

Prof. Dr. Liu was born in Anhui, China. He obtained the B.S. degree from Anhui Normal University (AHNU) in 2001. After that, he continued his research experience in both Shanghai Institute of Organic Chemistry (SIOC), CAS and AHNU under the jointly supervision of Prof. Dr. Shizheng Zhu and Prof. Dr. Shaowu Wang and obtained his Master degree in 2004. After a one year’s stint in Prof. Gang Zhao’s laboratory in SIOC, he joined Prof. Dr. Chi-Ming Che’s group in The University of Hong Kong and earned his Ph.D. degree in 2010. His Ph.D. research focused on organic catalysis and organometallic chemistry. He continued postdoctoral study in Prof. Che’s group in the University of Hong Kong and in Prof. Dr. Carlos F. Barbas III’s group in The Scripps Research Institute. At the end of 2012, he began his independent academic career in Southern University of Science and Technology (SUSTech). He was promoted to tenured Full Professor of SUSTech at the beginning of 2018.

Prof. Liu’s research interest is the designing of novel chiral anionic ligands to solve the radical-involved asymmetric reactions. He has published more than 70 papers in top-level journals, such as *Nat. Chem., Natal. Catal. Chem., J. Am. Chem. Chem., Angew. Chem.*, *Acc. Chem. Res*., *etc*. Owing to his great contribution to the field of the radical asymmetric chemistry, he has obtained many honors and awards, such as The Distinguished Lectureship Award (Chemical Society of Japan) (2017), Award for National Excellent Young Scholar (NSFC) (2017), The Scholar Program-Youth Project (Ministry of Education, china) (2017),CAPA Distinguished Faculty Award (CAPA) (2020), ACP Lectureship Awards (Taiwan District and Japan) (2020), The National Science Fund for Distinguished Young Scholars (NFSC) (2020), *etc.*

**5 representative publications:**

(1) 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(sp3)-C(sp) coupling, *Nat. Chem.*, 2019, 11: 1158-1166.

(2) 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.

(3) 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(sp3)–H amination of racemic ketones, *Nat. Catal.* 2020, 3: 539-546.

(4) 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.

(5) Qiang-Shuai Gu; Zhong-Liang Li; **Xin-Yuan Liu**\*;Copper(I)-catalyzed asymmetric reactions involving radicals, *Acc. Chem. Res.*, 2020, 53: 170-181.

**Other representative publications:**

1. 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.
2. 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.
3. 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.
4. Sheng-Peng Jiang; Xiao-Yang Dong; Qiang-Shuai Gu; Liu Ye; Zhong-Liang Li\*; **Xin-Yuan Liu**\*; Copper-Catalyzed Enantioconvergent Radical Suzuki–Miyaura C(sp3)–C(sp2) Cross-Coupling, *J. Am. Chem. Soc.*, 2020, 142: 19652-19659.
5. Xiao-Yang Dong#; Jiang-Tao Cheng#; Yu-Feng Zhang#; Zhong-Liang Li#; Tian-Ya Zhan; Ji-Jun Chen; FuLi 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.
6. 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.
7. 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.
8. 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.
9. Xiao-Yang Dong#; Tian-Ya Zhan#; Sheng-Peng Jiang; Xiao-Dong Liu; Liu Ye; Zhong-Liang Li; Qiang-Shuai Gu; **Xin-Yuan Liu**\*; Copper-Catalyzed Asymmetric Coupling of Allenyl Radicals with Terminal Alkynes to Access Tetrasubstituted Allenes, *Angew. Chem. Int. Ed.*, 2021, 60: 2160-2164.
10. Xiao-Long Su#; Liu Ye#; Ji-Jun Chen#; Xiao-Dong Liu#; Sheng-Peng Jiang; Fu-Li Wang; Lin Liu; Chang-Jiang Yang; Xiao-Yong Chang; Zhong-Liang Li; Qiang-Shuai Gu; **Xin-Yuan Liu**\*; Copper-Catalyzed Enantioconvergent Cross-Coupling of Racemic Alkyl Bromides with Azole C(sp3)–H Bonds, *Angew. Chem. Int. Ed.*, 2021, 60: 380-384.
11. Hai-Dong Xia#; Zhong-Liang Li#; Qiang-Shuai Gu#; Xiao-Yang Dong#; Jia-Heng Fang; Xuan-Yi Du; Li-Lei Wang; **Xin-Yuan Liu**\*; Photoinduced Copper-Catalyzed Asymmetric Decarboxylative Alkynylation with Terminal Alkynes, *Angew. Chem. Int. Ed.*, 2020, 59: 16926-16932.
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15. Xi-Tao Li; Qiang-Shuai Gu; Xiao-Yang Dong; Xiang Meng; **Xin-Yuan Liu**\*; A Copper Catalyst with a Cinchona-Alkaloid-Based Sulfonamide Ligand for Asymmetric Radical Oxytrifluoromethylation of Alkenyl Oximes, *Angew. Chem. Int. Ed.*, 2018, 57: 7668-7672.
16. Yong-Feng Cheng#; Xiao-Yang Dong#; Qiang-Shuai Gu#; Zhang-Long Yu; **Xin-Yuan Liu**\*;Achiral pyridine ligand-enabled enantioselective radical oxytrifluoromethylation of alkenes with alcohols, *Angew. Chem. Int. Ed.*, 2017, 56: 8883-8886.
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20. Peng Yu; Sheng-Cai Zheng; Ning-Yuan Yang; Bin Tan\*; **Xin-Yuan Liu**\*;Phosphine-Catalyzed Remote β-C-H Functionalization of Amine Triggered by Trifluoromethylation of Alkene: One-Pot Synthesis of Bistrifluoromethylated Enamides and Oxazoles, *Angew. Chem. Int. Ed.*, 2015, 54: 4041-4045.
21. Ming-Yue Wu; Wei-Wei He; **Xin-Yuan Liu**\*; Bin Tan\*; Asymmetric Construction of Spirooxindoles via Organocatalytic Multicomponent Reactions of Diazooxindoles, *Angew. Chem. Int. Ed.*, 2015, 54: 9409-9413.
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23. Zhen-Hua Zhang#; Xiao-Yang Dong#; Xuan-Yi Du #; Qiang-Shuai Gu; Zhong-Liang Li; **Xin-Yuan Liu**\*;Copper-catalyzed enantioselective Sonogashira-type oxidative cross-coupling of unactivated C(sp3)−H bonds with alkynes, *Nat. Commun.*, 2019, 10: 5689.
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29. Xiao-Long Yu#; Liping Kuang#; Su Chen#; Xiao-Long Zhu; Zhong-Liang Li; Bin Tan; **Xin-Yuan Liu**\*;Counteranion-Controlled Unprecedented Diastereo- and Enantioselective Tandem Formal Povarov Reaction for Construction of Bioactive Octahydro-Dipyrroloquinolines, *ACS Catal.*, 2016, 6: 6182-6190.
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33. Yang Zeng#; Xiao-Dong Liu#; Xian-Qi Guo; Qiang-Shuai Gu\*; Zhong-Liang Li\*, Xiao-Yong Chang; **Xin-Yuan Liu**\*;Cu/Chiral Phosphoric Acid-Catalyzed Radical-Initiated Asymmetric Aminosilylation of Alkene with Hydrosilane, *Sci. China Chem.*, 2019, 62: 1529-1536.