Curriculum Vitae

LIVIU M. MIRICA

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PROFESSIONAL POSITIONS

2019-present William H. and Janet G. Lycan Professor of Chemistry, University of Illinois at Urbana-Champaign

2019-present Faculty Member, Beckman Institute for Advanced Science and Technology, University of Illinois at Urbana-Champaign

2019-present Faculty Affiliate, The Neuroscience Program, University of Illinois at Urbana-Champaign

2022-present Faculty Affiliate, Dept. of Biomedical and Translational Sciences, Carle Illinois College of Medicine

2023-present Faculty Affiliate, Institute for Genomic Biology, University of Illinois at Urbana-Champaign

2023-present Faculty Affiliate, Dept. of Bioengineering, University of Illinois at Urbana-Champaign

2015-2022 Member, Hope Center for Neurological Disorders, Washington University School of Medicine

2016-2018 Professor, Department of Chemistry, Washington University

2013-2016 Associate Professor, Department of Chemistry, Washington University

2008-2013 Assistant Professor, Department of Chemistry, Washington University

2011-2018 Member, International Center for Advanced Renewable Energy & Sustainability (I-CARES), Washington University

2008-2018 Member, Division of Biological and Biomedical Sciences (DBBS), Washington University

2005-2008 NIH Postdoctoral Fellow, University of California, Berkeley

Postdoctoral Advisor: *Professor Judith P. Klinman*

EDUCATION

1999–2005 Ph.D., Chemistry, Stanford University, Stanford, CA

Thesis title: "Mechanistic Investigations of Model Complexes Relevant to Copper-Containing Enzymes." Graduate Advisor: *Professor T. Daniel P. Stack*

1996–1999 B.S., Chemistry, California Institute of Technology, Pasadena, CA

Undergraduate Research Advisor: *Professor Harry B. Gray*

AWARDS AND HONORS

- Somorjai Visiting Miller Professor, UC Berkeley, Spring 2026 semester
- Moore Distinguished Scholar, California Institute of Technology, November 2025

- Fellow of the American Association for the Advancement of Science, 2022
- Society of Biological Inorganic Chemistry Early Career Award, 2020
- Fellow of the Royal Society of Chemistry, 2018
- BK21–KAIST Lectureship Award, Korea Advanced Institute of Science and Technology, 2017
- Innovation Award, St. Louis Academy of Sciences, 2017
- Saint Louis Award, ACS St. Louis Section, 2016
- Organometallics Young Investigator Fellowship, ACS Division of Organic Chemistry, 2014
- Saltman Lectureship, Metals in Biology Gordon Research Conference, 2014
- NSF CAREER Award, 2013-2018
- Undergraduate Research Mentor of the Year Award, Washington University, 2012
- Alfred P. Sloan Foundation Research Fellowship, 2012
- Outstanding Faculty Member, Freshman Class Council & First Year Center, 2011
- Sony Electronics Scholarship Award for Excellence in Teaching, Washington University, 2011
- Ralph E. Powe Junior Faculty Award, Oak Ridge Associated Universities, 2010-2011
- NIH–NRSA Postdoctoral Fellowship, 2007-2008
- Young Investigator Award, Division of Inorganic Chemistry, ACS, 2006
- Franklin Veatch Memorial Fellowship, Stanford University, 2004-2005
- Stanford Graduate Fellowship, Stanford University, 1999-2003
- Taube Prize, Stanford University, 1999
- Merck Index Award for Excellence in Chemistry, California Institute of Technology, 1999
- Carnation Merit Award, California Institute of Technology, 1997-1998
- Silver Medal, International Chemistry Olympiad, Beijing, China, 1995
- Gold Medal, International Chemistry Olympiad, Oslo, Norway, 1994

RESEARCH INTERESTS

Development of novel transition metal catalysts for bioinspired oxidative organic transformations. Targeted reactions include alkyl-alkyl cross-coupling reactions, oxidative C-H functionalization reactions using green oxidants, and modelling of bioorganometallic nickel enzymes.

Investigation of the role of transition metal ions in amyloid β (Aβ) peptide aggregation in Alzheimer's disease (AD) and development of metal-binding and metal-containing multifunctional compounds as potential therapeutic and diagnostic agents for AD.

RESEARCH SUPPORT

Pending Support

- **National Science Foundation**, "CAS: Low-valent, highly catalytically active Ni-isocyanide compounds", 07/01/26 – 06/30/29, PI: Mirica.

- **National Institutes of Health**, "Organometallic Chemistry of Nickel Enzymes", 04/01/26 – 03/31/31, PI: Mirica.

Current Support

- **National Science Foundation**, "Controlling Single Electron Processes at Palladium Centers", 08/01/25 – 07/31/28, $600,00 total costs, PI: Mirica.
- **Department of Energy**, "Energy conservation, electron transfer and enzymology during methane production by *Methanosarcina* species", 09/01/24 – 08/31/26, $398,000 total costs, PI: Metcalf, Co-PIs: Mirica and van der Donk.
- **American Chemical Society, Petroleum Research Fund**, "Acetyl-CoA Synthase Model Systems for Unsymmetric C-C Coupling", 01/01/25 – 12/31/26, $125,000 total costs, PI: Mirica.
- **National Institutes of Health**, "Blood-Brain Barrier Permeable Multimodal Imaging Agents for Neurodegenerative Diseases", 09/01/23 – 08/31/28, $3,073,240 total costs, PI: Mirica; co-Is: Dobrucki, Llano.

PUBLICATIONS (*h*-index = 50, *i10*-index = 91, * denotes corresponding author)

Manuscripts Submitted

137. Chakrabarti, S.; Knecht, K. A.; Garcia, J. N.; Mirica, L. M.* PivaloNi: A Stable, Dicationic "Naked Nickel" Precursor for Coordination Chemistry and Catalysis, *Inorg. Chem. Front.*, submitted, ChemRxiv preprint DOI: https://doi.org/10.26434/chemrxiv.15006705/v1

136. El Sayed, T.; Patel, A.; Xu, K.; Salaiza, J. A.; Azhakath Valappil, H.; Majumdar, S.; Sutton; B. P.; Mirica, L. M.,* Design of bifunctional pyridinophane ligands as Mn^{2+} MRI agents for diagnostic imaging of Alzheimer's disease, *Inorg. Chem. Front.*, submitted, ChemRxiv preprint DOI: https://doi.org/10.26434/chemrxiv.15006736/v1

135. Bhowmik, S.; Azhakath Valappil, H.; Blade, G.; Dobrucki, I.; Dobrucki, L. W.; Mirica, L. M.;* Thia-Aza Pyridinophane Chelators for Copper Coordination and 64Cu Radiolabeling Studies, *Inorg. Chem.*, submitted, ChemRxiv preprint DOI: https://doi.org/10.26434/chemrxiv.15006523/v1

134. Westawker, L. P.; Holm, A. R.; Bouley, B. S.; Wallick, R. F.; Chakrabarti, S.; Ozerov, M.; J. Krzystek, J.; Telser, J.;* Mirica, L. M.* Zero-field splitting & spin states of photoactive pyridinophanesupported Ni(II)Cl2 complexes, *Inorg. Chem.*, submitted, ChemRxiv preprint DOI: https://doi.org/10.26434/chemrxiv.15006500/v1

133. Blade, G.; Lateef, Z.; Bowes, J.; Okoro, G.; Nelappana, M.; Whetter, J.; Dobrucki, I.; Boros, E.; Dobrucki, L. W.; Mirica, L. M.;* Sulfur-containing chelators towards the stabilization of 64Cu(II/I) for PET imaging applications, *Inorg. Chem.*, submitted.

132. El Sayed, T.; Rana, M.; Bhowmik, S.; Dobrucki, I.; Dobrucki, L. W.; Mirica, L. M.,* Picolinate- and Phosphonated Pyridyl-TACN Ligands for Stable and Inert Cu(II) Complexes for Radiochemical Applications, *Inorg. Chem.*, submitted, ChemRxiv preprint DOI: https://doi.org/10.26434/chemrxiv.15006501/v1

131. Bhowmik, S.; Rana, M.; Blade, G.; Dobrucki, I.; Dobrucki, L. W.; Mirica, L. M.;* Cu(II/I)-Pyridinophane Complexes: O_2 Reactivity and ^{64}Cu PET Imaging Studies, *Inorg. Chem.*, revision submitted, ChemRxiv preprint DOI: https://doi.org/10.26434/chemrxiv.15003851/v1

Publications

130. Jeong, D.;[#] Banerjee, S.;[#] Bae, D. Y.;[#] Chakrabarti, S.;[#] Nett, A.; Konstantinov, I.; Rosen, M.; Kennedy, R. D.; Mirica, L. M.,* Nickel-Catalyzed Telomerization of 1,3-Butadiene Promoted by Triarylphosphines: Unveiling Mechanistic Details for Selective Production of 1-Methoxy-2,7-octadiene, *ACS Catal.,* **2026**, *16*, accepted,

129. Gutierrez, C.; Mina, M.; An, J.; Bhowmik, S.; Xu, K.; Salaiza, J.; Chen, K.; El Sayed, T.; Mirica, L. M.,* Bis(styryl)benzene Probes for Targeting Early-Stage Amyloid-β Aggregates in Alzheimer's Disease, *ACS Chem. Neurosci.*, **2026**, *17*, accepted, ChemRxiv preprint DOI: https://doi.org/10.26434/chemrxiv.15004651/v1

128. Westawker, L. P.; Wallick, R. F.; Schultz, J. W.; Burke, J. H.; Watson, M. B.; Zhou, W.; Tang, F.; Zheng, B.; Smith, L. E.; Bouley, B. S.; Na, H.; Vura-Weis, J.; Mirica, L. M.* Nickel K-edge XANES studies on Pyridinophane-supported Coordination Complexes, *Inorg. Chem.*, **2026**, *65*, ASAP, https://doi.org/10.1021/acs.inorgchem.6c02509

127. Xu, K.; Salaiza, J.; Adeoye, H.; Bhowmik, S.; El Sayed, T.; Mirica, L. M.,* Pharmacokinetic Studies of Amyloid-targeting Bis(styryl)benzene Agents for Alzheimer's Disease, *ACS Chem. Neurosci.*, **2026**, *17*, 2533-2542, https://doi.org/10.1021/acschemneuro.6c00361

126. El Sayed, T.; Majumdar, S.; Sutton; B. P.; Mirica, L. M.,* Mn(II) MRI Contrast Agents Supported by Unsymmetric Pyridinophane-picolinate Ligands, *J. Inorg. Biochem.,* **2026**, *283*, 113377, https://doi.org/10.1016/j.jinorgbio.2026.113377

125. Bae, D. Y.; Ruhs, N. P.; Mirica, L. M.,* Aerobic C–H Bond Activation at a Pd Center under Aqueous Conditions, *Chem. Sci.*, **2026**, *17*, 13539 - 13549, https://doi.org/10.1039/d6sc03081e

124. El Sayed, T.; Terpstra, K.; Whetter, J. N.; Xu, K.; Zhu, L.; Chakrabarti, S.; Marlin, A.; Wessel, A. J.; Majumdar, S.; Sutton; B. P.; Boros, E.; Mirica, L. M.,* Pyridinophane Ligands: An Attractive Chelator Platform for Mn-Based Imaging Agents, *J. Med. Chem.*, **2026**, *69*, 10448-10462, https://doi.org/10.1021/acs.jmedchem.5c03597; PMCID: PMC13193324

123. Burke, J. H.; Johnsen, M.; Wallick, R. F.; Gnewkow, R.; Bae, D. Y.; Aswin, J. R.; Rossi, T. C.; Eckert, S.; Fondell, M.; van Spronsen, M. A.; Schaller, R. D.; Alfaro, V. S.; Lee, S.-J.; Gee, L. B.; Mirica, L. M.; Vura-Weis, J.; van der Veen, R. How Does Metal Spin State Affect Electronic Communication in Mixed-Valence Dimers? Insights from Ultrafast Near-Infrared and Soft X-ray Transient Absorption Spectroscopy, *Inorg. Chem*, **2026**, *65*, 2136-2149, https://doi.org/10.1021/acs.inorgchem.5c03543

122. Holm, A. R.; Wallick, R. F.; Vura-Weis, J.; Mirica, L. M,* Illuminating the Role of Alcohol Additives in Nickel Photoredox Catalysis via Ground State and Transient Absorption Spectroscopy, *ACS Catalysis*, **2026**, *16*, 1522-1532, https://doi.org/10.1021/acscatal.5c07700

121. Leung, J. J.-N.;[#] Chakrabarti, S.;[#] Cedron, N. D.; Mirica, L. M.,* Flash Communication: Intermolecular C(sp^2)-H Activation in a Palladium(II) Complex Supported by a p-Me_2N-Thiapyridinophane Ligand, *Organometallics,* **2026**, *45*, 225-230, *featured on the front cover*, https://doi.org/10.1021/acs.organomet.5c00336

120. Chakrabarti, S.; Chae, J. B.; Knecht, K. A., Cedron, N. D., Mirica, L. M.* Catalytically Competent Nickel(I)-Isocyanide Compounds for Cross-Coupling Reactions, *Nature Catalysis,* **2026**, *9*, 257-268, https://doi.org/10.1038/s41929-025-01473-9; highlighted in: *Nature Catalysis,* **2026**, *9*, 234-236: https://doi.org/10.1038/s41929-026-01492-0; *Chem*, **2026**, *13,* 103029*:* https://doi.org/10.1016/j.chempr.2026.103029; Illinois Chemistry News: https://chemistry.illinois.edu/news/2026-01-29/new-class-catalysts-could-dramatically-change-playing-field-nickel-catalysis; EurekAlert!: https://www.eurekalert.org/news-releases/1114986, Knowridge: https://knowridge.com/2026/02/this-nickel-catalyst-could-change-how-drugs-and-materials-are-made/, Phys.org: New class of catalysts could dramatically change playing field in nickel catalysis, Mendeley: Catalytically competent nickel(I)... preview & related info | Mendeley, Enerzine.com: Nouveaux catalyseurs Ni(I) stables : révolution en catalyse au nickel, and Knowridge: This nickel catalyst could change how drugs and materials are made

119. Chakrabarti, S.;[#] Banerjee, S.;[#] Mirica, L. M.,* Capturing the Hybrid Palladium(I)-Radical Pair Relevant to Photoexcited Palladium Catalysis, *J. Am. Chem. Soc.*, **2025**, *147*, 41882-41896, https://doi.org/10.1021/jacs.5c14709.

118. Boros, E.; Comba, P.; Engle, J. W.; Harriswangler, C.; Lapi, S. E.; Lewis, J. S.; Mastroianni, S.; Mirica, L. M.; Platas-Iglesias, C.; Ramogida, C. F.; Tripier, R.; Tosato, M. Chemical Tools to Characterize the Coordination Chemistry of Radionuclides for Radiopharmaceutical Applications, *Chem. Rev.*, **2025**, *125*, 12030-12068, https://doi.org/10.1021/acs.chemrev.5c00641; PMCID: PMC12746417

117. Terpstra, K.; Gutierrez, C.; Gui, K.; Mirica, L. M.,* Donepezil and Memantine Derivatives for Dual-Function and Prodrug Applications in Alzheimers Disease, *ACS Chem. Neurosci.* **2025**, *16*, 3591-3602, https://doi.org/10.1021/acschemneuro.5c00493, PMCID: PMC12414536

116. Bouley, B. S.;[#] Bae, D. Y.;[#] Zhou W.; Watson, M. B.; Griego, L.; Mirica, L. M.,* Oxidative Addition of Aryl Bromides at Palladium(I) to Form Palladium(III) Complexes, *Angew. Chem. Int. Ed.*, **2025**, *64*, e202514101, https://doi.org/10.1002/anie.202514101

115. Bouley, B. S.;[#] Bae, D. Y.;[#] Chakrabarti, S.;[#] Rosen, M.; Kennedy, R. D.; Mirica, L. M.,* Insights into the Mechanism of Active Catalyst Generation for the $Pd^{II}(acac)_2/PPh_3$ System in the Context of Telomerization of 1,3-Butadiene, *Chem. Sci.,* **2025**, *16*, 15486-15498, https://doi.org/10.1039/D5SC02171E.

114. Gutierrez, C.; Sun, L.; Huang, Y.; Terpstra, K.; Gui, K.; Mirica, L. M.,* N-Alkylamino Stilbene Compounds as Amyloid β Inhibitors for Alzheimer's Disease Research, *Molecules*, **2025**, *30*, 2471, https://doi.org/10.3390/molecules30112471. PMCID: PMC12156033

113. Nath, S.; Griego, L.; Mirica, L. M.,* The Mechanism of Acetyl-CoA Synthase Through the Lens of a Nickel Model System, *Nature Commun.*, **2025**, *16*, 5177, https://doi.org/10.1038/s41467-025-

60163-z; research highlighted in *Nature Catalysis*, **2025**, 8, 508, https://www.nature.com/articles/s41929-025-01373-y

112. Westawker, L. P.; Bouley, B. S.; Vura-Weis, J.; Mirica, L. M.,* Photochemistry of Ni(II) tolyl chlorides supported by bidentate ligand frameworks, *J. Am. Chem. Soc.*, **2025**, *147*, 17315-17329, https://doi.org/10.1021/jacs.5c03770

111. Banerjee, S.; Chakrabarti, S.; Bouley, B. S.; Wahlmeier, A. J.; Mirica, L. M.,* Mononuclear Palladium(I) and Palladium(III) Coordination Compounds, *Coord. Chem. Rev.*, **2025**, *535*, 216605, https://doi.org/10.1016/j.ccr.2025.216605

110. Leung, J. J.-N.; Bae, D. Y.; Mirica, L. M.,* Organometallic Nickel Complexes Supported by Pyridinophane Ligands and Their Oxidative Reactivity, *Dalton Trans.*, **2025**, *54*, 5286 - 5292, https://doi.org/10.1039/d5dt00135h

109. Yerbulekova, A.; Moshood, Y.; Griego, L.; Shafaat, H. S.;* Mirica, L. M.,* Spectroscopic and Computational Interrogation of a High-Valent Nickel-Dialkyl Complex Indicates Electronic Structure Asymmetry Drives C-C Bond Formation Reactivity, *J. Am. Chem. Soc.*, **2025**, *147*, 7317 - 7324, https://doi.org/10.1021/jacs.4c14104.

108. Rodriguez Carrero, R. J.; Lloyd, C. T.; Borkar, J.; Nath, S.; Mirica, L. M.; Nair, S.; Booker, S. J.; Metcalf, W. W. Genetic and biochemical characterization of a radical SAM enzyme required for posttranslational glutamine methylation of methyl-coenzyme M reductase, *mBio*, **2025**, e03546-03524, https://doi.org/10.1128/mbio.03546-24.

107. Rana, M.; Terpstra, K.; Gutierrez, C.; Xu, K.; Arya, H.; Bhatt, T. K.; Mirica, L. M.;* Sharma, A. K.,* Evaluation of Anti-Alzheimer's Potential of Azo-Stilbene-Thioflavin-T derived Multifunctional Molecules: Synthesis, Metal and Aβ Species Binding and Cholinesterase Activity, *Chem. Eur. J.*, **2025**, *31*, e202402748, https://doi.org/10.1002/chem.202402748, PMCID: PMC12435589

106. Chakrabarti, S.; Mirica, L. M.* Quantifying zinc and manganese reduction potentials in organic solvents, *Chem*, **2024**, *10*, 3273 - 3275 https://doi.org/10.1016/j.chempr.2024.10.015

105. Terpstra, K.; Huang, Y.; Na, H.; Sun, L.; Gutierrez, C.; Yu, Z.; Mirica, L. M.,* 2-Phenylbenzothiazolyl Iridium Complexes as Inhibitors and Probes of Amyloid β Aggregation. *Dalton Trans.*, **2024**, *53*, 14258 - 14264, https://doi.org/10.1039/d4dt01691b, PMCID: PMC11445708

104. Chae, J. B.; Holm, A. R.; Mirica, L. M.* Enabling Enantioselective Csp^3-Csp^3 Cross-coupling by Controlling Two Different Alkyl Radicals, *Nat. Catal.*, **2024**, *7*, 857-859, https://doi.org/10.1038/s41929-024-01208-2.

103. Burke, J.; Bae, D. Y.; Wallick, R.; Dykstra, C.; Rossi, T.; Smith, L.; Leahy, C.; Schaller, R.; Mirica, L.; Vura-Weis, J.; van der Veen, R.* High-Spin State of a Ferrocene Electron Donor Revealed by Optical and X-ray Transient Absorption Spectroscopy, *J. Am. Chem. Soc.*, **2024**, *146*, 216510-21663, https://doi.org/10.1021/jacs.4c05646

102. Na, H.; Wessel, A. J.; Kim, S.T.; Baik, M.-H.;* Mirica, L. M.,* Csp^3-H Bond Activation Mediated by a Pd(II) Complex under Mild Conditions, *Inorg. Chem. Front.*, **2024**, *11*, 4415-4423, https://doi.org/10.1039/D4QI01017E

101. Wallick, R. F.; Chakrabarti, S.; Burke, J. H.; Gnewkow, R.; Chae, J. B.; Rossi, T. C.; Mantouvalou, I.; Kanngießer, B.; Fondell, M.; Eckert, S.; Dykstra, C.; Smith, L. E.; Vura-Weis, J.; * Mirica, L. M.;* van der Veen, R. M* Excited-State Identification of a Nickel-Bipyridine Photocatalyst by Time-Resolved X-ray Absorption Spectroscopy, *J. Chem. Phys. Lett.*, **2024**, *15*, 4976–4982, https://doi.org/10.1021/acs.jpclett.4c00226

100. Bouley, B. S.; Garvey, I. J.; Na, H.; Chae, J. B.; Mirica, L. M.,* Anagostic Axial Interactions Inhibit Cross-Coupling Catalytic Activity in Square Planar Pyridinophane Nickel Complexes, *ChemCatChem*, **2024**, *16*, e202301677, http://dx.doi.org/10.1002/cctc.202301677

99. Griego, L.; Chae, J. B.; Mirica, L. M.* Triisopropyl-1,4,7-Triazacyclononane, a Goldilocks Ligand for Probing the Role of Ni(III) and Ni(I) Centers in Cross-Coupling Catalysis, *Chem*, **2024**, *10*, 867-881, https://doi.org/10.1016/j.chempr.2023.11.008

98. Hu, C.-H.; Chae, J. B.; Mirica, L. M.;* Improved Synthesis of Chiral 1,4,7-Triazacyclononane Derivatives and Their Application in Ni-catalyzed Csp^3-Csp^3 Kumada Cross-coupling, *Helv. Chim. Acta.*, **2024**, *170*, e202300170, http://dx.doi.org/10.1002/hlca.202300170.

97. Blade, G.; Wessel, A. J.; Terpstra, K.; Mirica, L. M.;* Pentadentate and Hexadentate Pyridinophane Ligands Support Reversible Cu(II)/Cu(I) Redox Couples, *Inorganics*, **2023**, *11*, 446, https://doi.org/10.3390/inorganics11110446

96. Yu, Z.; Blade, G.; Terpstra, K.; Dobrucki, I.; Dobrucki, L. W.; Mirica, L. M.;* Coordination Chemistry of Sulfur-Containing Bifunctional Chelators for Applications in ^{64}Cu PET Imaging for Alzheimer's Disease, *Inorg. Chem.*, **2023**, *62*, 50, 20820-20833, https://doi.org/10.1021/acs.inorgchem.3c02929

95. Westawker, L. P.; Khusnutdinova, J. R.; Wallick, R. F.; Mirica, L. M.* Palladium K-edge XAS Studies on Controlled Ligand Systems, *Inorg. Chem.*, **2023**, *62*, 50, 21128-21137, https://doi.org/10.1021/acs.inorgchem.3c03032

94. Chakrabarti, S.; Woods, T. J.; Mirica, L. M.;* Insights into the Mechanism of CO_2 Electroreduction by Molecular Palladium-Pyridinophane Complexes, *Inorg. Chem.*, **2023**, *62*, 16801-16809, https://doi.org/10.1021/acs.inorgchem.3c02236

93. Yu, Z.; Moshood, Y.; Wozniak, M. K.; Patel, S.; Terpstra, K.; Llano, D. A.; Dobrucki, L. W.; Mirica, L. M.;* Amphiphilic Molecules Exhibiting Zwitterionic Excited-State Intramolecular Proton Transfer and Near-Infrared Emission for the Detection of Amyloid β Aggregates in Alzheimer's Disease, *Chem. Eur. J.*, **2023**, e202302408, http://dx.doi.org/10.1002/chem.202302408

92. DiMucci, I. M.; Titus, C. J.; Nordlund, D.; Bour, J. R.; Chong, E.; Grigas, D. P.; Hu, C.-H.; Kosobokov, M. D.; Martin, C. D.; Mirica, L. M.; Nebra, N.; Vicic, D. A.; Yruegas, S.; MacMillan, S. N.;* Shearer, J.;* Lancaster, K. M.;* Scrutinizing Formally Ni^{IV} Centers through the Lenses of Core Spectroscopy, Molecular Orbital Theory, and Valence Bond Theory, *Chem. Sci.*, **2023**, *14*, 6915-6929, https://doi.org/10.1039/D3SC02001K

91. Hu, C.-H.; Kim, S. T.; Baik, M.-H.; Mirica, L. M.;* Nickel-Carbon Bond Oxygenation with Green Oxidants via High-Valent Nickel Species, *J. Am. Chem. Soc.*, **2023**, *145*, 11161-11172, https://doi.org/10.1021/jacs.3c01012

90. Bouley, B. S.; Tang, F.; Mirica, L. M.,* C-H Bond Activation via Concerted Metalation-Deprotonation at a Palladium(III) Center, *Chem. Sci.*, **2023**, *14*, 3800–3808, https://doi.org/10.1039/D3SC00034F

89. Torabi, S.-F.; Wu, Y.; Lake, R. J.; Hong, S.; Yu, Z.; Wu, P.; Yang, Z.; Ihms, H.; Nelson, N.; Guo, W.; Pawel, G. T.; Van Stappen, J.; Shao, X.; Mirica, L. M.; Lu, Y.* Simultaneous $Fe^{2+/3+}$ imaging shows Fe^{3+} over Fe^{2+} enrichment in Alzheimer's disease mouse brain, *Science Adv.,* **2023**, *9*, eade7622, https://doi.org/10.1126/sciadv.ade7622

88. Chakrabarti, S.; Sinha, S.; Tran, G. N.; Na, H.; Mirica, L. M.;* Characterization of Paramagnetic States in an Organometallic Nickel Hydrogen Evolution Electrocatalyst, *Nature Commun.*, **2023**, *14*, 905, https://doi.org/10.1038/s41467-023-36609-7

87. Terpstra, K.; Wang, Y.; Huynh, T. T.; Bandara, N.; Cho, H.-J.; Rogers, B. E.;* Mirica, L. M.* Divalent 2-(4-Hydroxyphenyl)benzothiazole Bifunctional Chelators for ^{64}Cu PET Imaging in Alzheimer's Disease, *Inorg. Chem.*, **2022**, *61*, 20326–20336, https://doi.org/10.1021/acs.inorgchem.2c02740

86. Yu, Z.; Guo, W.; Patel, S.; Cho, H.-J.; Sun, L.; Mirica, L. M.;* Amphiphilic Stilbene Derivatives Attenuate the Neurotoxicity of Soluble Aβ42 Oligomers by Controlling Their Interactions with Cell Membranes. *Chem. Sci*, **2022**, *13*, 12818-12830, https://doi.org/10.1039/D2SC02654F

85. Tran, G. N.; Bouley, B. S.; Mirica, L. M.,* Isolation and Catalytic Reactivity of Mononuclear Palladium(I) Complexes. *J. Am. Chem. Soc.*, **2022**, *144*, 20008-20015, https://doi.org/10.1021/jacs.2c08765

84. Wang, Y.-C.; Rath, N. P., Mirica, L. M.* Allylic Amination of Pd(II)-Allyl Complexes via High-Valent Pd Intermediates. *Organometallics*, **2022**, *41*, 2067–2076, https://doi.org/10.1021/acs.organomet.2c00215

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5. Mirica, L. M.; Stack, T. D. P. * "A Tris(μ-hydroxy)tricopper(II) Complex as a Model of the Native Intermediate in Laccase and Its Relationship to a Binuclear Analogue", *Inorg. Chem.*, **2005**, *44*, 2131-2133.

4. Pratt, R. C.; Mirica, L. M.; Stack, T. D. P.* "Snapshots of a Metamorphosing Cu(II) Ground State in a Galactose Oxidase-Inspired Complex", *Inorg. Chem.*, **2004**, *43*, 8030-8039.

3. Yoon, J.; Mirica, L. M.; Stack, T. D. P.;* Solomon, E. I.* "Spectroscopic Demonstration of a Large Antisymmetric Exchange Contribution to the Spin-Frustrated Ground State of a D_3 Symmetric Hydroxy-Bridged Trinuclear Cu(II) Complex: Ground-to-Excited State Superexchange Pathways", *J. Am. Chem. Soc.*, **2004**, *126*, 12586-12595.

2. Mirica, L. M.; Ottenwaelder, X.; Stack, T. D. P.* "Structure and Spectroscopy of Copper–Dioxygen Complexes", *Chem. Rev.*, **2004**, *104*, 1013-1046.

1. Mirica, L. M.; Vance, M.; Rudd, D. J.; Hedman, B.;* Hodgson, K. O.;* Solomon, E. I.;* Stack, T. D. P.* "A Stabilized μ-η^2:η^2-Peroxodicopper(II) Complex with a Secondary Diamine Ligand and Its Tyrosinase-like Reactivity", *J. Am. Chem. Soc.* **2002**, *124*, 9332-9333.

PATENTS

5. Mirica, L. M.; El Sayed, T. Pyridinophane Compounds and MRI Contrast Agents, filing date: September 14, 2025.

4. Mirica, L. M.; Chakrabarti, S.; Chae, J. B. Dinuclear Nickel Complexes and Cross-coupling Catalysis Precursors. U.S. Patent application no. 63/688,889, filing date: August 26, 2025.

3. Mirica, L. M.; Yu, Z. Amphiphilic Compounds for Attenuating Neurotoxicity of Amyloid-beta Oligomers and Diagnostic Methods. U.S. Patent provisional application no. 63/389,270, filing date: July 14, 2022.

2. Mirica, L. M.; Na, H., Tridentate Macrocyclic Compounds. U.S. Patent Application no. 63/215,131, filing date: June 25, 2021.

1. Mirica, L. M.; Sharma, A. K.; Schultz, J. W. "Metal-Binding Bifunctional Compounds as Diagnostic Agents for Alzheimer's Disease", US Patent US 9422286 B2, issued date August 23, 2016.

INVITED PRESENTATIONS

126. "Coordination Chemistry on the Brain: Applications to Neuroimaging in Alzheimer's Disease", *Invited Speaker*, *Metals in Medicine Gordon Research Conference*, Andover, NH, June 2026

125. "A radical approach: Paramagnetic Ni and Pd species in in organometallic catalysis", *Invited Speaker*, *Catalysis Club of Chicago Annual Symposium*, Chicago, IL, May 2026

124. "Coordination Chemistry on the Brain: Applications to Neuroimaging in Alzheimer's Disease", *Lawrence Berkeley National Laboratory,* Berkeley, CA, March 2026

123. "A radical approach: Paramagnetic Ni and Pd species in in organometallic catalysis", Department of Chemistry, *UC Berkeley*, Berkeley, CA, February 2026

122. "A radical approach: Paramagnetic Ni and Pd species in organometallic catalysis", Department of Chemistry, *UC Davis*, Davis, CA, February 2026

121. "A radical approach: Paramagnetic Ni and Pd species in organometallic catalysis", Department of Chemistry, *UC Irvine*, Irvine, CA, November 2025

120. "Coordination Chemistry on the Brain: Applications to Neuroimaging in Alzheimer's Disease", Department of Chemistry, *UC Santa Barbara*, Santa Barbara, CA, November 2025

119. "A radical approach: Paramagnetic Ni and Pd species in organometallic catalysis", Division of Chemistry and Chemical Engineering, *Caltech*, Pasadena, CA, November 2025

118. "A radical approach: Paramagnetic Ni and Pd species in organometallic catalysis", Department of Chemistry and Biochemistry, *UCLA*, Los Angeles, CA, November 2025

117. "A radical approach: Paramagnetic Ni and Pd species in organometallic catalysis", Department of Chemistry, *University of Southern California*, Los Angeles, CA, November 2025

116. "A radical approach: Paramagnetic Ni species in organometallic catalysis", Department of Chemistry, *University of Alabama,* Tuscaloosa, AL, April 2025.

115. "Catalytically Competent Nickel(I)-Isocyanide Compounds", Chemical Process Development, *Bristol Myers Squibb*, New Brunswick, NJ, November 2024.

114. "Catalytically Competent Nickel(I)-Isocyanide Compounds", Discovery Chemistry, *Merck & Co. Inc.*, Rahway, NJ, December 2024.

113. "Deciphering Iron Redox Changes in Alzheimer's Disease using DNAzyme Sensors that can Simultaneously Monitor Fe^{2+} and Fe^{3+}", Wu Y, Torabi SF, Lake R, Yang Z, Hong S, Yu Z, Mirica LM, Fonken L, Lu Y. *Alzheimer's & Dementia* **2024,** *20*, e088440, https://doi.org/10.1002/alz.088440, PMID: 39751563.

112. "A radical approach: Paramagnetic Ni species in organometallic catalysis", Department of Chemistry, *University of Michigan,* Ann Arbor, MI, September 2024.

111. "A radical approach: Paramagnetic Ni species in organometallic catalysis", Department of Chemistry, *Scripps Research,* San Diego, CA, September 2024.

110. "A radical approach: Paramagnetic Ni species in organometallic catalysis", *Invited Speaker*, *Organometallic Chemistry Gordon Research Conference*, Newport, RI, July 2024.

109. "A radical approach: Paramagnetic Ni species in organometallic photocatalysis and electrocatalysis", Department of Chemistry, *Stanford University*, April 2024.

108. "Coordination Chemistry on the Brain: Applications to Neuroimaging in Alzheimer's Disease", *Invited Speaker*, *Metals in Biology Gordon Research Conference*, Ventura, CA, January 2024.

107. "Coordination Chemistry on the Brain: Applications to Neuroimaging in Alzheimer's Disease", *Keynote Lecture*, *6th Symposium on Advanced Biological Inorganic Chemistry (SABIC-2024)*, Kolkata, India, January 2024.

106. "Characterization of Paramagnetic States in an Organometallic Nickel Hydrogen Evolution Electrocatalyst", *Invited Speaker*, *6th Symposium on Advanced Biological Inorganic Chemistry (SABIC-2024)*, Kolkata, India, January 2024.

105. "A radical approach: Paramagnetic Ni and Pd species in organometallic catalysis", *5th Dr. Sunil G. Naik Memorial Lecturer*, *International conference on "Frontiers in Catalysis -2024"*, Central University of Rajasthan, Ajmer, India, January 2024.

104. "Coordination Chemistry on the Brain: Applications to Neuroimaging in Alzheimer's Disease", *Plenary Lecture*, 20th *International Conference on Biological Inorganic Chemistry*, Adelaide, Australia, July 2023.

103. "The Organometallic Chemistry of Nickel Enzyme Mimics", 20th *International Conference on Biological Inorganic Chemistry*, Adelaide, Australia, July 2023.

102. "Novel Diagnostic ^{64}Cu PET Imaging Agents for Alzheimer's Disease", *16th International Symposium on Applied Bioinorganic Chemistry*, Ioanina, Greece, June 2023.

101. "A radical approach: Paramagnetic Ni species in organometallic photocatalysis and electrocatalysis", *Brown & Williamson Distinguished Lecture*, Department of Chemistry, *University of Louisville*, April 2023.

100. Mirica, L. M., Novel Diagnostic ^{64}Cu PET Imaging Agents for Alzheimer's disease. *Alzheimer's & Dementia* **2022,** *18*, e069158, https://doi.org/10.1002/alz.069158

99. "A radical approach: Paramagnetic Ni and Pd species in organometallic catalysis", Department of Chemistry, *University of Cincinnati*, November 2022.

98. "A radical approach: Paramagnetic Ni and Pd species in organometallic catalysis", Department of Chemistry, *Eastern Illinois University*, September 2022.

97. "Mechanistic studies of the Ni-photocatalyzed C-O cross-coupling reaction by using a novel tridentate pyridinophane ligand", *44th International Conference on Coordination Chemistry*, Rimini, Italy, August 2022.

96. "Aerobic oxidative reactivity of high-valent Ni complexes", *Aerobic Oxidation Catalysis*, National ACS Meeting, Chicago, August 2022.

95. "Novel PET imaging agents for Alzheimer's disease", *Medicinal Inorganic Chemistry: Walking the Walk from Innovation to Clinical Translation*, National ACS Meeting, Chicago, August 2022.

94. "Novel Theranostic Agents for Alzheimer's Disease", European Bioinorganic Conference, *EuroBIC-16*, Grenoble, France, July 2022.

93. "A radical approach: Paramagnetic Ni and Pd species in organometallic catalysis", *Gabor A. Somorjai Award for Creative Research in Catalysis: Symposium in Honor of Jin-Quan Yu*, National ACS Meeting, San Diego, March 2022.

92. Mirica, L. M., Amphiphilic distyrylbenzene derivatives as potential therapeutic and imaging agents for the soluble amyloid-β oligomers in Alzheimer's disease. *Alzheimer's & Dementia* **2021,** *17*, e056375, https://doi.org/10.1002/alz.056375

91. Mirica, L. M., Design of novel bifunctional chelators for diagnostic ^{64}Cu PET imaging in Alzheimer's disease. *Alzheimer's & Dementia* **2021,** *17*, e056406, https://doi.org/10.1002/alz.056406

90. "Mechanistic studies of the Ni-photocatalyzed C-O cross-coupling reaction by using a novel tridentate pyridinophane ligand", *Homogeneous Catalysis by Earth Abundant Metals Symposium*, Pacifichem, December 2021.

89. "Novel Theranostic Agents for Alzheimer's Disease", *Innovative Uses of Metals in Medicine Symposium*, Pacifichem, December 2021.

88. "The Organometallic Reactivity of paramagnetic Ni and Pd Complexes", *ACS Division of Inorganic Chemistry Periodic Table Talks*, October 2021.

87. "Theranostic Agents for Metal-A*β* Peptide Interactions in Alzheimer's Disease", *Roles of Metals on Amyloidosis Symposium*, Univ. of Michigan, October 2021.

86. "A radical approach: Paramagnetic Ni and Pd species in organometallic catalysis", *Dow Seminar Series*, September 2021.

85. "Novel Theranostic Agents for Alzheimer's Disease", Plenary Award lecture, The 1st Electronic Biological Inorganic Chemistry Meeting, July 2021.

84. "Novel Theranostic Agents for Metal-Amyloid *β* Peptide Interactions in Alzheimer's Disease", Department of Chemistry, *Auburn University*, April 2021.

65. Mirica, L. M.* A multifunctional chemical agent as an attenuator of amyloid and p-tau burden and neuroinflammation in Alzheimer's disease. *Alzheimer's & Dementia* **2020**, *16*, e047006, https://doi.org/10.1002/alz.047006

83. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", Department of Chemistry, *King Abdullah University of Science and Technology (KAUST), Saudi Arabia,* October 2019.

82. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", Department of Chemistry, *Notre Dame University,* September 2018.

81. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", Department of Chemistry, *University of Minnesota,* September 2018.

80. "Metal-Mediated Proceses in Chemistry and Biology", Department of Chemistry, *Purdue University,* February 2018.

79. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", *Institute of Chemical Research of Catalonia (ICIQ), Spain,* November 2017.

78. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", Department of Chemistry, *ETH Zürich, Switzerland,* November 2017.

77. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", Department of Chemistry, *École Polytechnique Fédérale de Lausanne (EPFL), Switzerland,* November 2017.

76. "Novel Theranostic Agents for Metal-Amyloid β Peptide Interactions in Alzheimer's Disease", Department of Chemistry, *University of Girona, Spain,* September 2017.

75. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", Department of Chemistry, *University of Girona, Spain,* September 2017.

74. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", Department of Chemistry, *POSTECH, South Korea,* February 2017.

73. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", Department of Chemistry, *DGIST, South Korea,* February 2017.

72. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", Department of Chemistry, *Korea Advancead Institute of Science and Technology (KAIST), South Korea,* February 2017.

71. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", Department of Chemistry, *New Mexico State University,* January 2017.

70. "Controlling and Imaging Amyloid β Peptide Aggregation in Alzheimer's Disease", Hope Center for Neurological Disorders, *Washington University School of Medicine,* November 2016.

69. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", Department of Chemistry, *University of Illinois – Urbana-Champaign,* November 2016.

68. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", Department of Chemistry, *University of Washington,* October 2016.

67. "Bioinspired oxidative reactivity: From Cu to Pd and Ni", invited DIC YIA Where Are They Now symposium talk, *American Chemical Society National Meeting*, Philadelphia, August 2016.

66. "Mechanistic Studies of Bioinspired Oxidative Organometallic Reactions", invited talk, *Department of Energy, Catalysis Science Contractor's Meeting*, Gaithersburg, MD, June 2016.

65. "C-C and C-Heteroaton Bond Formation Reactivity of Organometallic Ni(III) and Ni(IV) Complexes", Department of Chemistry, *University of Pennsylvania,* March 2016.

64. "C-C and C-Heteroaton Bond Formation Reactivity of Organometallic Ni(III) and Ni(IV) Complexes", Department of Chemistry, *Princeton University,* March 2016.

63. "The Organometallic Reactivity of Paramagnetic Pd and Ni Complexes", Department of Chemistry, *Marquette University,* September 2015.

62. "Controlling and Imaging Metal-Mediated A*β* Peptide Aggregation in Alzheimer's Disease", Department of Chemistry, *Simon Fraser University,* Burnaby, Canada, July 2015.

61. "Organometallic Reactivity of Pd and Ni Complexes in Uncommon Oxidation States", Department of Chemistry, *Quincy University,* March 2015.

60. "Organometallic Reactivity of High-Valent Pd and Ni Complexes Supported by Flexible Multidentate Ligands", Department of Chemistry, *Lehigh University,* September 2014.

59. "Organometallic Reactivity of High-Valent Pd and Ni Complexes", the 2014 Organometallics Symposium, *American Chemical Society National Meeting*, San Francisco, August 2014.

58. "Aerobically-Induced Oxidative Reactivity of Pd Complexes Supported by Flexible Multidentate Ligands", symposium talk, *American Chemical Society National Meeting*, San Francisco, August 2014.

57. "Controlling and Imaging Metal-Mediated A*β* Peptide Aggregation in Alzheimer's Disease", Department of Chemistry, *University of British Columbia,* Vancouver, Canada, April 2014.

56. "From Greenhouse Gas to Liquid Fuels: The Magic of Catalysis", *Science in St. Louis Public Lecture*, *Washington University,* March 2014.

55. "Organometallic Reactivity of High-Valent Group 10 Transition Metal Complexes", Department of Chemistry, *Tsinghua University,* Beijing, China, February 2014.

54. "Organometallic Reactivity of High-Valent Group 10 Transition Metal Complexes", Department of Organic Chemistry, *University of Science and Technology of China,* Hefei, China, February 2014.

53. "Organometallic Reactivity of High-Valent Group 10 Transition Metal Complexes", *Shanghai Institute of Organic Chemistry*, Shanghai, China*,* February 2014.

52. "Organometallic Reactivity of High-Valent Pd and Ni Complexes Supported by Flexible Multidentate Ligands", Department of Chemistry, *University of Rochester,* February 2014.

51. "Controlling and Imaging Metal-Mediated A*β* Peptide Aggregation in Alzheimer's Disease", *Saltman Lectureship, Metals in Biology Gordon Research Conference,* Ventura, January 2014.

50. "Novel Chemical Agents as Theranostic Tools for Metal-mediated A□ Peptide Aggregation", *International Conference on Biological Inorganic Chemistry (ICBIC16)*, Grenoble, France, July 2013.

49. "Organometallic Reactivity of High-Valent Pd and Ni Complexes Supported by Tetradentate and Tridentate Ligands", invited talk, *Organometallics Gordon Research Conference*, July 2013.

48. "Reactivity of Organometallic High-Valent Pd Complexes Supported by Flexible Multidentate Ligands", invited talk, *Department of Energy, Catalysis Science Contractor's Meeting*, Annapolis, June 2013.

47. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *University of California, Santa Barbara,* May 2013.
46. "Oxidative Reactivity of High-Valent Pd Complexes Supported by Flexible Multidentate Ligands", symposium talk, *American Chemical Society National Meeting*, New Orleans, April 2013.
45. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *Johns Hopkins University,* April 2013.
44. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *Georgetown University,* April 2013.
43. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *University of Maryland,* April 2013.
42. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *MIT,* March 2013.
41. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *Harvard University,* March 2013.
40. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *University of California, San Diego,* March 2013.
39. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *University of California, Los Angeles,* February 2013.
38. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *University of Southern California,* February 2013.
37. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *Caltech*, February 2013.
36. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *University of California, Berkeley,* February 2013.
35. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *Stanford University,* February 2013.
34. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *University of Florida,* February 2013.
33. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *North Carolina State University,* February 2013.
32. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *University of North Carolina, Chapel Hill,* January 2013.
31. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *Texas A&M University,* November 2012.
30. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *Yale University,* November 2012.

29. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *Indiana University,* November 2012.
28. "The Importance of Undergraduate Research in My Academic Career", keynote speaker, Undergraduate Research Symposium, Washington University, October, 2012.
27. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *University of Wisconsin, Madison,* October 2012.
26. "Aerobic Oxidative C-C and C-Heteroatom Bond Formation Reactions Involving High-Valent Pd Intermediates", Department of Chemistry, *University of Delaware,* October 2012.
25. "Stable Mononuclear Pd(III) and Pd(IV) Complexes: Reactivity Comparison and Relevance to Aerobic C-C Bond Formation", *NSF Workshop on Synthesis*, MIT Endicott House, Dedham, MA, May 2012.
24. "Stable Pd(III) and Pd(IV) Complexes Supported by Tetradentate and Tridentate Ligands and Their C-C Bond Formation Reactivity", *Mesilla Chemistry Workshop*, Las Cruces, New Mexico, February 2012.
23. "Stable Pd(III) and Pd(IV) Complexes Supported by Tetradentate and Tridentate Ligands and Their C-C Bond Formation Reactivity", Department of Chemistry, *University of California, Irvine*, December 2011.
22. "The Reaactivity of Stable Pd(III) and Pd(IV) Complexes Supported by Tetradentate and Tridentate Ligands", *Zing Coordination Chemistry Conference*, Mexico, December 2011.
21. "Stable Pd(III) and Pd(IV) Complexes Supported by Tetradentate and Tridentate Ligands and Their C-C Bond Formation Reactivity", Department of Chemistry, *University of Michigan, Ann Arbor*, November 2011.
20. "Late Transition Metal Catalysts for the Activation of Small Molecules: Relevance to Renewable Energy Catalysis", Department of Chemistry, *University of Louisville*, November 2011.
19. "Stable Pd(III) and Pd(IV) Complexes Supported by Tetradentate and Tridentate Ligands and Their C-C Bond Formation Reactivity", Department of Chemistry, *University of Missouri, Columbia*, October 2011.
18. "Late Transition Metal Catalysts for the Activation of Small Molecules: Relevance to Renewable Energy Catalysis", Department of Chemistry, *Missouri State University*, October 2011.
17. "Late Transition Metal Catalysts for the Activation of Small Molecules: Relevance to Renewable Energy Catalysis", Department of Chemistry, *Macalester College*, September 2011.
16. "Late Transition Metal Catalysts for the Activation of Small Molecules: Relevance to Renewable Energy Catalysis", Department of Chemistry, *Western Michigan University*, September 2011.
15. "New Chemical Agents for Controlling Amyloid β Peptide Aggregation in Alzheimer's Disease", *International Conference on Biological Inorganic Chemistry (ICBIC15)*, Vancouver, August 2011.

14. "Late Transition Metal Catalysts for the Activation of Small Molecules: Relevance to Renewable Energy Catalysis", *Challenges in Renewable Energy – International Symposia on Advancing the Chemical Sciences (ISACS4)*, MIT, Boston, July 2011.
13. "New Chemical Agents for Controlling Histone Demethylation and Amyloid β Peptide Aggregation", Department of Biochemistry and Molecular Biophysics, *Washington University School of Medicine*, April 2011.
12. "Late Transition Metal Catalysts for the Activation of Small Molecules: Relevance to Renewable Energy Catalysis", Department of Chemistry, *Saint Louis University*, February 2011.
11. "Late Transition Metal Catalysts for the Activation of Small Molecules: Relevance to Renewable Energy Catalysis", Department of Chemistry, *Southern Illinois University - Edwardsville*, January 2011.
10. "New Chemical Agents for Controlling Amyloid β Peptide Aggregation in Alzheimer's Disease", Alzheimer's Disease Research Center, *Washington University School of Medicine*, December 2010.
9. "Late Transition Metal Catalysts for the Activation of Small Molecules: Relevance to Renewable Energy Catalysis", *Midstates Consortium Undergraduate Research Symposium*, Washington University in St. Louis, November 2010.
8. "Stable Mononuclear Organometallic Pd(III) Complexes and Their C-C Bond Formation Reactivity", *Missouri Inorganic Day*, Saint Louis University, May 2010.
7. "Renewable Energy Catalysis: Studies of Water Oxidation by Bimetallic Complexes", Department of Chemistry and Biochemistry, *University of Missouri – St. Louis*, April 2010.
6. *"*Development of Specific Inhibitors for Histone Demethylases*", NIH Mentoring Workshop for Junior Faculty*, University of California, Irvine, October 2009.
5. "New Chemical Agents for Imaging and Controlling Amyloid β Peptide Aggregation in Alzheimer's Disease", Department of Radiology, *Washington University School of Medicine*, September 2009.
4. "Renewable Energy Catalysis: Studies of Water Oxidation by Bimetallic Complexes", Department of Chemistry, Departmental seminar and recruiting visit, *Illinois State University*, April 2009.
3. "Mechanistic Studies of the Ethylene-forming Enzyme ACC Oxidase", *13th International Conference on Biological Inorganic Chemistry*, Vienna, Austria, July 2007.
2. "Tyrosinase Reactivity in a Model Complex: An Alternative Hydroxylation Mechanism", Young Investigator Symposium, *232nd National Meeting of the American Chemical Society*, San Francisco, September 2006.
1. "Phenolate Hydroxylation Reactivity of a μ-η^2: η^2-Peroxodicopper(II) Complex: Peroxide O–O Bond Cleavage Precedes C–O Bond Formation", *Gordon Graduate Research Seminar: Bioinorganic Chemistry*, Ventura, January 2005.

COURSES TAUGHT

- Spring 2025, Chemistry 518A, *Special Topics in Inorganic Chemistry: Organometallic Chemistry*, 2 credit hours, enrollment: 9. Course evaluation: Instructor's teaching effectiveness: 3.75/5.00; Overall quality: 3.75/5.00.
- Fall 2024, Chemistry 518B, *Special Topics in Inorganic Chemistry: Inorganic Reaction Mechanisms*, 2 credit hours, enrollment: 16. Course evaluation: Instructor's teaching effectiveness: 4.17/5.00; Overall quality: 4.17/5.00.
- Fall 2024, Chemistry 585, *Materials Chemistry Literature Seminar*, 1 credit hour, enrollment: 5. Course evaluation: available January 2025.
- Spring 2024, Chemistry 518, *Special Topics in Inorganic Chemistry: Inorganic Reaction Mechanisms*, 4 credit hours, enrollment: 4. Course evaluation: Instructor's teaching effectiveness: 4.33/5.00; Overall quality: 4.67/5.00.
- Fall 2023, Chemistry 515, *Inorganic Literature Seminar*, 1 credit hour, enrollment: 3. Course evaluation: Instructor's teaching effectiveness: 4.33/5.00; Overall quality: 4.33/5.00.
- Spring 2023, Chemistry 515, *Inorganic Literature Seminar*, 1 credit hour, enrollment: 1.
- Fall 2022, Chemistry 518, *Special Topics in Inorganic Chemistry: Inorganic Reaction Mechanisms*, 4 credit hours, enrollment: 5. Course evaluation: Instructor's teaching effectiveness: 3.67/5.00; Overall quality: 3.67/5.00.
- Fall 2022, Chemistry 515, *Inorganic Literature Seminar*, 1 credit hour, enrollment: 7. Course evaluation: Instructor's teaching effectiveness: 4.33/5.00; Overall quality: 4.33/5.00.
- Spring 2022, Chemistry 516, *Physical Inorganic Chemistry,* 4 credit hours, enrollment: 15. Course evaluation: Instructor's teaching effectiveness: 4.63/5.00; Overall quality: 4.50/5.00. *Included into the List of Teachers Ranked as Excellent By Their Students.*
- Fall 2021, Chemistry 518, *Special Topics in Inorganic Chemistry: Bioinorganic Chemistry*, 4 credit hours, enrollment: 12. Course evaluation: Instructor's teaching effectiveness: 3.78/5.00; Overall quality: 3.67/5.00.
- Fall 2021, Chemistry 515, *Inorganic Literature Seminar*, 1 credit hour, enrollment: 8. Course evaluation: Instructor's teaching effectiveness: 4.33/5.00; Overall quality: 4.33/5.00.
- Spring 2021, Chemistry 516, *Physical Inorganic Chemistry,* 4 credit hours, enrollment: 20. Course evaluation: Instructor's teaching effectiveness: 4.14/5.00; Overall quality: 4.21/5.00.
- Fall 2020, Chemistry 312, *Inorganic Chemistry*, 4 credit hours, enrollment: 92. Course evaluation: Instructor's teaching effectiveness: 3.45/5.00; Overall quality: 3.10/5.00.
- Spring 2020, Chemistry 360, *Chemistry of the Environment*, 5 credit hours, enrollment: 183. Course evaluation: Instructor's teaching effectiveness: 4.16/5.00; Overall quality: 4.16/5.00.
- Spring 2018, Chemistry 464, *Inorganic Biochemistry*, 3 credit hours, enrollment: 13. Course evaluation: Learning 4.81/5.00; Organization 4.95/5.00; Enthusiasm: 4.96/5.00; Individual rapport: 4.93/5.00.

- Spring 2017, Chemistry 464, *Inorganic Biochemistry*, 3 credit hours, enrollment: 8. Course evaluation: Learning 4.67/5.00; Organization 4.92/5.00; Enthusiasm: 4.92/5.00; Individual rapport: 4.92/5.00.
- Fall 2016, Chemistry 461, *Inorganic Chemistry*, 3 credit hours, enrollment: 74. Course evaluation: Learning 3.97/5.00; Organization 3.84/5.00; Enthusiasm: 4.24/5.00; Individual rapport: 4.26/5.00.
- Spring 2016, Chemistry 464, *Inorganic Biochemistry*, 3 credit hours, enrollment: 13. Overall evaluation 5.35/7.00; Instruction 6.32/7.00; Organization 6.33/7.00; Interaction with students: 6.40/7.00.
- Fall 2015, Chemistry 461, *Inorganic Chemistry*, 3 credit hours, enrollment: 64. Overall evaluation 5.46/7.00; Instruction 5.53/7.00; Organization 5.88/7.00; Interaction with students: 6.16/7.00.
- Spring 2015, Chemistry 464, *Inorganic Biochemistry*, 3 credit hours, enrollment: 6. Overall evaluation 5.25/7.00; Instruction 6.30/7.00; Organization 6.23/7.00; Interaction with students: 6.30/7.00.
- Fall 2014, Chemistry 461, *Inorganic Chemistry*, 3 credit hours, enrollment: 45. Overall evaluation 5.11/7.00; Instruction 5.32/7.00; Organization 5.88/7.00; Interaction with students: 6.02/7.00.
- Spring 2014, Chemistry 464, *Inorganic Biochemistry*, 3 credit hours, enrollment: 7. Overall evaluation 6.93/7.00; Instruction 6.93/7.00; Organization 6.93/7.00; Interaction with students: 6.93/7.00.
- Fall 2013, Chemistry 461, *Inorganic Chemistry*, 3 credit hours, enrollment: 74. Overall evaluation 4.97/7.00; Instruction 4.97/7.00; Organization 5.60/7.00; Interaction with students: 6.02/7.00.
- Fall 2012, Chemistry 464, *Inorganic Biochemistry*, 3 credit hours, enrollment: 13. Overall evaluation 5.60/7.00; Instruction 5.81/7.00; Organization 6.09/7.00; Interaction with students: 6.30/7.00.
- Spring 2012, Chemistry 112, *General Chemistry*, 4 credit hours, enrollment: 621, taught one section of 332 students. Overall evaluation 5.60/7.00; Instruction 5.88/7.00; Organization 6.02/7.00; Interaction with students: 5.95/7.00.
- Fall 2011, Chemistry 464, *Inorganic Biochemistry*, 3 credit hours, enrollment: 13. Overall evaluation 5.74/7.00; Instruction 6.02/7.00; Organization 6.37/7.00; Interaction with students: 6.44/7.00.
- Spring 2011, Chemistry 112, *General Chemistry*, 4 credit hours, enrollment: 664, taught one section of 345 students. Overall evaluation 5.53/7.00; Instruction 5.88/7.00; Organization 5.95/7.00; Interaction with students: 5.95/7.00.
- Fall 2010, Chemistry 464, *Inorganic Biochemistry*, 3 credit hours, enrollment: 5. Overall evaluation 6.65/7.00; Instruction 6.30/7.00; Organization 6.44/7.00; Interaction with students: 6.72/7.00.
- Fall 2009, Chemistry 464, *Inorganic Biochemistry*, 3 credit hours, enrollment: 14. Overall evaluation 6.37/7.00; Instruction 6.30/7.00; Organization 6.58/7.00; Interaction with students: 6.72/7.00.
- Fall 2008, Chemistry 542, *Special Topics in Inorganic Chemistry: Metal-Catalyzed Reactions in Chemistry and Biology*, 3 credit hours, enrollment: 8. Overall evaluation 5.46/7.00; Instruction 5.60/7.00; Organization 5.60/7.00; Interaction with students: 6.51/7.00.

UNIVERSITY OF ILLINOIS COMMITTEES AND SERVICE

- Beckman Institute Molecular Imaging Laboratory Executive Committee, 2024 – present
- Executive Committee, College of Liberal Arts and Science, 2023 – present
- Executive Committee, Graduate College, UIUC, 2023 – present
- Advisory Committee, Department of Chemistry, 2022 – present
- Inorganic Area Budget & Operations Officer, Department of Chemistry, 2020 – present
- Materials Area Budget & Operations Officer, Department of Chemistry, 2023 – present
- Executive Committee, School of Chemical Sciences, 2021 – 2024
- Staff Committee, Department of Chemistry, 2019 – 2020
- Advisory Committee, Department of Chemistry, 2019 – 2021

WASHINGTON UNIVERSITY COMMITTEES AND SERVICE

- Chair, Admissions Committee, Department of Chemistry, 2014 – 2018
- Graduate Work Committee, Department of Chemistry, 2010 – present
- Admissions and Recruiting Committee, Department of Chemistry, 2008 – 2018
- Chair, Seminar Committee, Department of Chemistry, 2010 – 2016
- Biochemistry Faculty Search Committee, Department of Chemistry, 2016
- NMR and EPR Facility Manager Search Committee, Department of Chemistry, 2014 & 2016
- Bioorganic/biomaterials Faculty Search Committee, Department of Chemistry, 2014
- Goldwater Fellowship Committee, Washington University, 2015- present
- Undergraduate major advisor, Department of Chemistry: 19 students, 15 currently
- Thesis Committees, Department of Chemistry: 33 students, 15 currently
- External Thesis Committees, Division of Biological and Biomedical Sciences (DBBS): 4 students, 1 currently
- HHMI Summer Scholars in Biology and Biomedical Research Program Selection Committee, 2011 – 2014
- HHMI Summer Undergraduate Research Fellowships reviewer, 2009 – present. Reviewed applications for the SURF program.
- DBBS, MSTP Candidate Interview Committee, 2009 – present. Interviewed candidates for the WashU MD/PhD program.
- DBBS, Biochemistry Ph.D. Candidate Interview Committee, 2009 – present. Interviewed candidates for the WashU PhD program in Biochemistry.

PROFESSIONAL SERVICE

- *Awards Co-Chair*, Division of Inorganic Chemistry, American Chemical Society, 2023 – present.

- Reviewer for *Science, Nature, Nature Chemistry, Nature Catalysis, Nature Communications, Nature Chemical Biology, Chem, Journal of the American Chemical Society*, *Angewandte Chemie, Proceedings of the National Academy of Sciences U.S.A., Accounts of Chemical Research, Chemical Communications, Chemical Science, Inorganic Chemistry*, *Chemistry of Materials*, *Dalton Transactions, Organometallics, Metallomics, Inorganica Chimica Acta, Journal of Biological Inorganic Chemistry,* and *Journal of Inorganic Biochemistry*.
- Book reviewer for *Oxford University Press*, *John Wiley and Sons*, and *Elsevier*.
- Grant proposal reviewer for *National Institutes of Health, National Science Foundation, DOE Basic Energy Sciences, ACS Petroleum Research Fund*, *The Research Corporation, The Alzheimer's Association, European Research Council, CNRS France, Israel Science Foundation, The Austrian Science Fund*.
- *Ad-hoc member*, *Macromolecular Structure and Function A [MSFA] Study Section*, National Institutes of Health, February & June 2015, February 2024.
- Evaluated ten Tenure/Promotions Dossiers for PhD-granting Chemistry Departments, 2013-2026.
- *External Examiner* for a PhD Dissertation Defense, ICIQ, Spain, 2022.
- *External Examiner* for a PhD Dissertation Defense, Central University of Rajasthan, India, 2021.
- *External Examiner* for a PhD Dissertation Defense, University of British Columbia, Canada, 2014.
- *External Examiner* for a PhD Dissertation Defense, Simon Fraser University, Canada, 2015.
- Chaired numerous sessions at National American Chemical Society Meetings, 2010-2015.

COLLABORATORS

Prof. Wawrzyniec Dobrucki, University of Illinois, Department of Bioengineering

Prof. Bradley Sutton, University of Illinois, Department of Bioengineering

Prof. Stephen Boppart, University of Illinois, Department of Electrical and Computer Engineering

Prof. Emad Tajkhorshid, University of Illinois, Department of Biochemistry

Prof. Josh Vura-Weis, University of Illinois, Department of Chemistry

Prof. Jefferson Chan, University of Illinois, Department of Chemistry

Prof. Buck Rogers, Washington University School of Medicine, Department of Radiology

Prof. Yi Lu, University of Texas at Austin, Department of Chemistry

Prof. Hannah Shafaat, University of California, Los Angeles, Department of Chemistry & Biochemistry

Prof. Eszter Boros, University of Wisconsin-Madison, Department of Chemistry

RESEARCH ASSOCIATES (current group members in bold)

Postdoctoral Fellows

Dr. Jusung An, January 2025 – present; Ph.D. Korea University, South Korea

Dr. Saumitra Bhoumik, September 2023 – July 2026; Ph.D. IIT Kanpur, India

Dr. Donghyun Jeong, February 2024 – April 2026; Ph.D. UNIST, South Korea

Dr. Dae Young Bae, August 2021 – April 2026; Ph.D. Pohang University of Science and Technology (POSTECH), South Korea

Dr. Monika Rana, July 2023 – July 2025; Ph.D. Central University of Rajastan, India

Dr. Daniel Hu, May 2024 – December 2024; Ph.D. University of Illinois Urbana-Champaign

Dr. Hanah Na, June 2019 – February 2022; Ph.D. University of Houston; current position: research scientist,

Dr. Soumalya Sinha, August 2019 – August 2021; Ph.D. Simon Fraser University, Canada; current position: teaching assistant professor, University of Cincinnati

Dr. Liang Sun, June 2019 – March 2021; Ph.D. Washington University in St. Louis; current position: postdoctoral fellow, Memorial Sloan Kettering Cancer Center

Dr. Hong-Jun Cho, January 2016 – June 2021; Ph.D. Seoul National University, South Korea

Dr. Bennett Eleazer, October 2018 – December 2019; Ph.D. University of South Carolina

Dr. Hui Duan, February 2016 – April 2017; Ph.D. Wuhan University, China; current position: postdoctoral fellow, University of Delaware

Dr. Wen Zhou, September 2013 – August 2016; Ph.D. Brandeis University; current position: postdoctoral fellow, MIT

Dr. Anuj Sharma, October 2009 – March 2014; Ph.D. Indian Institute of Technology, Kanpur; current position: Assistant Professor and DST-INSPIRE Faculty, Central University of Rajasthan, India

Dr. Bo Zheng, March 2012 – July 2013; Ph.D. Nanjing University; postdoctoral scholar, Harvard University; current position: senior scientist, Cerion Advanced Materials.

Dr. Julia Khusnutdinova, May 2009 – December 2011; Ph.D. University of Maryland; honor: 2010 HHMI Mentor Travel Award; current position: Associate Professor, Okinawa Institute of Science and Technology, Japan.

Dr. Emi Evangelio, March 2010 – March 2011; Ph.D. University of Barcelona; honors: Fullbright Fellow; current position: postdoctoral fellow, University of Barcelona, Spain.

Graduate Students

Jinwoo Jung (November 2024 – present); B.S. Chemistry, Cornell University, 2025

Sophia Liu (November 2024 – present); B.S. Chemistry, University of Michigan, 2025

Richard Wetterer (November 2025 – present); NSF GRFP Fellow, B.S. Chemistry, UC Berkeley, 2024

Husna Azhakath Valappil (November 2024 – present); Integrated MSc. Chemistry, National Institute of Science Education and Research (NISER), Bhubaneswar 2024

Julian Bowes (November 2024 – present); B.S. Chemistry, University of Virginia 2023

Arka Ghosh (November 2024 – present); MSc. Chemistry, Indian Institute of Technology, Kanpur 2024; BSc. in Chemistry, Ramakrishna Mission Residential College 2022

Katy Knecht (November 2024 – present); B.S. Chemistry, Louisiana State University 2024

Jennifer Salaiza (November 2024 – present); B.S. Chemistry, University of La Verne 2023

Ashutosh Sharma (November 2024 – present); Integrated MSc. Chemistry, Central University of Rajasthan, India 2023

Sidhartha Banerjee (November 2023 – present); M.S. Chemistry, VNIT, Nagpur, India 2023; B.S. in Chemistry, Univ. of Calcutta, India 2021

Joshua Leung (November 2023 – present); B.S. Chemistry, UC Berkeley, 2022

Kerry Xu (September 2023 – present); B.S. Chemistry, University of Illinois, 2020

Glenn Blade (November 2021 – present); B.S. Biochemistry, St. Edward's University 2021

Tarek El Sayed (November 2021 – present); B.S. Chemistry, University of British Columbia 2021

Citlali Gutierrez (November 2021 – present); B.S. Chemistry, University of Central Florida 2021

Shounak Nath (November 2021 – present); M.S. (2021) and B.S. (2020) in Chemistry, Indian Institute of Science

Luke Westawker (November 2021 – present); B.S. Chemistry, Carleton College, 2021

Jubyeong Chae (March 2021 – present); M.S. (2020) and B.S. (2017) Chemistry, Seoul National University of Science and Technology

Dr. Sagnik Chakrabarti (November 2019 – September 2025); M.Sc. Chemistry, IIT Kanpur, 2019; B.S. in Chemistry, Presidency University, Kolkata, 2017

Dr. Annika Holm (November 2022 – September 2025); B.S. Chemistry, Sonoma State University, 2019

Dr. Karna Terpstra (November 2019 – August 2025); B.S. Chemistry, Whitworth University, 2019

Amy Wahlmeier (November 2020 – June 2024); B.S. Chemistry, Nebraska Wesleyan University, 2019

Dr. Bailey Bouley (March 2020 – May 2024); B.S. Chemistry, UT Austin, 2018

Dr. Rachel Wallick (December 2021 – April 2024); B. S. Chemistry, University of Maryland, 2018

Dr. Daniel Hu (November 2018 – January 2024); B.S. Chemistry, National Taiwan University, 2018

Alyssa Mohr (November 2021 – December 2023); B.S. (2021) Chemistry, Northern Illinois University

Yusuff Moshood (November 2021 – August 2023); M. S. (2021) Chemistry, Université Grenoble Alps, B. S. (2018) in Chemistry, University of Ibadan, Nigeria

Dr. Zhengxin Yu (November 2018 – August 2023); B.S. Chemistry, Nankai University, 2018

Katherine Greskovich (November 2019 – December 2022); B.S. Biochemistry, Kent State University, 2019

Dr. Leonel Griego (January 2016 – December 2021); B.S. Chemistry, University of Texas, El Paso, 2015

Neil Heberer (November 2019 – May 2021); B.S. Chemistry, Michigan State Univ., 2018

Kai Gui (November 2019 – August 2021); B.S. Chemistry, Grinnell College, 2019

Dr. Gina Tran (January 2016 – June 2021); B.S. Chemistry, Knox College, 2015

Dr. Yujue Wang (January 2016 – April 2021); B.S. Chemistry, Nankai University, 2015

Dr. Yiran Huang (January 2016 – March 2021); B.S. Chemistry, East China University of Science and Technology, China

Dr. Yung-Ching Wang (January 2016 – January 2021); B.S. Chemistry, National Taiwan University, 2014

Dr. Sofia Smith (January 2015 – March 2019); B.S. Chemistry, University of Rotterdam, Netherlands, 2013.

Dr. Liang Sun (January 2014 – March 2019); B.S. Chemistry, Jilin University, China, 2013

Alex Graves (January 2018 – December 2018); B.S. Chemistry, Rhodes College, 2017

Emily Reeves (January 2016 – December 2016); B.S. Chemistry, St. Olaf College, 2015

Shuai Zheng (January 2014 – May 2015); B.S. Chemistry, Zhejian University, China, 2013

Dr. Kei Fuchigami (January 2013 – December 2017); B.S. Chemistry, St. Olaf College, 2012. Departmental teaching award, 2013

Dr. Nicholas Ruhs (January 2012 – May 2017); B.S. Chemistry, Quincy University, 2011; Departmental teaching award, 2013

Dr. Andrew Wessel (January 2012 – May 2017); B.S. Chemistry, Missouri University of Science and Technology, 2011. Departmental teaching award, 2013; Dissertation fellowship, 2017

Dr. Michael Watson (January 2012 – May 2017); B.S. Chemistry, Saint Louis University, 2011; Departmental teaching award, 2015; Dissertation fellowship, 2017

Dr. Jason Schultz (January 2011 – January 2016); B.S. Chemistry, Gustavus Adolphus College, 2010; Departmental teaching award, 2011; Arthur and Ruth Homeyer Scholarship, 2012; Dissertation fellowship, 2016

Daniel Weisz (January 2010 – September 2011); B.S. Chemistry, Brandeis University, 2009

Stephanie Tucker (January 2010 – December 2011); B.S. Chemistry, Berry College, 2009; Departmental teaching award, 2011

Dr. Ying Zhang (January 2010 – December 2014), B.S. Chemistry, Nanjing University, China, 2009; co-advised with Prof. Michael Gross

Dr. Barbara (Gordon) Cascella (April 2009 – December 2014), B.S. Chemisty, Rhodes College, 2008; departmental teaching award, 2010; departmental dissertation fellowship, 2014

Dr. Jia Luo (January 2009 – May 2014), B.S. Chemistry, Xiamen University, China, 2008; departmental dissertation fellowship, 2013; current position: Lecturer, Dept. of Chemistry, Washington Univ

Dr. Fengrui Qu (January 2009 – June 2014), M.S. Chemistry, Southern Illinois University - Edwardsville, 2008; current position: Postdoctoral scholar, Dept. of Chemistry, Univ. of Alabama

Dr. Fengzhi Tang (January 2009 – June 2014), B.S. Chemistry, Huazhong University, China, 2008; departmental dissertation fellowship, 2014; current position: Scientist, AEG Inc., St. Louis

Undergraduate Students

Manny Stavridis (August 2025 – present); B.S. Chemistry, University of Illinois, expected 2028

Katie Chen (May 2025 – present); B.S. Chemistry, University of Illinois, expected 2027

Marie Mina (August 2024 – present); B.S. Chemistry, University of Illinois, expected 2027

Hammed Adeoye (June 2023 – present); B.S. Biochemistry, University of Illinois, expected 2026

Alexander Glogovac (January 2024 – December 2025); B.S. Chemistry, University of Illinois, December 2025

Zara Lateef (January 2024 – May 2025); B.S. Chemistry, University of Illinois, May 2025

Jazmin Garcia (January 2023 – May 2025); B.S. MCB/Chemistry, University of Illinois, May 2025

Akhil Patel Garvey (January 2023 – May 2025); B.S. MCB/Chemistry, University of Illinois, May 2025

Ian Garvey (March 2022 – May 2023); B.S. Chemistry, University of Illinois, May 2023

Nicholas Cedron (January 2022 – May 2023); B.S. Chemistry, University of Illinois, December 2022

Aryan Shah (January 2022 – December 2022); B.S. Bioengineering, University of Illinois, expected 2023

Shrey Patel (August 2019 – December 2021); B.S. Chemical Engineering, University of Illinois, 2021

Kinh Nguyen (June 2019 – January 2021); B.S. Chemistry, University of Illinois, 2021

Emily Morgan (May 2016 – December 2018); B.S. Chemistry, Washington University, 2018

Alice Hsu (January 2017 – May 2018); B.S. Chemistry, Washington University, expected 2019

Justin Chu (January 2016 – May 2018); B.S. Chemistry, Washington University, 2018

Veronica Li (June 2017 – December 2017); B.S. Chemistry, Washington University, 2017

Aidan Levine (January 2015 – May 2017); B.S. Chemistry, Washington University, 2017

Maya Sorini (January 2016 – May 2016); B.S. Chemistry, Washington University, expected 2018

Ryan Sun (January 2014 – May 2016); B.S. Chemistry, Washington University, expected 2016; HHMI Summer Undergraduate Research Fellowship, 2014; Summer Undergraduate Research Award, 2015

Nathaniel Belcher (January 2014 – May 2015); B.S. Chemistry, Washington University, 2015

Hyo Jin Sun (August 2013 – May 2015); B.S. Chemistry, Washington University, 2015; Summer Undergraduate Research Award, 2014; Wahl award, 2015

Aaron Rhee (August 2012 – May 2015); B.S. Chemistry, Washington University, 2015; Helmholz award, 2015

Aakash Gandhi (June 2011 – August 2011); Washington University Summer Scholars in Biology and Biomedical Research Program, 2012

Philip Azanov (May 2011 – May 2013); Washington University Summer Undergraduate Research Award, B.S. in Chemistry, Washington University, expected 2014

Tim Prior (January 2011 – May 2013); HHMI Summer Undergraduate Research Fellowship, 2012; HHMI undergraduate travel award, 2012; B.S. in Chemistry, Washington University, 2013

Sungho Park (September 2010 – May 2013); Washington University Summer Undergraduate Research Award, 2011; Washington University Summer Undergraduate Research Award, 2012; OUR undergraduate travel award, 2013; B.S. in Chemistry, 2013

Kathleen Hagan (September 2010 – December 2011); B.S. Chemical Engineering, Washington University, 2012; HHMI Summer Undergraduate Research Fellowship, 2011; currently part of the Teach for America program

Madeleine Coutre (June 2010 – August 2011); Washington University Summer Scholars in Biology and Biomedical Research Program, 2010; Sophomore Summer Undergraduate Research Fellowship, 2011

Jacob Shaw (January 2010 – May 2011); B.S. Chemistry, Washington University, 2012

Michael Schultz (September 2009 – May 2010); B.S. Chemistry, Washington University, 2012

Darren Finkelstein (June 2009 – May 2011), B.S. Chemistry, Washington University, 2011; HHMI Summer Undergraduate Research Fellowship, 2009; Barry M. Goldwater Scholarship finalist, 2010; Wahl award, 2011; currently a graduate student in chemistry at Stanford University

Nick Hawco (June 2009 – May 2011), B.S. Chemistry, Washington University, 2011; HHMI Summer Undergraduate Research Fellowship, 2009; HHMI undergraduate travel award, 2010; Helmholz award, 2011; currently a graduate student in marine biology at MIT/Woods Hole Oceanographic Institution

Megan Kelly (June – July 2009); Washington University Summer Scholars in Biology and Biomedical Research Program; B.S. in Chemistry, Washington University, 2013

Shayna Weiner (September 2008 – May 2009), B.S. Chemistry, Washington University, 2010