Demyan E. Prokopchuk

CURRENT POSITION

Assistant Professor
Department of Chemistry
Rutgers University - Newark
73 Warren Street
Newark, NJ, 07102
United States

Google Scholar
ORCID
Web of Science

demyan.prokopchuk@rutgers.edu
Research Group Website

EDUCATION AND EMPLOYMENT

Assistant Professor, Rutgers University, Newark, NJ **2019–**

Postdoctoral Fellow, University of Calgary, AB, Canada **2017–2018**
Mentor: Warren E. Piers
Electrocatalytic CO_2 reduction research as part of the Canada First Research Excellence Fund (CFREF)

Postdoctoral Fellow, Pacific Northwest National Laboratory, Richland, WA **2015–2017**
Mentors: R. Morris Bullock, Michael Mock (now at Montana State University)
N_2 reduction, H_2 oxidation in the DOE Center for Molecular Electrocatalysis EFRC

PhD, Chemistry, University of Toronto, Toronto, ON, Canada **2009–2015**
Advisor: Robert H. Morris
Thesis Title: "Synthetic and Computational Studies of Metal-Ligand Cooperation with Iron Group Complexes for Water Splitting and Ketone Hydrogenation"

BSc, Chemistry, University of Saskatchewan, Saskatoon, SK, Canada **2004–2009**
Chemistry (Major, High Honors) and Computer Science (Minor)
Mentors: Stephen Foley, Heinz-Bernhard Kraatz (now at University of Toronto–Scarborough)

OTHER RESEARCH POSITIONS

Visiting PhD Student, ETH Zürich, Switzerland **Jun–Oct 2014**
Advisor: Hansjörg Grützmacher

Inorganic Chemistry Exchange (ICE) Student, Western University, London, ON **May–Aug 2008**
Advisor: John Corrigan (now at University of Waterloo)

ALL PUBLICATIONS

37. D. S. Tresp, S. Luhach, T. Schramm, A. Rosendo, A. Houn, S. Grimme, A. Hansen, **D. E. Prokopchuk** "Expanded C-H and N-H Bond Thermochemistry of Cp^{N3}, an Amine-Rich Cyclopentadiene" *in preparation.*

36. L. Lin, P. Kucheryavy, T. Schramm, R. A. Lalancette, S. Grimme, A. Hansen, **D. E. Prokopchuk** "Unraveling the Difference in C(sp^3)-H Activation Capability Between Nickel and Palladium" *in preparation.*

35. J. Zuo, R. A. Lalancette, **D. E. Prokopchuk**, F. Jäkle "Regioselective Access to B-N Lewis Pair-Functionalized Anthracenes: Mechanistic Studies and Optoelectronic Properties" *submitted.*

34. A. VanderWeide, H. Neugebauer, B. Goel, D. S. Tresp, D. Pena, S. Grimme, A. Hansen, **D. E. Prokopchuk** "Multisite Ligand Noninnocence of $(Cp^{N3})Fe(CO)_3^+$ with Exogenous Hydride Donors: Kinetics and Mechanism" *Organometallics*, **2024**, *43*, 3143. 10.1021/acs.organomet.4c00137. Part of the "Experimental Studies of Reaction Mechanisms in Organometallic Chemistry and Catalysis" special issue.

33. A. Karagiannis, H. Neugebauer, R. A. Lalancette, S. Grimme, A. Hansen, **D. E. Prokopchuk** "Pushing the Limits of Organometallic Redox Chemistry with an Isolable Mn(-I) Dianion" *J. Am. Chem. Soc.*, **2024**, *146*, 19279. 10.1021/jacs.4c04561

32. X. Chen, A. Cifuentes-Lopez, X. Shao, L. Lin, **D. E. Prokopchuk**, M. Pavanello "Unraveling the Hydration Shell Structure and Dynamics of Group 10 Aqua Ions" *J. Phys. Chem. Lett*, **2024**, *15*, 5517. 10.1021/acs.jpclett.4c00464.

31. D. S. Tresp, **D. E. Prokopchuk** "Leveraging Intramolecular Electrostatics to Boost Electrocatalytic CO_2 Reduction" *Chem Catal.*, **2024**, 10.1016/j.checat.2024.101053. (invited contribution)

30. S. Luhach, R. A. Lalancette, **D. E. Prokopchuk** "'Catch and Release' of the Cp^{N3} Ligand Using Cobalt: Dissociation, Protonation, and C-H Bond Thermochemistry" *Dalton Trans.*, **2024**, *53*, 18865. 10.1039/D4DT01560F Part of the **New Talent, Americas** collection and selected as a **HOT Article**.

29. L. Lin, D. S. Tresp, D. M. Spasyuk, R. A. Lalancette, **D. E. Prokopchuk** "Accessing Ni(0) to Ni(IV) via Nickel-Carbon-Phosphorus Bond Reorganization" *Chem. Commun.* **2024**, *60*, 674. 10.1039/D3CC04687G. Part of the **Emerging Investigators Collection**, selected as a **HOT Article**, and artwork featured on journal front cover.

28. D. S. Tresp, **D. E. Prokopchuk** "Structural and Electrochemical Analysis of FeCp* Complexes Supported by a Borate-Bridged Dicarbene Ligand" *Polyhedron*, **2024**, *248*, 116745. 10.1016/j.poly.2023.116745. Special Issue: **Emerging Investigators in Inorganic Chemistry**

27. B. Goel, H. Neugebauer, A. VanderWeide, P. Sánchez, R. A. Lalancette, S. Grimme, A. Hansen, **D. E. Prokopchuk** "Essential Roles of Cp Ring Activation and Coordinated Solvent During Electrocatalytic H_2 Production with Fe(Cp^{N3}) Complexes" *ACS Catalysis* **2023**, *13*, 13650. 10.1021/acscatal.3c02911

26. A. VanderWeide, **D. E. Prokopchuk** "Cyclopentadienyl Ring Activation in Organometallic Chemistry and Catalysis" *Nature Reviews Chemistry*, **2023**, *7*, 561. 10.1038/s41570-023-00501-1

25. A. Karagiannis, B. Goel, **D. E. Prokopchuk** "Putting a New Spin on Imido Chemistry with an Fe^{II} Dicarbene Complex" *Trends Chem.*, **2023**, *5*, 105. 10.1016/j.trechm.2022.12.002 (invited contribution)

24. D. S. Tresp, H. Neugebauer, S. Grimme, A. Hansen, **D. E. Prokopchuk** "Electronic Effects of Aminoindenyl ligands Coordinated to Manganese: Structures and Properties of a Mn^0 Metalloradical and Bimetallic Mn^{I}/Mn^{-I} Adduct" *Organometallics* **2022**, *41*, 3055. 10.1021/acs.organomet.2c00463

23. A. Karagiannis, A. M. Tyryshkin, R. A. Lalancette, D. M. Spasyuk, A. Washington, **D. E. Prokopchuk** "A Redox-active Mn(0) Dicarbene Metalloradical" *Chem. Commun.*, **2022**, *58*, 12963. 10.1039/D2CC04677F

    Selected as a 2022 ChemComm HOT Article

22. L. Lin, D. Spasyuk, R. A. Lalancette, **D. E. Prokopchuk** "Coordination-Induced Weakening of a C(sp^3)-H Bond: Homolytic and Heterolytic Bond Strength of a CH—Ni Agostic Interaction" *J. Am. Chem. Soc.*, **2022**, *144*, 12632. 10.1021/jacs.2c05667

21. P. Sánchez, B. Goel, H. Neugebauer, Roger A. Lalancette, A. Hansen, S. Grimme, **D. E. Prokopchuk** "Ligand Protonation at Carbon, not Nitrogen, during H_2 Production with Amine-Rich Iron Electrocatalysts" *Inorg. Chem.* **2021**, *60*, 17407. 10.1021/acs.inorgchem.1c03142

Before Rutgers:

20. M. M. H. Sung, **D. E. Prokopchuk**, R. H. Morris "Phosphine-free ruthenium NCN-ligand complexes and their use in catalytic CO_2 hydrogenation" *Dalton Trans.* **2019**, *48*, 16569. (invited contribution) 10.1039/C9DT03143J

19. Z. Dubrawski, J. Heidebrecht, B. M. P. Lombardi, A. S. Hyla, J. Willkomm, C. L. Radford, J.-B Lin, G. C. Welch, S. Ponnurangam, R. Roesler, **D. E. Prokopchuk**, W. E. Piers "Ligand-Centered Electrochemical Processes Enable CO_2 Reduction with a Nickel Bis(triazapentadienyl) Complex" *Sustainable Energy Fuels* **2019**, *3*, 1172. 10.1039/C8SE00623G

    Selected as a 2019 Sustainable Energy and Fuels HOT Article

18. **D. E. Prokopchuk**, Geoffrey M. Chambers, E. D. Walter, M. T. Mock, R. M. Bullock "H_2 Binding, Splitting, and Net Hydrogen Atom Transfer at a Paramagnetic Iron Complex" *J. Am. Chem. Soc.* **2019**, *141*, 1871. 10.1021/jacs.8b12823

    News article at Phys.org, February 19, 2019: "Mechanism of iron-based hydrogen bond cleavage revealed"

17. **D. E. Prokopchuk**, E. S. Wiedner, E. D. Walter, N. A. Piro, W. S. Kassel, C. V. Popescu, R. M. Bullock, M. T. Mock "Catalytic N_2 Reduction into Silylamines and Thermodynamics of N_2 Binding at Square Planar Fe", *J. Am. Chem. Soc.* **2017**, *139*, 9291. 10.1021/jacs.7b04552

16. P. Bhattacharya, **D. E. Prokopchuk**, M. T. Mock "Exploring the Role of Pendant Amines in Transition Metal Complexes for the Reduction of N_2 to Hydrazine and Ammonia", *Coord. Chem. Rev.*, **2017**, *334*, 67. 10.1016/j.ccr.2016.07.005

15. S. A. M. Smith, **D. E. Prokopchuk**, R. H. Morris "Asymmetric transfer Hydrogenation of Ketones Using New Iron(II) (P-NH-N-P') Catalysts: Changing the Steric and Electronic Properties at Phosphorus P' ", *Isr. J. Chem.* **2017** *57*, 1204. (invited contribution) 10.1002/ijch.201700019

14. **D. E. Prokopchuk**, S. A. M. Smith , R. H. Morris "Ligands for iron-based homogeneous catalysts for the asymmetric hydrogenation of ketones and imines" in *Ligand Design in Metal Chemistry: Reactivity and Catalysis*, First Edition. Edited by Mark Stradiotto and Rylan Lundgren. John Wiley and Sons, Ltd., **2016** (invited contribution) 10.1002/9781118839621.ch8

13. **D. E. Prokopchuk**, A. J. Lough, R. E. Rodriguez-Lugo, R. H. Morris, H. Grützmacher "Insights into metal–ligand hydrogen transfer: a square-planar ruthenate complex supported by a tetradentate amino-amido-diolefin ligand", *Chem. Commun.*, **2016**, *52*, 6138. 10.1039/C6CC00041J

12. W. Zuo, **D. E. Prokopchuk**, A. J. Lough, R. H. Morris "Details of the Mechanism of the Asymmetric Transfer Hydrogenation of Acetophenone Using the Amine(imine)diphosphine Iron Precatalyst: The Base Effect and The Enantiodetermining Step", *ACS Catalysis*, **2016**, *6*, 301. 10.1021/acscatal.5b01979

11. C. Lichtenberg, **D. E. Prokopchuk**, M. Adelhardt, J. Sutter, L Viciu, K. Meyer, H. Grützmacher "Reactivity of an All-Ferrous Iron–Nitrogen Heterocubane under Reductive and Oxidative Conditions", *Chem. Eur. J.*, **2015**, *21*, 15797. 10.1002/chem.201502530

10. **D. E. Prokopchuk**, B. T. H. Tsui, A. J. Lough, R. H. Morris "Intramolecular C–H/O–H Bond Cleavage with Water and Alcohol Using a Phosphine-Free Ruthenium Carbene NCN Pincer Complex", *Chem. Eur. J.*, **2014**, *20*, 16960. 10.1002/chem.201404819

    News article in ChemViews magazine, October 12, 2014: "Phosphine-Free Ruthenium Complex for Water Splitting"

9. W. Zuo, S. Tauer, **D. E. Prokopchuk**, R. H. Morris "Iron Catalysts Containing Amine(imine)diphosphine P-NH-N-P Ligands Catalyze both Asymmetric Hydrogenation and Asymmetric Transfer Hydrogenation of Ketones" *Organometallics*, **2014**, *33*, 5791. (invited contribution) 10.1021/om500479q

    One of the most read articles between 2011-2016 (over 13000 times).

8. S. E. Clapham, M. Zimmer-De Iuliis, K. Mack, **D. E. Prokopchuk**, R. H. Morris "Alcohol Assisted Base-free Hydrogenation of Acetophenone Catalyzed by $OsH(NHCMe_2CMe_2NH_2)(PPh_3)_2$" *Can. J. Chem.*, **2014**, *92*, 731. (invited contribution) 10.1139/cjc-2014-0060

7. **D. E. Prokopchuk**, A. Collado, A. J. Lough, R. H. Morris "Structural properties of *trans* hydridohydroxo $M(H)(OH)(NH_2CMe_2CMe_2NH_2)(PPh_3)_2$ (M = Ru, Os) complexes and their proton exchange behaviour with water in solution" *Dalton Trans.*, **2013**, *42*, 10214. 10.1039/C3DT50452B

6. **D. E. Prokopchuk**, R. H. Morris, "Inner-Sphere Activation, Outer-Sphere Catalysis: Theoretical Study on the Mechanism of Transfer Hydrogenation of Ketones Using Iron(II) PNNP Eneamido Complexes" *Organometallics*, **2012**, *31*, 7375. 10.1021/om300572v

5. **D. E. Prokopchuk**, J. F. Sonnenberg, N. Meyer , M. Zimmer-De Iuliis, A. J. Lough, R. H. Morris, "Spectroscopic and DFT Study of Ferraziridine Complexes Formed in the Transfer Hydrogenation of Acetophenone Catalyzed Using *trans*-$[Fe(CO)(NCMe)(PPh_2C_6H_4CH{=}NCH_2-)_2-\kappa^4 P,N,N,P](BF_4)_2$" *Organometallics*, **2012**, *31*, 3056. 10.1021/om201170f

4. **D. E. Prokopchuk**, A. J. Lough, R. H. Morris "From Amine to Ruthenaziridine to Azaallyl: Unusual Transformation of Di-(2-pyridylmethyl)amine on Ruthenium" *Dalton Trans.*, **2011**, *40*, 10603. 10.1039/C1DT10626K

3. J. M. Chitanda, **D. E. Prokopchuk**, J. W. Quail, S. R. Foley "Synthesis of Palladacycles Employing Iminoisoindolines as Monoanionic Bidentate Ligands" *Dalton Trans.*, **2008**, 6023. 10.1039/B806544F

2. J. M. Chitanda, **D. E. Prokopchuk**, J. W. Quail, S. R. Foley "From Pyrroles to Isoindolines: Synthesis of a $\gamma-$Diimine Ligand for Applications in Palladium Coordination Chemistry and Catalysis" *Organometallics*, **2008**, *27*, 2337. 10.1021/om 800080e

1. **D. E. Prokopchuk**, G. A. Orlowski, H.-B. Kraatz "Synthesis of Amino Acid Conjugates of $1,1'$-dimethylferrocene: New Chiral Conjugates" *Inorg. Chim. Acta*, **2008**, *361*, 1327. 10.1016/j.ica.2007.08.028

Research Grants

National Science Foundation ($799,799) **2025–2030**
"CAREER: CAS: Modulating Ligand-based C-H and N-H Bond Strengths for Sustainable Synthesis and Catalysis" (Lead PI)

US Department of Energy ($664,755) **2025–2028**
"DOE-FAIR: Electrically Driven Catalysis with Supercharged Reducing Agents" (Lead PI)

American Chemical Society – Petroleum Research Fund ($110,000) **2023–2025**
"Using Adamantyl Ligands as Metal-Mediated C-H Activation Models (66371-ND3)" (Lead PI)

National Science Foundation ($451,046) **2021–2024**
"NSF-DFG-Echem: CAS: Synergistic Experimental and Computational Approaches to Designing Electrocatalysts with Proton-Responsive Ligand Architectures (2055097)" (Lead PI)

Rutgers Global Grants Program ($8,000) **2022–2023**
"Electrically Driven Carbon Dioxide Reduction Using Organobismuth Compounds" (Lead PI)
Collaborative Project with Prof. Crispin Lichtenberg, University of Marburg

National Science Foundation ($273,700) **2020–2023**
"MRI: Acquisition of a Single Crystal X-ray Diffractometer (2018753)" (co-PI)

Rutgers Research Council ($2,500) **2019–2020**
"Bio-Inspired Molecular Catalysts for Electrochemical Energy" (Lead PI)

Invited Talks

California State University, Chico, CA	**Apr 2025**
University of Toronto, Toronto, ON	**Mar 2025**
York University, North York, ON	**Mar 2025**
ACS Spring Meeting, San Diego, CA	**Mar 2025**
Lehigh Univerity, Bethlehem, PA	**Feb 2025**
University of Cincinnati, Cincinnati, OH	**Jan 2025**
University of Houston, Houston, TX	**Dec 2024**
Rutgers University, New Brunswick, NJ	**Dec 2024**
University of Virginia, Charlottesville, VA	**Nov 2024**
New York University, New York, NY	**Oct 2024**
NSF-DFG PI Meeting, Braunschweig, Germany	**Sep 2024**
ACS Fall Meeting, Denver, CO (2 talks)	**Aug 2024**
Gordon Conference, Organometallic Chemistry, Newport, RI	**Jul 2024**
ACS Mid-Atlantic Regional Meeting (MARM), Penn State University	**Jun 2024**
Canadian Chemistry Conference and Exhibition, Winnipeg, MB	**Jun 2024**
ETH Zürich, Switzerland	**May 2024**
University of Zürich, Switzerland	**May 2024**

	University of Bonn, Germany	**May 2024**
	Utrecht University, Netherlands	**May 2024**
	University of Marburg, Germany	**May 2024**
	University of Göttingen, Germany	**May 2024**
	University of Hamburg, Germany	**May 2024**
	Western Canadian Undergraduate Chemistry Conference, Saskatoon, Canada	**May 2024**
	University of Saskatchewan, Saskatoon, Canada	**Mar 2024**
	Princeton University, Princeton, NJ	**Feb 2024**
	University of New Hampshire, Durham, NH	**Aug 2023**
	University of Seville, Seville, Spain	**Apr 2023**
	University of Winnipeg, Winnipeg, MB	**Mar 2023**
	University of Manitoba, Winnipeg, MB	**Mar 2023**
	Marquette University, Milwaukee, WI	**Jan 2023**
	The College of New Jersey, Ewing, NJ	**Oct 2022**
	Canadian Chemistry Conference and Exhibition, Calgary, AB	**Jun 2022**
	ACS Spring Meeting, San Diego, CA	**Mar 2022**
	Pacifichem, Honolulu, HI	**Dec 2021**
	IUPAC/Canadian Chemistry Conference and Exhibition, Montreal, QC	**Aug 2021**
	University of Akron, Akron, OH	**Apr 2021**
	Peking University, Beijing, China	**Sep 2019**
	Gordon Research Seminar, Solar Fuels, Ventura, CA	**Jan 2018**
	University of British Columbia–Okanagan, Kelowna, BC	**Jan 2018**
	University of Cincinnati, Cincinnati, OH	**Dec 2017**
	Gordon Research Seminar, Organometallic Chemistry, Newport, RI	**Jul 2017**

Conference Presentations

	Gordon Research Conference, Organometallic Chemistry, Newport, RI	**2022**
	Gordon Research Conference, Solar Fuels, Lucca, Italy	**2022**
	Gordon Research Seminar, Organometallic Chemistry, Newport, RI	**2019**
	Gordon Research Conference, Solar Fuels, Ventura, CA	**2018**
	Gordon Research Conference, Organometallic Chemistry, Newport, RI	**2017**
	DOE Meeting of Energy Frontier Research Centers, Washington, DC	**2017**
	100^{th} Canadian Chemistry Conference, Toronto, ON	**2017**
	Gordon Research Conference, Organometallic Chemistry, Newport, RI	**2016**
	97^{th} Canadian Chemistry Conference, Vancouver, BC	**2014**
	Inorganic Discussion Weekend. York, ON	**2013**
	95^{th} Canadian Chemistry Conference, Calgary, AB	**2012**
	94^{th} Canadian Chemistry Conference, Montreal, QC	**2011**
	241^{st} ACS National Meeting, Anaheim, CA	**2011**
	Inorganic Discussion Weekend, Windsor, ON	**2010**
	U of S Chemistry Research Awards Day, Saskatoon SK	**2007**
	90^{th} Canadian Chemistry Conference, Winnipeg, MB	**2007**
	21^{st} Western Canadian Undergraduate Chemistry Conference, Saskatoon, SK	**2007**
	U of S Chemistry Research Awards Day, Saskatoon SK	**2006**

Honors and Awards

	Outstanding Staff Award, PNNL	**2017**
	Outstanding Staff Award, PNNL	**2016**
	J. Warren Flanagan Ontario Graduate Scholarship, U of T	**2014–2015**
	Chemistry Conference Travel Grant, U of T	**2014**
	Special Opportunity Graduate Travel Fellowship, U of T	**2014**
	NSERC-CGS-D Michael Smith Foreign Study Scholarship	**2014**
	Chemistry Conference Travel Grant, U of T	**2012**
	NSERC CGS-D Alexander Graham Bell Canada Graduate Scholarship	**2011–2014**

School of Graduate Studies Conference Travel Grant, U of T	**2011**
Student Travel Award, ACS Division of Inorganic Chemistry	**2011**
Best Poster Award, Inorganic Discussion Weekend, Windsor, ON	**2010**
NSERC CGS-M Alexander Graham Bell Canada Graduate Scholarship	**2010–2011**
Edwin Walter and Margery Warren Scholarship in Science, U of T	**2009–2010**
Alan C. Nixon Summer Research Award, U of S	**2007**
Best Poster Award, U of S Chemistry Research Awards Day	**2006**
Greystone Scholar Entrance Scholarship, U of S	**2004**

SERVICE TO CHEMISTRY

Peer reviewer: *Journal of the American Chemical Society, Angewandte Chemie International Edition, Nature Communications, ACS Catalysis, Chem Catalysis, Chemical Communications, Chemistry – A European Journal, Organometallics, Inorganic Chemistry, Dalton Transactions, Canadian Journal of Chemistry, European Journal of Inorganic Chemistry, ChemElectroChem, New Journal of Chemistry, Polyhedron, Inorganic Chemistry Frontiers*

PhD thesis external examiner: Rutgers – New Brunswick (Bo Li, 2019; Goldman), Rutgers – New Brunswick (Benjamin Gordon, 2022; Goldman) University of New Hampshire (Peiyuan Zhao, 2023; Caputo), Rutgers – New Brunswick (Minzhu Zou, 2024; Waldie)

Symposium Co-organizer, ACS Spring Meeting, San Diego, CA "ACS Award in Organometallic Chemistry: Symposium in Honor of Robert Morris"	**2025**
Ad Hoc Reviewer, US Department of Energy (DOE-BES Program)	**2025**
Ad Hoc Reviewer, National Science Foundation	**2025**
Ad Hoc Reviewer, ACS Petroleum Research Fund	**2022, 2023, 2024**
Ad Hoc Reviewer, US Department of Energy (DOE-BES Program)	**2023**
Ad Hoc Reviewer, Rutgers Global Grants Program	**2023**
Panel Reviewer, National Science Foundation	**2021, 2022**
Review Editor, *Frontiers in Chemistry* (Inorganic Chemistry)	**2022-**
Ad Hoc Reviewer, Oak Ridge Associated Universities (FDCRGP Program)	**2022, 2023**
Symposium Co-organizer, Canadian Chemistry Conference and Exhibition, Calgary, AB "Dihydrogen, Metal Hydrides, and Beyond"	**2022**
Symposium Co-organizer, ACS Spring Meeting, San Diego, CA "ACS Award in Organometallic Chemistry: Symposium in Honor of Morris Bullock"	**2022**
Session Chair, Virtual Q&A, Canadian Chemistry Conference and Exhibition, Montreal, QC	**2021**
Chair, Gordon Research Seminar, Organometallic Chemistry, Newport, RI	**2019**
Organizer, 21^{st} Western Canadian Undergraduate Chemistry Conference	**2007**

SERVICE TO UNIVERSITY

Thesis Defense Committee, Rutgers–Newark Chemistry **2021–**
Ian Weiss (PhD 2021, Galoppini)
Ana de Olveira Silva (PhD 2023, Brenner-Moyer)
Junjie Ouyang (MS 2024, He)
Jingyao Zuo (PhD 2024, Jäkle)

Candidacy Exam Committee, Rutgers–Newark Chemistry **2020–**
James McQuade (2020), Oguz Kucukosmann (2022), Conor Long (2022), Kelvin Urbina (2023), Amy Turtz (2023), Tiffany Olivera (2023), Zhiyuan Zhang (2023), Andres Cifuentes-Lopez (2024), Diana Kapkayeva (2024), Lakshita Anand (2024), Wenchao Chu (2024), Yawei Zhu (2024).

Business Administrator Search Committee, Rutgers–Newark Chemistry	**2023**
Faculty Search Committee, Rutgers–Newark Chemistry	**2021–2022**
Advisory Committee, Rutgers–Newark McNair TRiO Scholarship Program	**2021–**
Graduate Admissions Committee, Rutgers–Newark Chemistry	**2019–2022**

Teaching

Chem 448: Inorganic and Materials Chemistry Laboratory **Spring 2022, 2023, 2024, 2025**
Capstone course for chemistry majors at Rutgers-Newark. The course presents a series of laboratory experiments on the synthesis and characterization of organic, inorganic, organometallic and polymeric compounds and materials. Introduced two new teaching modules:
1. Synthesis of Vaska's Complex for Stoichiometric and Catalytic Reactions
2. Scientific Glassblowing Fundamentals

Chem 579: Coordination Chemistry Applied to Catalysis **Spring 2019, 2020; Fall 2023**
Conceived, developed, and taught new graduate course covering classical and modern aspects of ligand design for homogeneous catalysis

Chem 413: Inorganic Chemistry 2 **Fall 2019, 2020, 2021, 2024**
Senior level undergraduate course covering, structure, bonding and reactivity of molecules containing transition metals and main group elements.

Mentorship and Outreach

Current PhD Students: Ageliki Karagiannis, David Tresp, Lirong Lin, Sanju Kumari, Viani Maxwell, Nino Demetrashvili

Current Undergrads: Faith Kim (Chemistry '25)

PhD students graduated:
Bhumika Goel (2024). "Controlling the Movement of Protons and Electrons with Amine-Functionalized Cp^{N3} Ligands Coordinated to Iron"

MS Students graduated:
Ageliki Karagiannis (2020). "Synthesis of Amine-Functionalized Bis(imidazolium)borate Salts: Novel Bis(carbene)borate Ligand Precursors"

Former Postdocs:
Dr. Andrew VanderWeide (2021-2023)
Dr. Práxedes Sánchez (2019-2021)

Former Undergraduates:
Allison Houn, 2024 (Meiklejohn Fellow, Amherst College)
Amado Rosendo, 2024 (Meiklejohn Fellow, Amherst College)
Shenelle Baines, 2024 (GS-LSAMP Scholar, Chemistry)
Christopher Elliott, 2023 (Chemistry major and SURF Fellow)
Deuris Pena, 2023 (Summer Researcher, Bloomfield College)
Asmaa Washington, 2022 (GS-LSAMP Scholar, Chemistry)
Naser Abuali, 2022 (Chem 452 Project)
Meroline Bazile, 2019-2020 (McNair and GS-LSAMP Scholar, Chemistry)
Christeen Shenoda, 2019-2020 (Summer Student, Chem 452 Project)

NSF-Garden State LSAMP Program Mentor, Rutgers University–Newark **2019-2020, 2022, 2024**
Summer Undergraduate Research Program Mentor, Rutgers University–Newark **2023**
McNair Scholarship Program Mentor, Rutgers University–Newark **2019–2020**
Juror, ACS North Jersey Section Awards Division **2021**
Judge, William Paterson University Undergraduate Research Symposium, Wayne, NJ **2019**
Member, US Department of Energy Early Career Network **2016–2017**
Co-Founder, Chemistry Career Day, University of Toronto **2014**
Chair, Chemical Institute of Canada (CIC) Toronto Section **2013–2014**
Treasurer/Webmaster, Chemical Institute of Canada (CIC) Toronto Section **2012–2013**
Student Activities Chair, Chemical Institute of Canada (CIC) Toronto Section **2011–2012**

Organizer, International Year of Chemistry, Toronto, ON **2011**
Volunteer, Science Rendezvous, University of Toronto **2011**
Volunteer, "Ask a Nobel Laureate" Lecture Series, University of Toronto **2010, 2011**
Member At Large, Chemical Institute of Canada (CIC) Toronto Section **2010–2011**
VP Internal, Chemistry Student Society, University of Saskatchewan **2007–2008**
VP Admin, Chemistry Student Society, University of Saskatchewan **2006–2007**

STUDENT ACHIEVEMENTS

David Tresp: **SASN Teaching Assistant Award** **2024**
One of two graduate students selected from the School of Arts & Sciences for their outstanding contributions to undergraduate education.

Lirong Lin: **Dissertation Fellowship** **2024–2025**
The graduate school's most prestigious and comprehensive financial award for students in the last year of their doctoral programs.

Lirong Lin: **Teaching Assistant Award** **2023**
For outstanding contributions to the Organic Chemistry laboratory.

Bhumika Goel: **ACS DIC Student Travel Award** **2023**
Presented results at the Fall ACS Meeting in San Francisco.

Ageliki Karagiannis: **Cambridge Isotope Laboratories Student Travel Award** **2023**
Presented results at the Fall ACS Meeting in San Francisco.

Christopher Elliott: **Summer Undergraduate Research Fellowship** **2023**
Highly competitive campus-wide competition for undergraduate students performing summer research at Rutgers-Newark.

Bhumika Goel: **Dissertation Fellowship** **2023–2024**
The graduate school's most prestigious and comprehensive financial award for students in the last year of their doctoral programs.

Viani Maxwell: **NIH G-RISE Fellowship** **2022–2024**
Awarded to top incoming PhD students from diverse backgrounds to successfully transition into careers in biomedical research.

Lirong Lin: **Taylor-Torre Research Award** **2022**
In recognition of her outstanding accomplishments as a 3^{rd} year PhD student at Rutgers–Newark.

David Tresp: **Rutgers University Presidential Fellowship** **2019–2024**
Awarded to top incoming PhD students across all disciplines that display strong potential for success in research.

Bhumika Goel: **Teaching Assistant Award** **2020–2021**
For outstanding contributions to the General Chemistry laboratory.

David Tresp: **Teaching Assistant Award** **2020–2021**
For outstanding contributions to senior Organic and Inorganic chemistry laboratories.