

Wednesday, September 6, 2017

Personal

Born on 23 October, 1980 in *Mengcheng, Anhui, P. R. China*

Employment

2015-present **National University of Singapore** Assistant Professor of Chemistry
2011-2014 **University of California, Berkeley** Postdoctoral Research Associate
2010-2011 **University of Illinois at Urbana-Champaign** Postdoctoral Research Associate

Education

2010-2014 **University of California, Berkeley, CA; University of Illinois at Urbana-Champaign, IL**
Postdoctoral Advisor: Prof. John F. Hartwig
Studied palladium- and nickel-catalyzed C-C and C-N cross-coupling reactions. Such reactions include (asymmetric) α -arylation of carbonyl compounds, amination of aryl halides with primary aliphatic amines, and (asymmetric) α -arylation of fluorinated enolates. Detailed mechanistic studies were conducted for nickel-catalyzed C-C and C-N cross-coupling reactions.

2005-2009 **University of Groningen, Netherlands**, Ph.D. in Chemistry
Graduate Supervisor: Prof. Bart Hessen
Designed and synthesized a range of multiple-dentated nitrogen-based ligands derived from the 6-amino-1,4-diazepine framework. Synthesized a variety of rare-earth metal alkyl complexes supported by these nitrogen-based ligands. Studied the catalytic activities of these complexes towards hydrofunctionalization of olefins and polymerization of ethylene.

2002-2005 **Åbo Akademi University, Finland**, M.Sc. in Chemical Engineering
Thesis Supervisor: Dr. Ove S. Andell
Designed and synthesized multiple siloxy-substituted cyclopentadienyl ligands and zirconium complexes supported by these Cp-ligands. Studied the copolymerization of ethylene and 1-hexene catalyzed these synthesized zirconocenes.

1998-2002 **University of Science and Technology of China, Hefei, Anhui**, B.Sc. in Applied Chemistry
Thesis Supervisor: Prof. Wenfang Shi
Studied the synthesis of hyper-branched polyamides.

Awards

2016 Asian Core Program Lectureship from China
2015 Young Investigator Award (National University of Singapore)
2008 Chinese Government Awards for Self-Financed Graduate Students Abroad

Teaching

2017 CM5225 "Asymmetric Catalysis"
2016 CM4225 "Organic Spectroscopy"
2015 CM3221 "Organic Synthesis and Spectroscopy"

Publications

19. Yu, S.; Wu, C.; Ge, S. "Cobalt-Catalyzed Asymmetric Hydroboration/Cyclization of 1,6-Enynes with Pinacolborane" *J. Am. Chem. Soc.* **2017**, *139*, 6526–6529.
18. Teo, W. J.; Wang, C.; Tan, Y. W.; Ge, S. "Cobalt-Catalyzed Z-Selective Hydrosilylation of Terminal Alkynes" *Angew. Chem., Int. Ed.* **2017**, *56*, 4328–4332.

17. Wang, C.; Teo, W. J.; Ge, S. "Cobalt-Catalyzed Regiodivergent Hydrosilylation of Vinylarenes and Aliphatic Alkenes: Ligand- and Silane-Dependent Regioselectivities" *ACS Catal.* **2017**, *7*, 855–863.
16. Jin, Y.; Chen, M.; Ge, S.; Hartwig, J. F. "Pd-Catalyzed Enantioselective α -Arylation of α -Fluorooxindoles" *Org. Lett.* **2017**, *19*, 1390–1393.
15. Wang, C.; Wu, C.; Ge, S. "Iron-Catalyzed *E*-Selective Dehydrogenative Borylation of Vinylarenes with Pinacolborane" *ACS Catal.* **2016**, *6*, 7585–7589.
14. Jiao, Z.; Beiger, J. J.; Jin, Y.; Ge, S.; Zhou, J.; Hartwig, J. F. "Pd-Catalyzed Enantioselective α -Arylation of α -Fluoroketones" *J. Am. Chem. Soc.* **2016**, *138*, 7585–7589.
13. Ge, S.; Arlow, S. I.; Mormino, M. G.; Hartwig, J. F. "Pd-Catalyzed α -Arylation of Trimethylsilyl Enolates of α,α -Difluoroacetamides" *J. Am. Chem. Soc.* **2014**, *136*, 14401–14404.
12. Ge, S.; Chaladaj, W.; Hartwig, J. F. "Pd-Catalyzed α -Arylation of α,α -Difluoroketones with Aryl Bromides and Chlorides. A Route to Difluoromethylarenes" *J. Am. Chem. Soc.* **2014**, *136*, 4149–4152.
11. Ge, S.; Green, R. A.; Hartwig, J. F. "Controlling First-Row Metal Catalysts: Amination of Aryl and Heteroaryl Chlorides and Bromides with Primary Aliphatic Amines Catalyzed by a BINAP-Ligated Single-Component Ni(0) Complex" *J. Am. Chem. Soc.* **2014**, *136*, 1617–1627.
10. Hama, T.; Ge, S.; Hartwig, J. F. "Palladium-Catalyzed α -Arylation of Zinc Enolates of Esters: Improved Reaction Conditions and the Substrate Scope" (Featured Article) *J. Org. Chem.* **2013**, *78*, 8250–8266.
9. Ge, S.; Hartwig, J. F. "A Highly Reactive Single-Component Nickel Precursor for Suzuki-Miyaura Cross-Coupling of Heteroaryl Halides with Heteroarylboronic Acids" *Angew. Chem., Int. Ed.* **2012**, *51*, 12837–12841. **Highlighted by Synfacts (2013, 9, 0143).**
8. Ge, S.; Hartwig, J. F. "Nickel-Catalyzed Asymmetric α -Arylation and Heteroarylation of Ketones with Chloroarenes: Effect of Halide on Selectivity, Oxidation State, and Room-Temperature Reactions" *J. Am. Chem. Soc.* **2011**, *133*, 16330–16333. **Highlighted by Synfacts (2012, 8, 0055).**
7. Ge, S.; Meetsma, M.; Hessen, B. "Scandium, Yttrium and Lanthanum Benzyl and Alkynyl Complexes with the *N*-(2-Pyrrolidin-1-ylethyl)-1,4-diazepan-6-amido Ligand: Synthesis, Characterization, and *Z*-Selective Catalytic Linear Dimerization of Phenylacetylenes" *Organometallics* **2009**, *28*, 719–726.
6. Ge, S.; Meetsma, M.; Hessen, B. "Neutral and Cationic Rare Earth Metal Alkyl and Benzyl Compounds with the 6-Pyrrolidinyl-1,4,6-trimethyl-1,4-diazepine Ligand and their Performance in the Catalytic Hydroamination/cyclization of Aminoalkenes" *Organometallics* **2008**, *27*, 5339–5346.
5. Ge, S.; Meetsma, M.; Hessen, B. "Highly Efficient Hydrosilylation of Alkenes by Organoyttrium Catalysts with Sterically Demanding Amidinate and Guanidinate Ligands" *Organometallics* **2008**, *27*, 3131–3135.
4. Ge, S.; Morambeuna, V. F. Q.; Meetsma, M.; Hessen, B. "Highly Efficient Regio- and Stereoselective Dimerization of (hetero)Aromatic Terminal Alkynes by Organo-rare Earth Metal Catalysts" *Organometallics* **2007**, *26*, 6508–6510.
3. Ge, S.; Meetsma, M.; Hessen, B. "Monoanionic *fac*- κ^3 ligands derived from 6-amino-1,4-diazepine: ligand dependence of stability and catalytic activity of their scandium alkyl derivatives" *Organometallics* **2007**, *26*, 5278–5284.
2. Ge, S.; Bambirra, S.; Meetsma, M.; Hessen, B. "The 6-amino-6-methyl-1,4-diazepine group as an ancillary ligand framework for neutral and cationic scandium and yttrium alkyls" *Chem. Commun. (Cambridge, United Kingdom)* **2006**, 3320–3322.

1. Ge, S.; Andell, O. S.; Penninkangas, A.; Maaranen, J.; Telen, T.; Mutikainen, I. "The first synthesised examples of di-siloxy-substituted cyclopentadienyl zirconocenes, their synthesis, structure and activity in ethylene polymerization" *J. of Organomet. Chem.* **2006**, *691*, 122–130.

Patent Applications

1. Hartwig, J. F.; Ge, S.; Chaladaj, W. "Metal-Catalyzed Coupling of Aryl and Vinyl Halides with α,α -Difluorocarbonyl Compounds" PCT Int. Appl. (**2014**), WO201465861 A1 20141009
2. Andel, O. A.; Penninkangas, A.; Ge, S.; Paavola S. "Siloxy substituted metallocene catalysts" Eur. Pat. Appt. (**2007**), 34pp. EP 1752462 A1 20070214
3. Andel, O. A.; Penninkangas, A.; Ge, S. "Transition-metal metallocenes with mono- or bicyclic multi-siloxy-substituted cyclopentadienyl groups, their preparation and use as polymerization catalysts" Eur. Pat. Appt. (**2006**), 20pp. EP 1640378 A1 20060329

Invited Lectures

7. The Symposium of JSPS-DFG Joint Graduate Externship Program, March 13-16, **2018**, Osaka University, Osaka, Japan
6. The 2nd Base Metal Catalysis Symposium, Kyushu University, January 24–26, **2018**, Fukuoka, Japan
5. The 13th SINO-US Chemistry Professor Conference, December 15–18, **2017**, Nantong, China
4. The 7th International Collaborative and Cooperative Chemistry Symposium, December 15–18, **2016**, Beijing, China
3. The 14th International Symposium for Chinese Organic Chemists (ISCOC) & The 11th International Symposium for Chinese Inorganic Chemists (ISCIC), December 8–10, **2016**, Singapore
2. International Symposium on Catalysis and Fine Chemicals, November 10–14, **2016**, Taipei, Taiwan
1. The 12th SINO-US Chemistry Professors Conference, June 23–35, **2016**, Guangzhou, China