

Curriculum Vitae
Tianning Diao
New York University

Department of Chemistry
100 Washington Square East
New York, NY 10003

Tel: (212) 998-8436
Email: diao@nyu.edu
<https://wp.nyu.edu/diao/>

Professional Position

Assistant Professor
New York University, NY

July 2014-present

Education and Training

Postdoctoral Researcher
Advisor: Professor Paul J. Chirik

2012 - 2014
Princeton University, NJ

Ph. D., Chemistry
Advisor: Professor Shannon S. Stahl

2007 - 2012
University of Wisconsin-Madison, WI

B.S., Chemistry
Advisor: Professor Jie Wu

2003 - 2007
Fudan University, Shanghai, China

Summer Research Intern
Advisor: Dr. Matthew H. Yates

Summer, 2009
Eli Lilly and Company, Indianapolis, IN

Honors and Awards

Organometallics Distinguished Author Award	2018
Sloan Research Fellowship	2018
Goddard Junior Faculty Fellowship	2017
NSF-CAREER Award	2016
Charles and Martha Casey Excellence Award in Organic Chemistry Research	2012
Hirschman-Rich Graduate Award (Bioorganic)	2011
Abbott Laboratories Organic Synthesis Award	2011
Eastman Summer Research Award	2010
Undergraduate Outstanding Thesis Award	2007
Chun-Tsung Research Fellowship, Chun-Tsung Endowment Fund (CURE)	2006
Undergraduate Science Creation Award, Fudan University	2005
Silver Medal in Chinese National Chemistry Olympiad, Wuhan University	2003
First Prize in Chinese National Chemistry Olympiad, Sichuan Province	2001,2002

Publications

8. Kuang, Y.; Wang, X.; Anthony, D.; Diao, T.* "Ni-Catalyzed Two-Component Reductive Dicarbofunctionalization of Alkenes via Radical Cyclization" *Chem. Comm.* **2018**, *54*, 2558-2561.
7. Xu, H.; Wang, X.; Hu, C.; Diao, T.* "Structural Characterization of β -Agostic Bonds in Pd-Catalyzed Polymerization" *Organometallics* **2017**, *36*, 4099-4102.
6. Kuang, Y.; Anthony, D.; Katigbak, J.; Marrucci, F.; Humagain, S.; Diao, T.* "Ni(I)-Catalyzed Reductive Cyclization of 1,6-Dienes: Mechanism-Controlled *trans*-Selectivity" *Chem* **2017**, *3*, 268-280.
5. Diccianni, J. B.; Heitmann T.; Diao, T.* "Nickel-Catalyzed Reductive Cycloisomerization of Enynes with CO₂" *J. Org. Chem.* **2017**, *82*, 6895-6903.
4. Diccianni, J. B.; Hu, C.; Diao, T.* "Binuclear, High-Valent Nickel Complexes: Ni–Ni Bonds in Aryl–Halogen Bond Formation" *Angew. Chem. Int. Ed.* **2017**, *56*, 3635-3639.
3. Xu, H.; White, P.; Hu, C.; Diao, T.* "Structure and Isotope Effects of β -H Agostic (α -Diimine)Ni Cation as the Polymerization Intermediate" *Angew. Chem. Int. Ed.* **2017**, *56*, 1535-1538.
2. Diccianni, J. B.; Hu, C.; Diao, T.* "N–N Bond Forming Reductive Elimination via a Mixed-Valent Ni(II)-Ni(III) Intermediate" *Angew. Chem. Int. Ed.* **2016**, *55*, 7534-7538.
1. Xu, H.; Diccianni, J. B.; Katigbak, J.; Hu, C.; Zhang, Y.; Diao, T.* "Bimetallic C–C Bond Forming Reductive Elimination from Nickel" *J. Am. Chem. Soc.* **2016**, *138*, 4779-4786.

Prior to NYU

13. Schuster, C. H.; Diao, T.; Pappas, I.; Chirik, P. J. "Bench-Stable, Substrate-Activated Cobalt Carboxylate Pre-Catalysts for Alkene Hydrosilylation with Tertiary Silanes" *ACS Catalysis* **2016**, 2632-2636.
12. Palmer, W. N.; Diao, T.; Pappas, I.; Chirik, P. J. "High-Activity Cobalt Catalysts for Alkene Hydroboration with Electronically Responsive Terpyridine and α -Diimine Ligands" *ACS Catalysis* **2015**, *5*, 622-626.
11. Atienza, C. C. H.; Diao, T.; Weller, K. J.; Nye, S. A.; Lewis, K. M.; Delis, J. G. P.; Boyer, J. L.; Roy, A. K.; Chirik, P. J. "Bis(imino)pyridine Cobalt-Catalyzed Dehydrogenative Silylation of Alkenes: Scope, Mechanism, and Origins of Selective Allylsilane Formation" *J. Am. Chem. Soc.* **2014**, *136*, 12108-12118.
10. Diao, T.; Stahl, S. S. "O₂-Promoted Allylic Acetoxylation of Alkenes: Assessment of "Push" versus "Pull" Mechanisms and Comparison Between O₂ and Benzoquinone" *Polyhedron* **2014**, *84*, 96-102.
9. Pun, D.; Diao, T.; Stahl, S. S. "Aerobic Dehydrogenation of Cyclohexanone to Phenol Catalyzed by Pd(TFA)₂/2-Dimethylaminopyridine: Evidence for the Role of Pd Nanoparticles", *J. Am. Chem. Soc.* **2013**, *135*, 8213-8221.
8. Diao, T.; Pun, D.; Stahl, S. S. "Aerobic Dehydrogenation of Cyclohexanone to Cyclohexenone Catalyzed by Pd(DMSO)₂(TFA)₂: Evidence for Ligand-Controlled Chemoselectivity", *J. Am. Chem. Soc.* **2013**, *135*, 8205-8212.

7. Diao, T.; White, P.; Guzei, I.; Stahl, S. S. "Characterization of DMSO Coordination to Palladium(II) in Solution and Insights into the Aerobic Oxidation Catalyst, Pd(DMSO)₂(TFA)₂" *Inorg. Chem.* **2012**, *51*, 11898-11909.
6. Diao, T.; Wadzinski, T. J.; Stahl, S. S. "Direct Aerobic α,β -Dehydrogenation of Aldehydes and Ketones with a Pd(TFA)₂/4,5-Diazafluorenone Catalyst" *Chem. Sci.* **2012**, *3*, 887-891.
5. Diao, T.; Stahl, S. S. "Synthesis of Cyclic Enones via Direct Palladium-Catalyzed Aerobic Dehydrogenation of Ketones" *J. Am. Chem. Soc.* **2011**, *133*, 14566-14569.
4. Ye, X.; Johnson, M. D.; Diao, T.; Yates, M. H.; Stahl, S. S. "Development of Safe and Scalable Continuous-flow Methods for Palladium-Catalyzed Aerobic Oxidation Reactions" *Green Chem.* **2010**, *12*, 1180-1186.
3. Diao, T.; Sun, X.; Fan, R.; Wu, J. "Unexpected Ring-opening Reaction of Aziridine with Acetic Anhydride in DMF" *Chem. Lett.* **2007**, *36*, 604-605.
2. Wu, J.; Diao, T.; Sun, W.; Li, Y. "Expeditious Approach to Coumarins via Pechmann Reaction Catalyzed by Molecular Iodine or Ag(OTf)" *Synth. Commun.* **2006**, *36*, 2949-2956.
1. Wu, J.; Zhang, L.; Diao, T. "Expeditious Approach to Quinolines via Friedländer Synthesis Catalyzed by FeCl₃ or Mg(ClO₄)₂" *Synlett.* **2005**, *17*, 2653-2657.

Book Chapter

Shannon S. Stahl; Diao, T. Oxidation Adjacent to C=X Bonds by Dehydrogenation. In *Comprehensive Organic Synthesis II*; Knochel, P., Molander, G. A., Eds.; Elsevier *Comp. Org. Synth.* **2014**, *7*, 178-212.

Patents

8. Diao, T.; Chirik, P. J.; Roy, A. K.; Lewis, K.; Weller, K. J.; Delis, J. G. P.; Yu, R. "Cobalt Terpyridine Complexes as Catalysts for Hydrosilylation and Dehydrogenative Silylation of Alkenes" WO 2015077306 A1, 2015.
7. Chirik, P. J.; Diao, T.; Yu, R. "Hydroboration and Borylation with Cobalt Catalysts" WO 2015077344 A1, 2015.
6. Diao, T.; Chirik, P. J.; Roy, A. K.; Lewis, K. M.; Delis, J. G. P.; Weller, K. J. "Dialkyl Cobalt Catalysts and Their Use for Hydrosilylation and Dehydrogenative Silylation" WO 2015171881 A1, 2015.
5. Diao, T.; Chirik, P. J.; Roy, A. K.; Lewis, K. M.; Weller, K. J.; Delis, J. G. P.; Yu, R. "Dehydrogenative Silylation, Hydrosilylation and Crosslinking Using Cobalt Catalysts" WO 2015077298 A1, 2015.
4. Diao, T.; Chirik, P. J.; Roy, A. K.; Lewis, K. M.; Nye, S. A.; Weller, K. J.; Delis, J. G. P. "Cobalt Catalysts and their Use for Hydrosilylation and Dehydrogenative Silylation" U.S. Patent US20150141647 A1, 2015.
3. Diao, T.; Chirik, P. J.; Roy, A. K.; Lewis, K. M.; Nye, S. A.; Weller, K. J.; Delis, J. G. P.; Yu, R. "Dehydrogenative Silylation, Hydrosilylation and Crosslinking Using Cobalt Catalysts" U.S. Patent US20150080536 A1, 2015.
2. Roy, A. K.; Atienza, C. C. H.; Chirik, P. J.; Lewis, K. M.; Weller, K. J.; Nye, S. A.; Delis, J. G. P.;

Boyer, J. L.; Diao, T.; Pohl, E. "Selective 1,2-Hydrosilylation of Terminally Unsaturated 1,3-Dienes using Iron Catalysts" U.S. Patent US 20140330024 A1, 2014.

1. Roy, A. K.; Atienza, C. C. H.; Chirik, P. J.; Lewis, K. M.; Weller, K. J.; Nye, S.; Delis, J. G. P.; Boyer, J. L.; Diao, T.; Pohl, E. "Reusable Homogeneous Cobalt Pyridine Diimine Catalysts for Dehydrogenative Silylation and Tandem Dehydrogenative-Silylation-Hydrogenation" U.S. Patent US20140243486 A1, 2014.

Invited Presentations

Texas A&M University	April 2019
University of Wisconsin-Madison	Nov. 2018
Organic Young Academic Investigator Symposium	Aug. 2018
Stony Brook University	April 2018
Novartis mini-Symposium at University of Chicago	April 2018
Purdue University	April 2018
Stony Brook University	April 2018
Shanghai-New York Symposium on Frontiers in Chemical Biology	Mar. 2018
Florida Heterocyclic and Synthetic Chemistry Conference	Mar. 2018
NYU-Tel Aviv: Symposium of New Horizons in Chemistry: From Fundamentals to Applications	Feb. 2018
Queens College	Jan. 2018
City College of New York	Nov. 2017
Frontiers of Inorganic and Organometallic Chemistry Lecture at Columbia University	Oct. 2017
Queens College	Apr. 2017
Lehigh University	Mar. 2017
Gordon Conference-Inorganic Reactions and Mechanism (poster)	Mar. 2017
Sichuan University	Jan. 2017
Shanghai Institute of Organic Chemistry (SIOC)	Dec. 2016
Fudan University	Dec. 2016
Shanghai University	Dec. 2016
NYU-Shanghai	Dec. 2016
TSRC-Enabling Technology for Reactions and Processes, Colorado	Aug, 2016
44th Middle Atlantic Regional Meeting of the ACS	Jun, 2016
NYU Abu Dhabi International Chemistry Conference on Organic and Bioorganic Chemistry	Feb, 2016
St John's University (Invited by the ACS Student Chapter)	Nov, 2015