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Curriculum Vitae

Education:

1995 B.Sc. Faculty of Science, Chiba University (Japan)

1997 M.Sc. Graduate School of Science, Chiba University (Japan)

(Supervisor: Prof. Tsuneo Imamoto)

2000 Ph.D. Graduate School of Science and Technology, Chiba University (Japan)

(Supervisor: Prof. Tsuneo Imamoto)

Research and professional experience:

2000-2002 Special Predoctoral Researcher, Organometallic Chemistry Laboratory, RIKEN

2002 Research Scientist, Organometallic Chemistry Laboratory, RIKEN

(Director: Dr. Zhaomin Hou)

2009-present Senior Research Scientist, Organometallic Chemistry Laboratory, RIKEN

(Director: Dr. Zhaomin Hou)

2013- present Senior Research Scientist, Advanced Catalysis Research Group, RIKEN Center for Sustainable Resource Science

2004~ Beijing University, China Guest Associate Professor

2008~ Dalian University of Technology, China Guest Associate Professor

Honor:

2009 RIKEN Research Incentive Award

2011 Progress Award in Synthetic Organic Chemistry, Japan Original Publications

2013 Rare Earth Society of Japan Award for Young Scientists

2020 RIKEN EIHO Award (RIKEN Significant Achievement Award)

Original Publications

- 1) J. Shao, L. Huang, S. Lou, A. Ohno, Y. Yamada, M. Nishiura, T. Murahashi, Z. Hou, "Synthesis of Rigid Stepladder Polymers via Scandium-Catalyzed Polyspiroannulation of Quinoline with Alkyne" *J. Am. Chem. Soc.*, **2025**, *147*, 1416–1420.
- 2) H. Zhang, L. Huang, X. Wu, M. Chi, H. Wang, M. Nishiura, Y. Higaki, T. Murahashi, Z. Hou, "Synthesis of Self-Healing Elastomers by Scandium-Catalyzed Terpolymerization of Ethylene, Styrene, and Dimethylaminophenyl-Substituted Propylene", *Macromolecules*, **2024**, *57*, 7219-7226.
- 3) L. Huang, Y. Yang, J. Shao, G. Xiong, H. Wang, M. Nishiura, Z. Hou, "Synthesis of Tough and Fluorescent Self-Healing Elastomers by Scandium-Catalyzed Terpolymerization of Pyrenylethenylstyrene, Ethylene, and Anisylpropylene", *J. Am. Chem. Soc.*, **2024**, *146*, 2718-2727.
- 4) A. Mishra, X. Cong, M. Nishiura, Z. Hou, "Enantioselective Synthesis of 1-Aminoindanes via [3 + 2] Annulation of Aldimines with Alkenes by Scandium-Catalyzed C–H Activation", *J. Am. Chem. Soc.*, **2023**, *145*, 17468-17477.
- 5) X. Cong, Q. Zhuo, N. Hao, Z. Mo, G. Zhan, M. Nishiura, Z. Hou, "Regio- and Diastereoselective [3 + 2] Annulation of Aliphatic Aldimines with Alkenes by Scandium-Catalyzed β -C(sp³)-H Activation", *Angew. Chem. Int. Ed.*, **2022**, *61*, e202115996.
- 6) S. Lou, G. Luo, S. Yamaguchi, K. An, M. Nishiura, Z. Hou, "Modular Access to Spiro-dihydroquinolines via Scandium-Catalyzed Dearomative Annulation of Quinolines with Alkynes", *J. Am. Chem. Soc.*, **2021**, *143*, 20462-20471.
- 7) Y. Yang, H. Wang, L. Huang, M. Nishiura, Y. Higaki, Z. Hou, "Terpolymerization of Ethylene and Two Different Methoxyaryl-Substituted Propylenes by Scandium Catalyst Makes Tough and Fast Self-Healing Elastomers", *Angew. Chem. Int. Ed.*, **2021**, *60*, 26192-26198.
- 8) S. Lou, Q. Zhuo, M. Nishiura, G. Luo, and Z. Hou, "Enantioselective C–H Alkenylation of Ferrocenes with Alkynes by Half-Sandwich Scandium

- Catalyst", *J. Am. Chem. Soc.*, **2021**, *143*, 2470-2476.
- 9) S. Lou, L. Zhang, Y. Luo, M. Nishiura, G. Luo, Y. Luo, and Z. Hou, "Regiodivergent C-H Alkylation of Quinolines with Alkenes by Half-Sandwich Rare-Earth Catalysts", *J. Am. Chem. Soc.*, **2020**, *142*, 18128-18137.
- 10) H. Wang, X. Wu, Y. Yang, M. Nishiura, Z. Hou, "Co-syndiospecific Alternating Copolymerization of Functionalized Propylenes and Styrene by Rare-Earth Catalysts", *Angew. Chem. Int. Ed.*, **2020**, *59*, 7173-7177.
- 11) H. Wang, Y. Yang, M. Nishiura, Y. Higaki, A. Takahara, Z. Hou, "Synthesis of Self-Healing Polymers by Scandium-Catalyzed Copolymerization of Ethylene and Anisylpropylenes", *J. Am. Chem. Soc.*, **2019**, *141*, 3249-3257.
- 12) G. Zhan, H. Teng, Y. Luo, S. Lou, M. Nishiura, Z. Hou, "Enantioselective Construction of Silicon-Stereogenic Silanes by Scandium-Catalyzed Intermolecular Alkene Hydrosilylation", *Angew. Chem. Int. Ed.*, **2018**, *57*, 12342–12346.
- 13) X. Shi, M. Nishiura, and Z. Hou: "C–H Polyaddition of Dimethoxyarenes to Unconjugated Dienes by Rare Earth Catalysts", *J. Am. Chem. Soc.* **2016**, *138*, 6147–6150.
- 14) M. Nishiura, F. Guo, and Z. Hou, "Half-Sandwich Rare-Earth-Catalyzed Olefin Polymerization, Carbometalation, and Hydroarylation", *Acc. Chem. Res.*, **2015**, *48*, 2209-2220.
- 15) M. Nishiura, Z. Hou, "Novel Polymerization Catalysts and Hydride Clusters from Rare Earth Metal Dialkyls", *Nature Chem.*, **2010**, *2*, 257-268.