36. Xiao-Yang Dong;[#] Zi-Jian Zhou; Zhong-Liang Li; Peng-Fei Wang; Jun (Joelle) Wang; and **Xin-Yuan Liu*** Ligand-Enabled Cu-Catalyzed Deoxyalkynylation of α-Unfunctionalized Alcohols with Terminal Alkynes *Angew. Chem. Int. Ed.* **2025,** *64*, e202517652.
37. Wei Zhang;[#] Yu Tian;[#] Xiao-Dong Liu; Cheng Luan; Ji-Ren Liu; Qiang-Shuai Gu; Zhong-Liang Li; **Xin-Yuan Liu.*** Copper-Catalyzed Enantioselective C(sp^3)−SCF_3 Coupling of Carbon-Centered Benzyl Radicals with $(Me_4N)SCF_3$. *Angew. Chem. Int. Ed.* **2024**, *63*, e202319850.
38. Yu-Feng Zhang;[#] Jia-Huan Wang;[#] Ning-Yuan Yang;[#] Zheng Chen; Li-Lei Wang; Qiang-Shuai Gu; Zhong-Liang Li; **Xin-Yuan Liu**.* Copper-Catalyzed Enantioconvergent Radical C(sp^3)–N Cross-Coupling: Access to α,α-Disubstituted Amino Acids. *Angew. Chem. Int. Ed*. **2023**, *62*, e202302983.
39. Huan Zhou;[#] Li-Wen Fan;[#] Yang-Qing Ren; Li-Lei Wang; Chang-Jiang Yang; Qiang-Shuai Gu; Zhong-Liang Li;* **Xin-Yuan Liu**.* Copper-Catalyzed Chemo- and Enantioselective Radical 1,2-Carbophosphonylation of Styrenes. *Angew. Chem. Int. Ed.* **2023**, *62*, e20221852.

40. Fu-Li Wang;[#] Lin Liu;[#] Chang-Jiang Yang; Cheng Luan; Yang Jing; Ji-Jun Chen; Qiang-Shuai Gu; Zhong-Liang Li;* **Xin-Yuan Liu**.* Synthesis of α-Quaternary β-Lactams via Copper-Catalyzed Enantioconvergent Radical C(sp^3)–C(sp^2) Cross-Coupling with Organoboronate Esters. *Angew. Chem. Int. Ed.* **2023**, *62*, e202214709.
41. Wu Yang;[#] Lin Liu;[#] Jiandong Guo;[#] Shou-Guo Wang; Jia-Yong Zhang; Li-Wen Fan; Yu Tian; Li-Lei Wang; Cheng Luan; Zhong-Liang Li; Chuan He; Xiaotai Wang;* Qiang-Shuai Gu;* **Xin-Yuan Liu**.* Enantioselective Hydroxylation of Dihydrosilanes to Si-Chiral Silanols Catalyzed by In Situ Generated Copper(II) Species. *Angew. Chem. Int. Ed.* **2022**, *61*, e202205743.
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46. Liu Ye;[#] Yu Tian;[#] Xiang Meng; Qiang-Shuai Gu; **Xin-Yuan Liu**.* Cu(I)/Chiral Phosphoric Acid-Catalyzed Radical-Involved Enantioselective Intramolecular Amination of Allylic and Benzylic C-H Bonds. *Angew. Chem. Int. Ed.* **2020**, *59*, 1129-1133.
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57. Dao-Juan Cheng; Liang Yan; Shi-Kai Tian;* Ming-Yue Wu; Lu-Xin Wang; Zi-Li Fan; Sheng-Cai Zheng; **Xin-Yuan Liu**;* Bin Tan.* Highly Enantioselective Kinetic Resolution of Axially Chiral BINAM Derivatives Catalyzed by a Brønsted Acid. *Angew. Chem. Int. Ed.* **2014**, *53*, 3684-3687.
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