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Brief Summary

Hsuan-Hung Liao finished his Ph.D. in Organic Chemistry (Summa Cum Laude, 2016) at RWTH Aachen University in Germany, through a DAAD Scholarship, under the guidance of Prof. Magnus Rueping. He was a recipient of the Marie Skłodowska-Curie Individual Fellowship. He served as a postdoctoral researcher (2017-2019) at the University of Bristol, United Kingdom, in the group of Prof. Varinder Aggarwal. He is currently an Associate Professor in the Department of Chemistry at National Sun Yat-sen University (NSYSU), Taiwan. Hsuan-Hung Liao is a recipient of the 2023 Thieme Chemistry Journals Award.

Career

2024-2025	Chair of International Ph.D. Program for Science (IPPS), National Sun Yat-sen University, Taiwan
2023-present	Associate Professor in Chemistry, National Sun-Yat-sen University, Taiwan
2019-2022	Assistant Professor in Chemistry, National Sun Yat-sen University, Taiwan
2017-2019	Marie Skłodowska-Curie, an individual fellow at the University of Bristol, UK.
2016-2017	Postdoctoral fellow and subgroup leader, RWTH Aachen University, Germany.

Education

2012-2016	PhD in Organic Chemistry, RWTH Aachen University, Germany. Grade: Summa Cum Laude
2008-2010	Master of Science in Chemistry, National Tsing Hua University, Taiwan.
2004-2008	Bachelor of Science in Chemistry, National Tsing Hua University, Taiwan.

Honor and Awards

2025	Asian Core Program Award, China
2025	Distinguished Young Researcher Award, NSYSU
2025	2025 Ta-You Wu Memorial Award, NSTC
2025	2025 Young Chemists Award of the Chemical Society, Located in Taipei
2025	Outstanding Young Scholar, Shui-Mu Foundation of Chemistry
2024	Asian Core Program Lectureship Award, Singapore
2024-2028	Emerging Young Scholar for the NSTC 2030 Cross-Generation Young Scholars Program
2024-2029	Ministry of Education Yushan Young Scholar (Phase 2)
2023	Asian Core Program Lectureship Award, Korea and Thailand
2023	Outstanding Award for the Young Scholar, Innovative and Development in the Taiwan Comprehensive University System
2023	Thieme Chemistry Journal Award

2019-2024	Ministry of Science and Technology Young Scholar Fellowship (the Einstein program)
2019-2024	Ministry of Education Yushan Young Scholar (Phase 1)
2017-2019	EU Horizon 2020 Marie Skłodowska-Curie Individual Fellowship
2017	Borchers-Plakette for an outstanding PhD dissertation
2013-2016	Research Grants for Doctoral Candidates and Young Academics and Scientists (DAAD Scholarship)
2012-2013	Taiwan Ministry of Education Studying Abroad Scholarship
2011	Achievement Award for Mandatory service as Second Lieutenant
2006	Best Paper Prize among all Chun-Tsung Scholars
2006	Chun-Tsung Scholarship (Nobel laureate, Tsung-Dao Lee Endowment)

Publications

- Strain-Release Diversification of 1-Azabicyclobutanes via Bromide/Nickel Relay Catalyzed 1,3-Bis-Carbofunctionalization.
Y.-H. Lee, C.-M. Hsu, S. Miñoza, Y.-F. Shih, Y.-C. Ding, T.-Y. Hsu, S.-T. Chen, K.-C. Chang, W.-H. Lee, Y. A. Lin*, **H.-H. Liao***,
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- Irradiation of Bifunctional Masked Ketone Pro-Aromatics Unveils Autoinductive Autocatalysis via Electron Donor–Acceptor (EDA) Complexes.
C.-L. Chan, Y.-T. Tsao, A. S. Paculba, P.-S. Lin, Z.-N. Tsai, H.-H. Chiu, R. Kunitake, M.-J. Chiu, C.-C. Yeh, C.-C. Chiu, and **H.-H. Liao***,
Org. Lett. **2025**, 27, 35, 9593–9598.
- Photoenolization of α,β -Unsaturated Esters Enables Enantioselective Contra-Thermodynamic Positional Isomerization to α -Tertiary β,γ -Alkenyl Esters.
K.-C. Chang, H.-H. Chiu, P.-G. Huang, S. Miñoza, W.-H. Lee, P. K. Keerthipati, S. Racochote, Y.-H. Lee, C.-J. Chou, C.-M. Hsu, C.-W. Chang, D. Soorukram, C.-c. Chiu, and **H.-H. Liao***,
J. Am. Chem. Soc. **2025**, 147, 7452–7460.
- FluoroFusion: NHC-Catalyzed Nucleophilic Aromatic Substitution Reaction Unveils Functional Perfluorinated Diarylmethanones.
C.-L. Chan, S.-C. Lee, P.-S. Lin, R. V. P. P. Tapales, J.-S. Li, C.-A. Lai, J.-T. Lee, C.-H. Li, and **H.-H. Liao***,
Org. Lett. **2024**, 26, 2338–2342.
- Pro-aromatic Dihydroquinazolinones – From Multigram Synthesis to Reagents for Gram-scale Metallaphotoredox Reactions.
Z.-N. Tsai, L.-Y. Li, A. S. Paculba, S. Miñoza, Y.-T. Tsao, P.-S. Lin, **H.-H. Liao***,
Chem Asian J. **2023**, 19, e202301004.
- Ketone-derived pro-aromatic reagents for radical group transfer reactions and deconstructive functionalizations.
S. Miñoza, I. Librando, **H.-H. Liao***,
Synlett. **2023**, 35, 1072–1088.
- Azetidines with All-Carbon Quaternary Centers: Merging Relay Catalysis with Strain Release Functionalization.
C.-M. Hsu, H.-B. Lin, X.-Z. Hou, R. V. P. P. Tapales, C.-K. Shih, S. Miñoza, Y.-S. Tsai, Z.-N. Tsai, C.-L. Chan, and **H.-H. Liao***,
J. Am. Chem. Soc. **2023**, 145, 19049–19059.
- A protocol for the gram-scale synthesis of polyfluoroaryl sulfides via an S_NAr step.
C. -L. Chan, S. -C. Lee, **H. -H Liao***,
STAR Protocols, **2023**, 4, 102043.
- Iterative Synthesis of 1,3-Polyboronic Esters with High Stereocontrol: Applications to Bahamaolide A and Polyfunctionalised Hydrocarbons.
S. G. Aiken†, J. M. Bateman†, **H.-H. Liao†** (†equal contribution), A. Fawcett, T. Bootwicha, P. Vincetti, E. L. Myers, A. Noble, V. K. Aggarwal*,
Nat. Chem. **2023**, 15, 248–256.

10. Direct synthesis of oxaspirolactones in batch, photoflow, and silica gel-supported solvent-free conditions *via* visible-light photo- and heterogeneous Brønsted acid relay catalysis.
S. Miñoza, W.-C. Ke, Y.-Y. Yu, P. K. Keerthipati, K.-C. Chang, W.-C. Kao, Z.-N. Tsai, and **H.-H. Liao***,
Green Chem. **2022**, 24, 9157–9167.
11. Synthesis of perfluoroaryl sulfides at electron-poor arenes via an S_NAr step with an unexpected mechanism.
H.-H. Liao*, S.-C. Lee, H. Kao, Y.-L. Hsu, C.-M. Hsu, Y.-T. Tsao, S. Miñoza, L.-Y. Li, Z.-N. Tsai, K.-C. Chang, C.-K. Cheng, C.-L. Chan, Y.-S. Chien, C.-c. Chiu*,
Cell Rep. Phys. Sci. **2022**, 3, 8, 101010.
12. Aza-ortho-Quinone Methides as Reactive Intermediates: Generation and Utility in Contemporary Asymmetric Synthesis.
H.-H. Liao*, S. Miñoza, S.-C. Lee, M. Rueping*,
Chem.-Eur. J., **2022**, e202201112.
13. Desulfurative Ni-Catalyzed Reductive Cross-Coupling of Benzyl Mercaptans/Mercaptoacetates with Aryl Halides.
C.-M. Hsu, S.-C. Lee, H.-E. Tsai, Y.-T. Tsao, C.-L. Chan, S. Miñoza, Z.-N. Tsai, L.-Y. Li, and **H.-H. Liao***,
J. Org. Chem. **2022**, 87, 3799–3803.
14. 簡介電化學在有機合成上的發展和應用 A Brief Overview of Organic Electrosynthesis.
蔡郁萱, 謝承宇, **廖軒宏**, 王琢堅. *化學*, **2021**, 79, 327.
15. Aromatization as an Impetus to Harness Ketones for Metallaphotoredox-Catalyzed Benzoylation/Benzylation of (Hetero)arenes.
S.-C. Lee, L.-Y. Li, Z.-N. Tsai, Y.-H. Lee, Y.-T. Tsao, P.-G. Huang, C.-K. Cheng, H.-B. Lin, T.-W. Chen, C.-H. Yang, C.-C. Chiu, and **H.-H. Liao***,
Org. Lett., **2022**, 24, 85–89.
16. Multiple hydrogen-bond activation in asymmetric brønsted acid catalysis.
H.-H. Liao, C.-C. Hsiao, I. Atodiresei, and M. Rueping,
Chem.-Eur. J., **2018**, 24, 7718–7723.
17. Ligand-controlled chemoselective nickel catalyzed Suzuki-Miyaura cross-couplings: Ester as cross-coupling partner for c(sp²)-c(sp³) bond formation.
A. Chatupheeraphat†, **H.-H. Liao†**, (†equal contribution) W. Srimontree, L. Guo, Y. Minenkov, A. Poater, L. Cavallo, M. Rueping,
J. Am. Chem. Soc., **2018**, 140, 3724–3735.
18. Nickel-catalyzed C-S bond formation via decarbonylative thioetherification of esters, amides and intramolecular recombination fragment coupling of thioesters.
S.-C. Lee, **H.-H. Liao**, A. Chatupheeraphat, M. Rueping,
Chem.-Eur. J. **2018**, 24, 3608–3612.
19. Nickel-catalyzed decarbonylative silylation, borylation, and amination of arylamides via a deamidative reaction pathway.
S.-C. Lee, L. Guo, H. Yue, **H.-H. Liao**, M. Rueping,
Synlett **2017**, 28, 2594.
20. Nickel-Catalyzed C–CN Bond Formation via Decarbonylative Cyanation of Esters, Amides, and Intramolecular Recombination Fragment Coupling of Acyl Cyanides.
A. Chatupheeraphat†, **H.-H. Liao†**, (†equal contribution), S.-C. Lee, M. Rueping, *Org. Lett.* **2017**, 19, 4255–4258.
21. Amide to Alkyne Interconversion via a Nickel/Copper-Catalyzed Deamidative Cross-Coupling of Aryl and Alkenyl Amides.
W. Srimontree, A. Chatupheeraphat, **H.-H. Liao**, M. Rueping,
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22. Catalytic ester and amide to amine interconversion: Nickel-catalyzed decarbonylative amination of aryl and heteroaryl esters and amides.
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23. Asymmetric Brønsted acid-catalyzed substitution of diaryl methanols with thiols and alcohols for

the synthesis of chiral thioethers and ethers.

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24. Asymmetric Brønsted acid catalyzed synthesis of triarylmethanes-construction of communesin and spiroindoline scaffolds.
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C.-C. Hsiao, S. Raja, **H.-H. Liao**, I. Atodiresei, M. Rueping,
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C.-C. Hsiao, **H.-H. Liao**, M. Rueping,
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27. Shedding light on Brønsted acid catalysis - a photocyclization-reduction reaction for the asymmetric synthesis of tetrahydroquinolines from aminochalcones in batch and flow.
H.-H. Liao, C.-C. Hsiao, E. Sugiono, and M. Rueping,
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28. Shedding light on organocatalysis-light-assisted asymmetric ion-pair catalysis for the enantioselective hydrogenation of pyrylium Ions.
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Chem.-Eur. J. **2013**, 19, 9775–9779.
29. Effects of haloniums on gold-catalyzed ring expansion of 1-oxiranyl-1-alkynylcyclopropanes.
H.-H. Liao and R.-S. Liu,
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30. Diversity of products in the gold-catalyzed cyclization of 1-epoxy-1-alkynylcyclopropanes by using 1-oxyallyl cations.
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31. Platinum-catalyzed chemoselectively hydrative dimerization of 2-alkynyl-1-acetylbenzenes for one-pot facile synthesis of chrysene derivatives.
Das, **H.-H. Liao**, and R.-S. Liu,
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