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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 Postdoctoral 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, Center for Sustainable Resource Science, RIKEN

Concurrent posts

- 2004- Guest Associate Professor, College of Chemistry, Peking University
2008- Guest Associate Professor in School of Chemical Engineering, Dalian University of Technology

Awards

- 2009 RIKEN Research Incentive Award
2011 Progress Award in Synthetic Organic Chemistry, Japan

Selected Publications

- 1) B. Wang, M. Nishiura, J. Cheng and Z. Hou,
"Half-Sandwich Scandium Boryl Complexes Bearing a Silylene-Linked Cyclopentadienyl-Amido Ligand "
***Dalton Trans.*, 2014, 43, 14215-14218.**
- 2) F. Guo, M. Nishiura, Y. Li, Z. Hou,
"Cyclocopolymerization of 1,6-Heptadiene with Styrene Catalyzed by a Half-Sandwich Scandium Dialkyl Complex Bearing a Phosphine Oxide Side Arm",
***J. Polym. Sci., Part A: Polym. Chem.*, 2014, 52, 1509-1513.**
- 3) K. Nishii, X. Kang, M. Nishiura, Y. Luo and Z. Hou,
"Regio- and Stereospecific Living Polymerization and Copolymerization of (E)-1,3-Pentadiene with 1,3-Butadiene by Half-sandwich Scandium Catalysts",
***Dalton Trans.*, 2013, 42, 9030-9032.**(a special issue)
- 4) B. Guan, B. Wang, M. Nishiura, and Z. Hou,
"Yttrium-Catalyzed Addition of Benzylic C-H Bonds of Alkyl Pyridines to Olefins",
***Angew. Chem. Int. Ed.*, 2013, 52, 4418-4421.**
- 5) F. Guo, M. Nishiura, Y. Li, and Z. Hou,

- "Copolymerization of Isoprene and Nonconjugated α,ω -Dienes by Half-Sandwich Scandium Catalysts with and without a Coordinative Side Arm",
Chem. Asian J., **2013**, *8*, 2471-2482.
- 6) T. Li, M. Nishiura, J. Cheng, Y. Li, and Z. Hou,
"M₄(CH₂)₄ Cubane-Type Rare-Earth Methylidene Complexes: Unique Reactivity toward Unsaturated C-O, C-N, and C-S Bonds",
Chem. Eur. J., **2012**, *18*, 15079-15085.
- 7) F. Guo, M. Nishiura, H. Koshino, and Z. Hou,
"Scandium-Catalyzed Cyclocopolymerization of 1,5-Hexadiene with Styrene and Ethylene: Efficient Synthesis of Cyclopolyolefins Containing Syndiotactic Styrene-Styrene Sequences and Methylene-1,3-cyclopentane Units",
Macromolecules, **2011**, *44*, 6335-6344.
- 8) J. Oyamada, M. Nishiura, Z. Hou,
"Scandium-Catalyzed Silylation of Aromatic C-H Bonds",
Angew. Chem. Int. Ed., **2011**, *50*, 10720-10723.
- 9) S. Li, J. Cheng, Y. Chen, M. Nishiura, and Z. Hou,
"Rare Earth Metal Boryl Complexes: Synthesis, Structure, and Insertion of a Carbodiimide and Carbon Monoxide"
Angew. Chem. Int. Ed., **2011**, *50*, 6360-6363.
- 10) W. Zhang, Z. Wang, M. Nishiura, Z. Xi, and Z. Hou,
"Ln₄(CH₂)₄ Cubane-Type Rare-Earth Methylidene Complexes Consisting of "(C₅Me₄SiMe₃)LnCH₂" Units (Ln=Tm,Lu)"
J. Am. Chem. Soc., **2011**, *133*, 5712-5717.
- 11) F. Guo, M. Nishiura, H. Koshino, Z. Hou,
"Cycloterpolymerization of 1,6-Heptadiene with Ethylene and Styrene Catalyzed by a THF-Free Half-Sandwich Scandium Complex",
Macromolecules, **2011**, *44*, 2400-2403.
- 12) M. Nishiura, J. Baldamus, T. Shima, K. Mori, Z. Hou,
"Synthesis and Structures of the C₅Me₄SiMe₃-Supported Polyhydride Complexes over the Full Size Range of the Rare Earth Series",
Chem. Eur. J., **2011**, *17*, 5033-5044.
- 13) L. Pan, K. Zhang, M. Nishiura, Z. Hou,
"Syndiospecific Living Copolymerization of Styrene with ϵ -Caprolactone by Scandium Catalysts", **Macromolecules**, **2010**, *43*, 9591-9593.
- 14) M. Nishiura, Z. Hou,
"Novel Polymerization Catalysts and Hydride Clusters from Rare Earth Metal Dialkyls",
Nature Chem., **2010**, *2*, 257-268.
- 15) X. Li, M. Nishiura, L. Hu, K. Mori, Z. Hou,
"Alternating and Random Copolymerization of Isoprene and Ethylene Catalyzed by Cationic Half-Sandwich Scandium Alkyls",
J. Am. Chem. Soc., **2009**, *131*, 13870-13882 .
- 16) L. Zhang, M. Nishiura, M. Yuki, Y. Luo, Z. Hou,
"Isoprene Polymerization with Yttrium Amidinate Catalyst: Switching the Regio- and Stereoselectivity by Addition of AlMe₃"
Angew. Chem., Int. Ed., **2008**, *47*, 2642-2645 .
- 17) M. Nishiura, T. Mashiko, Z. Hou,
"Synthesis and Styrene Polymerisation Catalysis of η^5 - and η^1 -Pyrrolyl-Ligated Cationic Rare Earth Metal Aminobenzylcomplexes",
Chem. Commun., **2008**, 2019-2021.
- 18) X. Li, M. Nishiura, K. Mori, T. Mashiko, Z. Hou,
"Cationic Scandium Aminobenzyl Complexes. Synthesis, Structure and Unprecedented Catalysis of Copolymerization of 1-Hexene and Dicyclopentadiene",
Chem. Commun., **2007**, 4137-4139 .
- 19) X. Li, J. Baldamus, M. Nishiura, O. Tardif, Z. Hou,
"Cationic Rare-Earth Polyhydrido Complexes. Synthesis, Structure, and Catalytic Activity for

- the cis 1,4-Selective Polymerization of 1,3-Cyclohexadiene",
Angew. Chem., Int. Ed., **2006**, *45*, 8184-8188 .
- 20) W.-X. Zhang, M. Nishiura, Z. Hou,
"Catalytic Addition of Terminal Alkynes to Carbodiimides by half-Sandwich Rare Earth Metal Complexes",
J. Am. Chem. Soc., **2005**, *127*, 16788-16789 .
- 21) M. Nishiura, Z. Hou, Y. Wakatsuki,
"A Novel Binuclear Samarium(II) Complex Bearing Mixed Cyclopentadienide/Siloxide Ligands: [(C₅Me₅)Sm{μ-OSi(O^tBu)₃}₃Sm]. Synthesis, Structure, Electron-Transfer, and Unusual Metal-Coordination Reactions",
Organometallics, **2004**, *23*, 1359-1368 .
- 22) M. Nishiura, Z. Hou, Y. Wakatsuki, T. Yamaki, and T. Miyamoto,
"Novel Z-Selective Head-to-Head Dimerization of Terminal Alkynes Catalyzed by Lanthanide Half-Metallocene Complexes",
J. Am. Chem. Soc., **2003**, *125*, 1184-1185 .