

## Demyan E. Prokopchuk

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- 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<sub>2</sub> 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<sub>2</sub> reduction, H<sub>2</sub> 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**
33. A. VanderWeide, H. Neugebauer, B. Goel, D. S. Tresp, D. Pena, S. Grimme, A. Hansen, **D. E. Prokopchuk** “Multisite Ligand Noninnocence of (Cp<sup>N3</sup>)Fe(CO)<sub>3</sub><sup>+</sup> with Exogenous Hydride Donors: Kinetics and Mechanism” *Organometallics*, **2024**, [acs.organomet.4c00137](https://doi.org/10.1021/jacs.4c00137). Part of the “Experimental Studies of Reaction Mechanisms in Organometallic Chemistry and Catalysis” special issue.
32. 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](https://doi.org/10.1021/jacs.4c04561)
31. D. S. Tresp, **D. E. Prokopchuk** “Leveraging Intramolecular Electrostatics to Boost Electrocatalytic CO<sub>2</sub> Reduction” *Chem Catal.*, **2024**, [10.1016/j.checat.2024.101053](https://doi.org/10.1016/j.checat.2024.101053). (invited contribution)
30. S. Luhach, R. A. Lalancette, **D. E. Prokopchuk** “‘Catch and Release’ of the Cp<sup>N3</sup> Ligand Using Cobalt: Dissociation, Protonation, and C-H Bond Thermochemistry” *Dalton Trans.*, **2024**, [10.1039/D4DT01560F](https://doi.org/10.1039/D4DT01560F) Part of the “New Talent, Americas” special issue 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](https://doi.org/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](https://doi.org/10.1016/j.poly.2023.116745) (Special Issue: Emerging Investigators)
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<sub>2</sub> Production with Fe(Cp<sup>N3</sup>) Complexes” *ACS Catalysis* **2023**, *13*, 13650. [10.1021/acscatal.3c02911](https://doi.org/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](https://doi.org/10.1038/s41570-023-00501-1)
25. A. Karagiannis, B. Goel, **D. E. Prokopchuk** “Putting a New Spin on Imido Chemistry with an Fe<sup>II</sup> Dicarbene Complex” *Trends Chem.*, **2023**, *5*, 105. [10.1016/j.trechm.2022.12.002](https://doi.org/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<sup>0</sup> Metalloradical and Bimetallic Mn<sup>I</sup>/Mn<sup>-I</sup> Adduct” *Organometallics* **2022**, *41*, 3055. [10.1021/acs.organomet.2c00463](https://doi.org/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](https://doi.org/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<sup>3</sup>)-H Bond: Homolytic and Heterolytic Bond Strength of a CH—Ni Agostic Interaction” *J. Am. Chem. Soc.*, **2022**, *144*, 12632. [10.1021/jacs.2c05667](https://doi.org/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<sub>2</sub> Production with Amine-Rich Iron Electrocatalysts” *Inorg. Chem.* **2021**, *60*, 17407. [10.1021/acs.inorgchem.1c03142](https://doi.org/10.1021/acs.inorgchem.1c03142)

#### Publications 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<sub>2</sub> hydrogenation” *Dalton Trans.* **2019**, *48*, 16569. (invited contribution) [10.1039/C9DT03143J](https://doi.org/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. Ponnuram, R. Roesler, **D. E. Prokopchuk**, W. E. Piers “Ligand-Centered Electrochemical Processes Enable CO<sub>2</sub> Reduction with a Nickel Bis(triazapentadienyl) Complex” *Sustainable Energy Fuels* **2019**, *3*, 1172. [10.1039/C8SE00623G](https://doi.org/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<sub>2</sub> Binding, Splitting, and Net Hydrogen Atom Transfer at a Paramagnetic Iron Complex” *J. Am. Chem. Soc.* **2019**, *141*, 1871. [10.1021/jacs.8b12823](https://doi.org/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<sub>2</sub> Reduction into Silylamines and Thermodynamics of N<sub>2</sub> Binding at Square Planar Fe”, *J. Am. Chem. Soc.* **2017**, *139*, 9291. [10.1021/jacs.7b04552](https://doi.org/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<sub>2</sub> to Hydrazine and Ammonia”, *Coord. Chem. Rev.*, **2017**, *334*, 67. [10.1016/j.ccr.2016.07.005](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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<sub>2</sub>CMe<sub>2</sub>NH<sub>2</sub>)(PPh<sub>3</sub>)<sub>2</sub>” *Can. J. Chem.*, **2014**, 92, 731. (invited contribution) [10.1139/cjc-2014-0060](https://doi.org/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<sub>2</sub>CMe<sub>2</sub>CMe<sub>2</sub>NH<sub>2</sub>)(PPh<sub>3</sub>)<sub>2</sub> (M = Ru, Os) complexes and their proton exchange behaviour with water in solution” *Dalton Trans.*, **2013**, 42, 10214. [10.1039/C3DT50452B](https://doi.org/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](https://doi.org/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<sub>2</sub>C<sub>6</sub>H<sub>4</sub>CH=NCH<sub>2</sub>)<sub>2</sub>-κ<sup>4</sup>P,N,N,P](BF<sub>4</sub>)<sub>2</sub>” *Organometallics*, **2012**, 31, 3056. [10.1021/om201170f](https://doi.org/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](https://doi.org/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](https://doi.org/10.1039/B806544F)
2. J. M. Chitanda, **D. E. Prokopchuk**, J. W. Quail, S. R. Foley “From Pyrroles to Isoindolines: Synthesis of a γ-Diimine Ligand for Applications in Palladium Coordination Chemistry and Catalysis” *Organometallics*, **2008**, 27, 2337. [10.1021/om800080e](https://doi.org/10.1021/om800080e)
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](https://doi.org/10.1016/j.ica.2007.08.028)

## RESEARCH GRANTS

<b>American Chemical Society – Petroleum Research Fund (\$110,000)</b> “Using Adamantyl Ligands as Metal-Mediated C-H Activation Models” (Lead PI)	<b>2023–2025</b>
<b>National Science Foundation (\$451,046)</b> “NSF-DFG-Echem: CAS: Synergistic Experimental and Computational Approaches to Designing Electrocatalysts with Proton-Responsive Ligand Architectures” (Lead PI)	<b>2021–2024</b>
<b>Rutgers Global Grants Program (\$8,000)</b> “Electrically Driven Carbon Dioxide Reduction Using Organobismuth Compounds” (Lead PI) Collaborative Project with Prof. Crispin Lichtenberg, University of Marburg	<b>2022–2023</b>
<b>National Science Foundation (\$273,700)</b> “MRI: Acquisition of a Single Crystal X-ray Diffractometer” (co-PI)	<b>2020–2023</b>
<b>Rutgers Research Council (\$2,500)</b> “Bio-Inspired Molecular Catalysts for Electrochemical Energy” (Lead PI)	<b>2019–2020</b>

## INVITED TALKS

California State University, Chico, CA	<b>Apr 2025</b>
University of Toronto, Toronto, ON	<b>Mar 2025</b>
York University, North York, ON	<b>Mar 2025</b>
University of Houston, Houston, TX	<b>Dec 2024</b>
Rutgers University, New Brunswick, NJ	<b>Dec 2024</b>
University of Virginia, Charlottesville, VA	<b>Nov 2024</b>
New York University, New York, NY	<b>Oct 2024</b>
NSF-DFG PI Meeting, Braunschweig, Germany	<b>Sep 2024</b>
ACS Fall Meeting, Denver, CO (2 talks)	<b>Aug 2024</b>
Gordon Conference, Organometallic Chemistry, Newport, RI	<b>Jul 2024</b>
ACS Mid-Atlantic Regional Meeting (MARM), Penn State University	<b>Jun 2024</b>
Canadian Chemistry Conference and Exhibition, Winnipeg, MB	<b>Jun 2024</b>
ETH Zürich, Switzerland	<b>May 2024</b>
University of Zürich, Switzerland	<b>May 2024</b>
University of Bonn, Germany	<b>May 2024</b>
Utrecht University, Netherlands	<b>May 2024</b>
University of Marburg, Germany	<b>May 2024</b>
University of Göttingen, Germany	<b>May 2024</b>
University of Hamburg, Germany	<b>May 2024</b>
Western Canadian Undergraduate Chemistry Conference, Saskatoon, Canada	<b>May 2024</b>
University of Saskatchewan, Saskatoon, Canada	<b>Mar 2024</b>
Princeton University, Princeton, NJ	<b>Feb 2024</b>
University of New Hampshire, Durham, NH	<b>Aug 2023</b>
University of Seville, Seville, Spain	<b>Apr 2023</b>
University of Winnipeg, Winnipeg, MB	<b>Mar 2023</b>
University of Manitoba, Winnipeg, MB	<b>Mar 2023</b>
Marquette University, Milwaukee, WI	<b>Jan 2023</b>
The College of New Jersey, Ewing, NJ	<b>Oct 2022</b>
Canadian Chemistry Conference and Exhibition, Calgary, AB	<b>Jun 2022</b>
ACS Spring Meeting, San Diego, CA	<b>Mar 2022</b>
Pacificchem, Honolulu, HI	<b>Dec 2021</b>
IUPAC/Canadian Chemistry Conference and Exhibition, Montreal, QC	<b>Aug 2021</b>
University of Akron, Akron, OH	<b>Apr 2021</b>
Peking University, Beijing, China	<b>Sep 2019</b>
Gordon Research Seminar, Solar Fuels, Ventura, CA	<b>Jan 2018</b>

University of British Columbia–Okanagan, Kelowna, BC	<b>Jan 2018</b>
University of Cincinnati, Cincinnati, OH	<b>Dec 2017</b>
Gordon Research Seminar, Organometallic Chemistry, Newport, RI	<b>Jul 2017</b>

#### CONFERENCE

#### PRESENTATIONS

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

#### HONORS AND

#### AWARDS

Outstanding Staff Award, PNNL	<b>2017</b>
Outstanding Staff Award, PNNL	<b>2016</b>
J. Warren Flanagan Ontario Graduate Scholarship, U of T	<b>2014–2015</b>
Chemistry Conference Travel Grant, U of T	<b>2014</b>
Special Opportunity Graduate Travel Fellowship, U of T	<b>2014</b>
NSERC-CGS-D Michael Smith Foreign Study Scholarship	<b>2014</b>
Chemistry Conference Travel Grant, U of T	<b>2012</b>
NSERC CGS-D Alexander Graham Bell Canada Graduate Scholarship	<b>2011–2014</b>
School of Graduate Studies Conference Travel Grant, U of T	<b>2011</b>
Student Travel Award, ACS Division of Inorganic Chemistry	<b>2011</b>
Best Poster Award, Inorganic Discussion Weekend, Windsor, ON	<b>2010</b>
NSERC CGS-M Alexander Graham Bell Canada Graduate Scholarship	<b>2010–2011</b>
Edwin Walter and Margery Warren Scholarship in Science, U of T	<b>2009–2010</b>
Alan C. Nixon Summer Research Award, U of S	<b>2007</b>
Best Poster Award, U of S Chemistry Research Awards Day	<b>2006</b>
Greystone Scholar Entrance Scholarship, U of S	<b>2004</b>

#### SERVICE TO

#### CHEMISTRY

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

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)

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 2022  
 “Dihydrogen, Metal Hydrides, and Beyond”  
**Symposium Co-organizer**, ACS Spring Meeting, San Diego, CA 2022  
 “ACS Award in Organometallic Chemistry: Symposium in Honor of Morris Bullock”  
**Session Chair**, Virtual Q&A, Canadian Chemistry Conference and Exhibition, Montreal, QC 2021  
**Chair**, Gordon Research Seminar, Organometallic Chemistry, Newport, RI 2019  
**Organizer**, 21<sup>st</sup> Western Canadian Undergraduate Chemistry Conference 2007

SERVICE TO  
UNIVERSITY

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

**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  
 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

**PhD students graduated:**

Bhumika Goel (2024). “Controlling the Movement of Protons and Electrons with Amine-Functionalized Cp<sup>N3</sup> 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<sup>rd</sup> 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.