

# Curriculum Vitae

## Personal Information

Name: Nobuya Tsuji  
Date of Birth: February 7th, 1989  
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## Education

2012. 03 **B. Sc.** Department of Pharmaceutical Sciences, Kyoto University, Japan (Prof. Yoshiji Takemoto)  
2014. 03 **M. Sc.** Graduate School of Pharmaceutical Science, Kyoto University, Japan (Prof. Yoshiji Takemoto)  
2018. 09 **Ph. D.** Max-Planck-Institut für Kohlenforschung, Germany (Prof. Benjamin List)

## Academic Career

2018. 10 – 2019. 02 **Postdoc** (interim), Max-Planck-Institut für Kohlenforschung, Germany (Prof. Benjamin List)  
2019. 03 – 2019. 12 **Postdoc**, Department of Chemistry, University of California, Berkeley (Prof. Omar M. Yaghi)  
2020. 01 – 2023. 03 **Specially Appointed Assistant Professor (Co-PI)**, Institute for Chemical Reaction Design and Discovery (WPI-ICReDD), Hokkaido University (Prof. Benjamin List)  
2023. 04 – present **Specially Appointed Associate Professor (Co-PI)**, Institute for Chemical Reaction Design and Discovery (WPI-ICReDD), Hokkaido University (Prof. Benjamin List)

## Fellowships & Grants

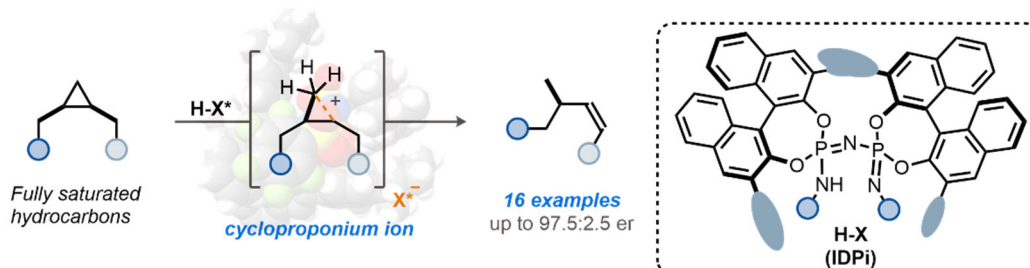
2019. 03 – 2019. 12 Uehara Memorial Foundation Postdoctoral Fellowship  
2020. 09 – 2022. 03 JSPS Grant-in-Aid for Research Activity Start-up (20K22515)  
2022. 04 – present JSPS Grant-in-Aid for Young Scientists (22K14672)

## Awards

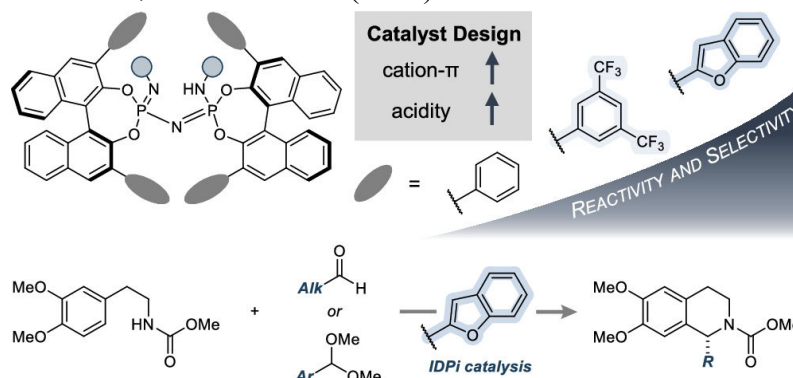
2023 Thieme Chemistry Journals Award  
2024 JSP fellowship for Bürgenstock conference 2024

## Publications

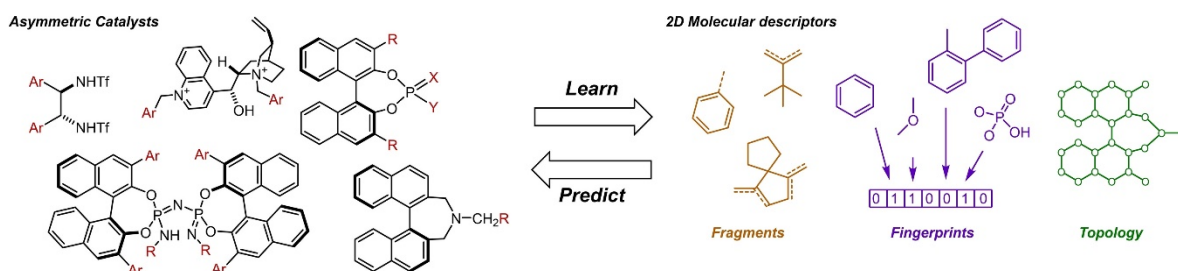
1. Ravindra Krushnaji Raut, Satoshi Matsutani, Fuxing Shi, Shuta Kataoka, Margareta Poje, Benjamin Mitschke, Satoshi Maeda, **Nobuya Tsuji\***, Benjamin List\*  
“Catalytic asymmetric fragmentation of cyclopropanes”  
*Science* 386, 225–230. (2024)



2. Manuel J. Scharf, **Nobuya Tsuji**, Monika M. Lindner, Markus Leutzsch, Märt Lõkov, Elisabeth Parman, Ivo Leito, Benjamin List\*  
“Highly Acidic Electron-Rich Brønsted Acids Accelerate Asymmetric Pictet–Spengler Reactions by Virtue of Stabilizing Cation– $\pi$  Interactions”  
*J. Am. Chem. Soc.* 146, 28339–28349. (2024)

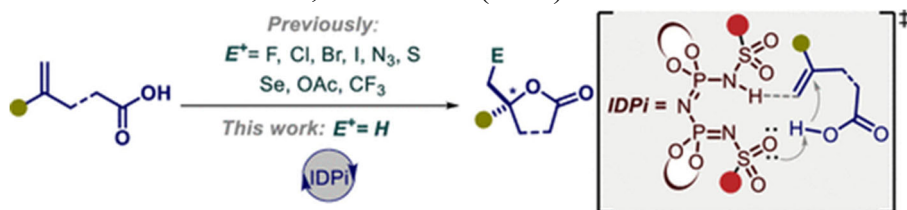


3. Jung Tae Han, **Nobuya Tsuji**, Hui Zhou, Markus Leutzsch, Benjamin List\*  
“Organocatalytic asymmetric synthesis of Si-stereogenic silacycles”  
*Nature Commun.* 15, 5846. (2024)
4. Vijay Wakchaure, William DeSnoo, Croix Laconsay, Markus Leutzsch, **Nobuya Tsuji**, Dean Tantillo\*, Benjamin List\*  
“Catalytic Asymmetric Cationic Shifts of Aliphatic Hydrocarbons”  
*Nature*, 625, 287–292 (2024)
5. Pavel Sidorov\*, **Nobuya Tsuji\***  
“A Primer on 2D Descriptors in Selectivity Modeling for Asymmetric Catalysis”  
*Chem. Eur. J.* e202302837 (2023)



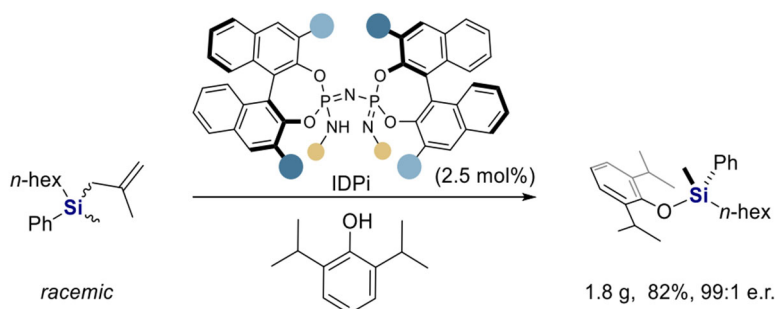
6. Rajat Maji, Santanu Ghosh, Oleg Grossmann, Pinglu Zhang, Markus Leutzsch, **Nobuya Tsuji**, Benjamin List\*

“A Catalytic Asymmetric Hydrolactonization”  
*J. Am. Chem. Soc.* 145, 8788–8793 (2023)

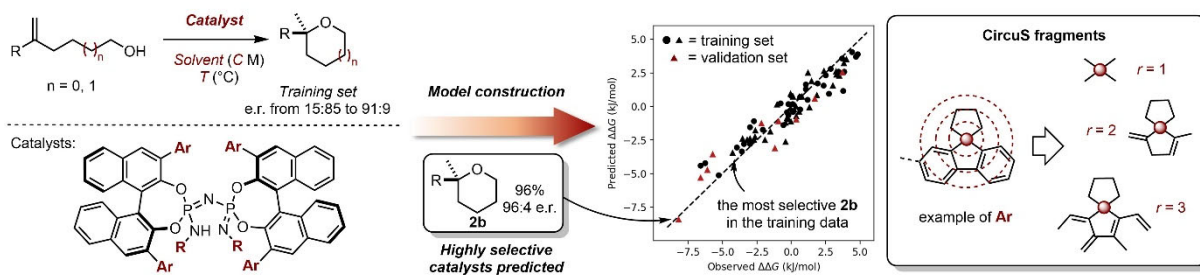


◆ Up to 98:2 e.r. ◆ Up to 98% yield ◆ Scalable ◆ Natural Product synthesis  
 ◆ In-depth physical organic and DFT analyses

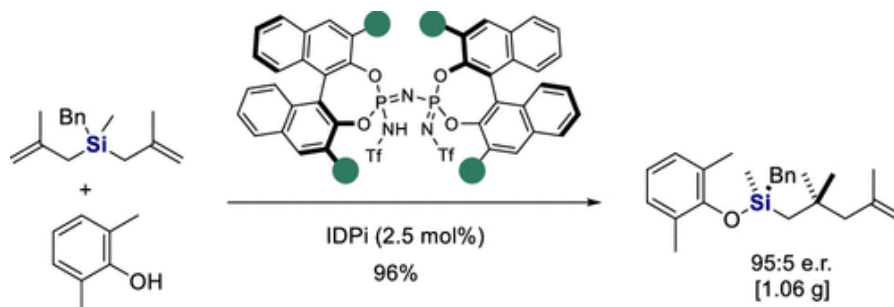
7. Hui Zhou, Roberta Properzi, Markus Leutzsch, Paola Belanzoni, Giovanni Bistoni, **Nobuya Tsuji**, Jung Tae Han, Chendan Zhu, Benjamin List\*  
 “Organocatalytic DYKAT of *Si*-Stereogenic Silanes”  
*J. Am. Chem. Soc.* 145, 4994–5000 (2023)



8. **Nobuya Tsuji**<sup>†</sup>\*, Pavel Sidorov<sup>†</sup>\*, Chendan Zhu, Yuuya Nagata, Timur Gimadiev, Alexandre Varnek\*, Benjamin List\*  
 “Predicting Highly Enantioselective Catalysts Using Tunable Fragment Descriptors”  
*Angew. Chem. Int. Ed.* 62, e202218659 (2023).  
 preprint: *ChemRxiv*, (2022) DOI: 10.26434/chemrxiv-2022-bsmdl  
<sup>†</sup>Equal contributions.



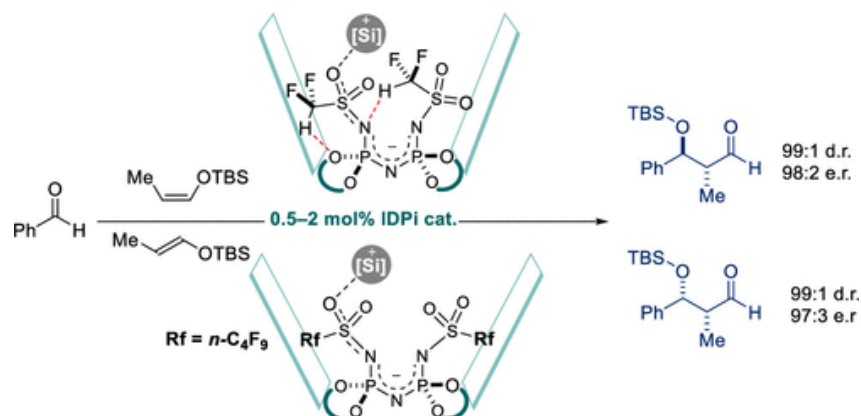
9. Hui Zhou, Jung Tae Han, Nils Nöthling, Monika M. Lindner, Judith Jenniches, Clemens Kühn, **Nobuya Tsuji**, Li Zhang, and Benjamin List\*  
 “Organocatalytic Asymmetric Synthesis of *Si*-Stereogenic Silyl Ethers”  
*J. Am. Chem. Soc.* 144, 10156–10161 (2022).



10. Tynchtyk Amatov, **Nobuya Tsuji**, Rajat Maji, Lucas Schreyer, Hui Zhou, Markus Leutzsch, and Benjamin List\*

“Confinement-Controlled, Either *syn*- or *anti*-Selective Catalytic Asymmetric Mukaiyama Aldolizations of Propionaldehyde Enolsilanes”

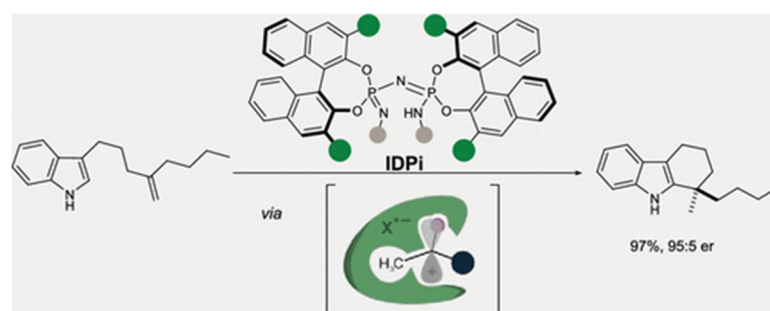
*J. Am. Chem. Soc.* 143, 14475–14481 (2021).



11. Pinglu Zhang, **Nobuya Tsuji**, Jie Ouyang, and Benjamin List\*

“Strong and Confined Acids Catalyze Asymmetric Intramolecular Hydroarylations of Unactivated Olefins with Indoles”

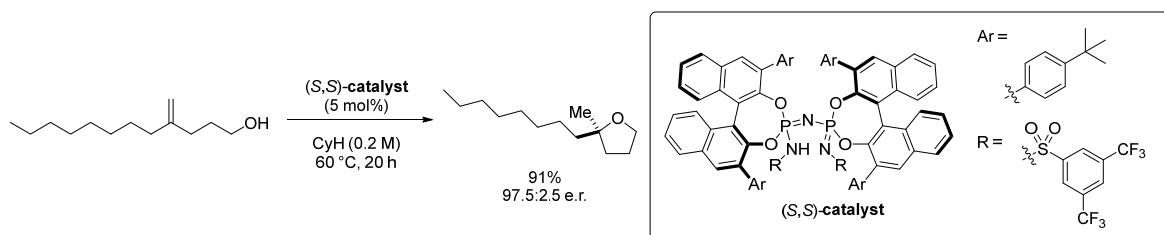
*J. Am. Chem. Soc.* 143, 675–680 (2021).



12. **Nobuya Tsuji**, Jennifer L. Kennemur, Thomas Buyck, Sunggi Lee, Sébastien Prévost, Philip S. J. Kaib, Dmytro Bykov, Christophe Farès and Benjamin List\*

“Activation of olefins via asymmetric Brønsted acid catalysis”

*Science* 359, 1501–1505 (2018).

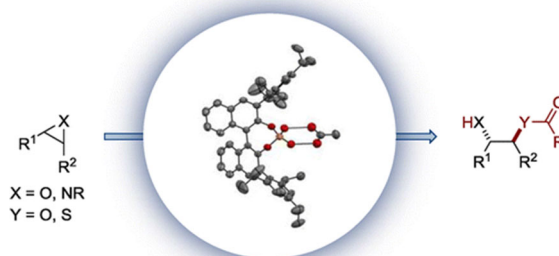


*Highlighted on ACS Chemical & Engineering News*

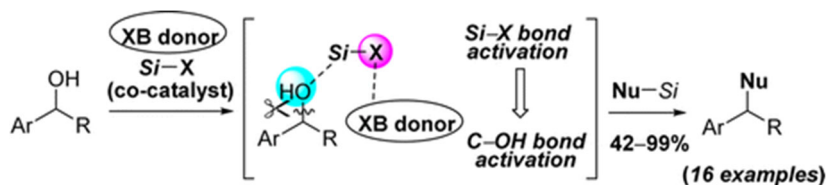
13. Mattia Riccardo Monaco, Daniele Fazzi, **Nobuya Tsuji**, Marcus Leutzsch, Saihu Liao, Walter Thiel and Benjamin List\*

“Self-Assembly Asymmetric Organocatalysis: A Combined Experimental and Computational Investigation”

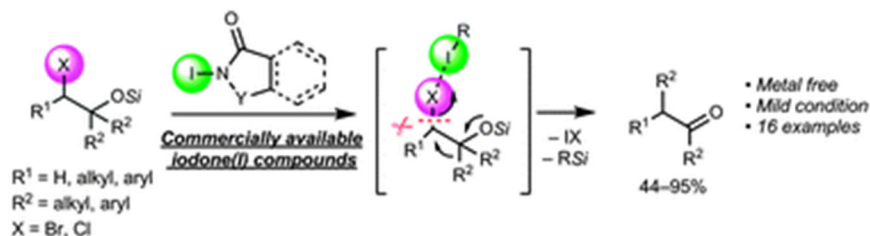
*J. Am. Chem. Soc.* 138, 14740–14749 (2016).



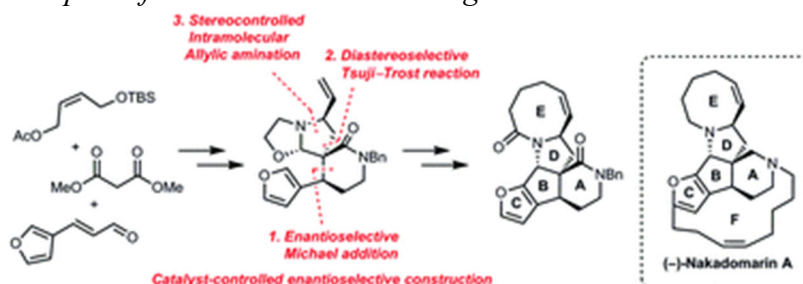
14. Masato Saito, **Nobuya Tsuji**, Yusuke Kobayashi and Yoshiji Takemoto\*  
 “Direct Dehydroxylative Coupling Reaction of Alcohols with Organosilanes through Si–X Bond Activation by Halogen Bonding”  
*Org. Lett.* 17, 3000–3003 (2015).



15. **Nobuya Tsuji**, Yusuke Kobayashi and Yoshiji Takemoto\*  
 “Electrophilic iodine(I) compounds induced semipinacol rearrangement via C–X bond cleavage”  
*Chem. Commun.* 50, 13691–13694 (2014).



16. **Nobuya Tsuji**, Michael Stadler, Naoya Kazumi, Tsubasa Inokuma, Yusuke Kobayashi and Yoshiji Takemoto\*  
 “Catalytic asymmetric synthesis of the pentacyclic core of (–)-Nakadomarin A via oxazolidine as an iminium cation equivalent”  
*Org. Biomol. Chem.* 12, 7919–7922 (2014).  
 This article is a part of 2014 Hot Articles in Organic and Biomolecular Chemistry.



## Invited Lectures

1. Joint Symposium of the Faculty of Pharmaceutical Sciences & WPI-ICReDD in Hokkaido University (September 2022; online)
2. The Catalysis Society of Japan Meetings 2023 Fall (September 2023; Sapporo, Japan)
3. SSOCJ Hokkaido, Organic chemistry seminar for young researchers (Nov 2023; Sapporo, Japan)
4. The 7<sup>th</sup> ICReDD International Symposium – The Rising Star Program- (Jan 2024; Sapporo, Japan)
5. The 104th CSJ Annual Meeting: Asian International Symposium - Organic Chemistry / Green Sustainable Chemistry – (Mar 2024; Funabashi, Japan)

## References

### **1. Prof. Dr. Benjamin List**

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### **2. Prof. Dr. Omar M. Yaghi**

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### **3. Prof. Dr. Yoshiji Takemoto**

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