

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
www.diaogroup.org

Professional Positions

Professor, New York University, NY	2023-Present
Associate Professor, New York University, NY	2020-2023
Assistant Professor, New York University, NY	2014-2020

Education and Training

Postdoctoral Research Associate, Princeton University, Princeton, NJ	2012 - 2014
Ph. D. in Chemistry, University of Wisconsin-Madison, Madison, WI	2007 - 2012
B.S. in Chemistry, Fudan University, Shanghai, China	2003 - 2007

Honors and Awards

Arthur C. Cope Scholar Award	2023
Camille-Dreyfus Teacher-Scholar Award	2019
Thieme Chemistry Journal Award	2019
CAPA Distinguished Junior Faculty Award	2018
<i>Organometallics</i> 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

Editorship and Service

Associate editor, <i>ACS Catalysis</i>	2023-present
Editorial Advisory Board, <i>Org. Lett.</i>	2023-present
Editorial Advisory Board, <i>Organometallics</i>	2019-present
Guest Editor, <i>Organometallics</i>	2021
Early Career Advisory Board, <i>ACS Catalysis</i>	2018
<i>Ad hoc</i> reviewer for NSF, NIH, DOE, ACS-PRF, etc.	2018-present
NIGMS SBCA/CSB standing member	2022-2026

Publications

29. Dawson, G.; Lin, Q.; Diao, T.* Ligand Redox-Activity Governed by the Geometry of Organonickel Radical Complexes. *J. Am. Chem. Soc.* **2023**, *145*, 20551–20561.
28. Suh, S.; Jambu, S.; Chin, M.; Diao, T.* Selective Cleavage of Lignin Model Compounds via a Microscopic Reverse Biosynthesis Mechanism. *Org. Lett.* **2023**, *25*, 4792–4796.
27. Lin, Q.; Spielvogel, E.; Diao, T.* Radical Capture at Nickel(II) Complexes: Spectroscopic Evidence, Rates, and Stereoselectivity. *Chem*, **2023**, *9*, 1295-1308.
26. Qi, X.; Jambu, S.; Ji, Y.; Belyk, K.; Panigrahi, N.; Arora, P.; Strotman, N.; Diao, T.* Late-Stage Modification of Oligopeptides by Nickel-Catalyzed Stereoselective Radical Addition to Dehydroalanine. *Angew. Chem. Int. Ed.* **2022**, *10.1002/anie.202213315*.
25. Ju, L.; Hu, C.; Diao, T.* Strategies for Promoting Reductive Elimination from Bi- and Bis-Oxazoline Ligated Nickel Complexes. *Organometallics*. **2022**, *41*, 1748–1753. (Invited contribution to the Special Issue "Sustainable Organometallic Chemistry")
24. Chin, M.; Suh, S.; Fang, Z.; Hegg, E.; Diao, T.* Depolymerization of Lignin via a Microscopic Reverse Biosynthesis Pathway. *ACS Cat.* **2022**, *12*, 2532-2539.
23. Ju, L.; Lin, Q.; Libretto, N.; Wagner, C.; Hu, C.; Miller, J.*; Diao, T.* Reactivity of (bi-Oxazoline)organonickel Complexes and the Revision of a Catalytic Mechanism. *J. Am. Chem. Soc.* **2021**, *143*, 14458-14463.
22. Lin, Q.; Dawson, G.; Diao, T.* Experimental Electrochemical Potentials of Nickel Complexes. *Synlett*. **2021**, *32*, 1606-1620. (Invited contribution)
21. Lin, Q.; Fu, Y.; Liu, P.*; Diao, T.* Monovalent Nickel-Mediated Radical Formation: A Concerted Halogen-Atom Dissociation Pathway Determined by Electroanalytical Studies. *J. Am. Chem. Soc.* **2021**, *143*, 14196-14206.
20. Wei, Y.; Lam, J.; Diao, T.* Synthesis of C-Acyl Furanosides via the Cross-Coupling of Glycosyl Esters with Carboxylic Acids. *Chem. Sci.* **2021**, *12*, 11414-11419.
19. Wagner, C.; Herrera, G.; Lin, Q.; Hu, C.; Diao, T.* Redox-Activity of Pyridine-Oxazoline Ligands in the Stabilization of Monovalent Organometallic Nickel Complexes *J. Am. Chem. Soc.* **2021**, *143*, 5295-5300.
18. Wei, Y.; Ben-zvi, B.; Diao, T.* Diastereoselective Synthesis of Aryl C-Glycosides from Glycosyl Esters via C-O Bond Homolysis. *Angew. Chem. Int. Ed.* **2021**, *60*, 9433-9438.
17. Anthony, D.; Diao, T.* Asymmetric Reductive Dicarbofunctionalization of Alkenes via Nickel Catalysis. *Synlett*. **2020**, *31*, 1443-1447. (Invited contribution)
16. Qi, X.; Diao, T.* Nickel-Catalyzed Dicarbofunctionalization of Alkenes. *ACS Cat.* **2020**, 8542-8556. (Invited review article)
15. Diccianni, J. B.; Lin, Q.; Diao, T.* Mechanisms of Nickel-Catalyzed Coupling Reactions and Applications in Alkene Functionalization. *Acc. Chem. Res.* **2020**, *53*, 906-919. (Invited review article)
14. Lin, Q.; Diao, T.* Mechanism of Ni-Catalyzed Reductive 1,2-Dicarbofunctionalization of Alkenes. *J. Am. Chem. Soc.* **2019**, *141*, 17937-17948.
13. Diccianni, J. B.; Diao, T.* Mechanisms of Ni-Catalyzed Cross-Coupling Reactions. *Trends in Chemistry*, **2019**, *1*, 830-844. (Invited review article)

12. Diccianni, J. B.; Hu, T. C.; Diao, T.* (Xantphos)Ni(I)-Alkyl Mediated Insertion of CO₂. *Angew. Chem. Int. Ed.* **2019**, *58*, 13865-13868.
11. Anthony, D.; Lin, Q.; Baudet, J.; Diao, T.* Ni-Catalyzed Asymmetric Reductive Diarylation of Vinylarenes. *Angew. Chem. Int. Ed.* **2019**, *58*, 3198-3201.
10. Diccianni, J. B.; Chin, M.; Diao, T.* Synthesis of Lactate Derivatives via Reductive Radical Addition to α -Oxyacrylates. *Tetrahedron* **2019**, *75*, 4180-4185.
(Invited contribution in honor of John Hartwig's Tetrahedron Award)
9. Diccianni, J. B.; Katigbak, J.; Hu, C.; Diao, T.* Mechanistic Characterization of Ni(I)-Mediated Alkyl Bromide Activation: Oxidative Addition, Electron Transfer, or Halogen-Atom-Abstraction. *J. Am. Chem. Soc.* **2019**, *141*, 1788-1796.
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

Book Chapter

Wagner, C.; Diao, T., Nickel-Carbon σ -Bonded Complexes. In *Comprehensive Organometallic Chemistry IV*, Meyer K., O. H. D., Parkin G., Ed. Elsevier 2022; Vol. 8, pp 271-356.

Patent

Diao, T.; Chin, M.; Suh, S. Depolymerization and Valorization of a Biopolymer, US 17/705,762.