

Caroline T. Saouma

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Education

- 2011 Ph.D. in Chemistry
California Institute of Technology
Advisor: Prof. Jonas C. Peters
Thesis: *Iron Mediated Reduction Schemes for Dinitrogen and Carbon Dioxide*
- 2005 S.B. in Chemistry
Massachusetts Institute of Technology
Advisor: Prof. Stephen J. Lippard
Thesis: *Synthetic Strategies to Improve the Cytotoxicity of Platinum-Based Therapeutics*

Professional Experience

- 2014 - present Assistant Professor, Department of Chemistry
University of Utah
- 2011 - 2013 Postdoctoral Research Fellow
University of Washington
Advisor: Prof. James M. Mayer

Honors and Awards

- 2022 *Catalysis Science & Technology*, Emerging Investigator
2022 Utah Jazz Most Valuable Educator
2021 Impact Leader Award, National Society of Leadership and Success
2021 UPSTEM Fellow, University of Utah
2021 *JACS*, Early Career Investigator
2021 Scialog Fellow (Negative Emissions Science)
2021 UPSTEM Fellow
2020 *Dalton Transactions* Outstanding Reviewer
2020 *Chemical Communications*, Emerging Investigator
2020 NSF CAREER Award
2018 Ionic VIPeR Fellow
2012 ACS Division of Inorganic Chemistry Young Investigator Award
2011 NIH Ruth L. Kirschstein F32 Postdoctoral Fellowship
2009 Carl Storm Underrepresented Minority Fellowship
2005 NSF Graduate Research Fellowship
2005 MIT Department of Chemistry Service Award

Publications

(^ldesignates undergraduate author, *designates corresponding author)

University of Utah

In preparation:

1. **C. T. Saouma***, "DEI discussion in undergraduate inorganic chemistry enhances equity and inclusivity." (Planned submission: spring, 2022, to *J. Chem. Educ.*)
2. C. L. Mathis, and **C. T. Saouma***, "Formate binding enhances the effective hydricity of a Ru(MACHO) analogue." (Planned submission: spring 2022).

3. K. Schlenker, R. T. VanderLinden and **C. T. Saouma***, "Effect of sterics and metal on the mechanism of CO₂ hydrogenation to formate." (Planned submission: spring 2022).

Submitted:

4. K. Schlenker, R. T. VanderLinden and **C. T. Saouma***, "Hydricity as a Function of Ligand pK_a and not H₂ Equilibrium in Neutral and Anionic (PNP)M-H Catalysts." (Submitted: May 2021; planned resubmission spring 2022).

Published:

5. A. Cannon^ℓ, and **C. T. Saouma***, "Ru catalyzed hydrogenation of CO₂ to formate under basic and acidic conditions." *Polyhedron*, **2021**, 207, 115375.
 - Part of the Undergraduate Research in Inorganic Chemistry 2021 Issue.
6. K. Schlenker, E. G. Christensen, A. A. Zhanserkeev, G. R. McDonald, E. L. Yang, K. T. Lutz, R. P. Steele, R. T. VanderLinden and **C. T. Saouma***, "Role of Ligand-Bound CO₂ in the Hydrogenation of CO₂ to Formate at a (PNP)Mn Catalyst." *ACS Catal.*, **2021**, 11, 8358 - 8369.
7. M. Bhattacharya, S. Sebghati^ℓ, R. T. VanderLinden and **C. T. Saouma***, "Toward Combined Carbon Capture and Recycling: Addition of an Amine Alters Product Selectivity from CO to Formic Acid in Manganese Catalyzed Reduction of CO₂." *J. Am. Chem. Soc.*, **2020**, 142, 17589 - 17597.
 - Selected by the associate editors to be included in the *Early Career Investigators* virtual issue.
8. F. Wang, A. Cannon^ℓ, M. Bhattacharya, R. Baumgarten, R. T. Vanderlinden and **C. T. Saouma***, "Hydrogenation and electrocatalytic reduction of carbon dioxide to formate with a single Co catalyst." *Chem. Commun.*, **2020**, 56, 12142 - 12145.
 - Part of the 2020 Emerging Investigator Issue.
9. M. Bhattacharya, S. Sebghati^ℓ, Y. M. Vercella^ℓ, and **C. T. Saouma***, "Electrochemical Reduction of Carbamates and Carbamic Acids: Implications for Combined Carbon Capture and Electrochemical CO₂ Recycling." *Journal of The Electrochemical Society*, **2020**, 167, 086507.
10. M. Bhattacharya, K. Chandler^ℓ, J. Geary^ℓ, and **C. T. Saouma***, "The role of leached Zr in the photocatalytic reduction of CO₂ to formate by derivatives of UiO-66 metal organic frameworks." *Dalton Trans.*, **2020**, 49, 4751.
11. C. L. Mathis, **C. T. Saouma***, "Protic media enhanced protodeboronation for a Potential H₂O₂-sensitive ligand system." *Polyhedron*, **2020**, 179, 114377.
12. T. Elkin, **C. T. Saouma***, "Effect of linker and metal on photoreduction and cascade reactions of nitroaromatics by M-UiO-66 metal organic frameworks." *Inorg. Chim. Acta*, **2019**, 497, 119076.
13. C. L. Mathis, J. Geary^ℓ, Y. Ardon^ℓ, M. S. Reese^ℓ, M. A. Philliber^ℓ, R. T. VanderLinden, and **C. T. Saouma***, "Thermodynamic Analysis of Metal-Ligand Cooperativity of PNP Ru Complexes: Implications for CO₂ Hydrogenation to Methanol and Catalyst Inhibition." *J. Am. Chem. Soc.*, **2019**, 141, 14317 - 14328.
Corrected: *J. Am. Chem. Soc.*, **2021**, 143, 11274.

Prior to University of Utah

14. T. Zerk, **C. T. Saouma**, J. M. Mayer*, and W. B. Tolman*, "Low Reorganization Energy for Electron Self-Exchange by a Formally Copper(III,II) Redox Couple." *Inorg. Chem.*, **2019**, 58, 14151 - 14158.
15. **C. T. Saouma**, C.-C. Tsou, S. Richard, R. Ameloot, F. Vermoortele, S. Smolders, B. Bueken, A. G. DiPasquale, W. Kaminsky, C. N. Valdez, D. E. De Vos*, and J. M. Mayer*, "Sodium-coupled electron transfer reactivity of metal-organic frameworks containing titanium clusters: the importance of cations in redox chemistry." *Chem. Sci.*, **2019**, 10, 1322 - 1331.

16. **C. T. Saouma***, S. Richard, S. Smolders, M. F. Delley, R. Ameloot, F. Vermoortele, D. E. De Vos*, and J. M. Mayer*, "Bulk-to-Surface Proton-Coupled Electron Transfer Reactivity of the Metal-Organic Framework MIL-125." *J. Am. Chem. Soc.*, **2018**, *140*, 16184 - 16189.
17. **C. T. Saouma***, W. D. Morris, J. W. Darcy, and J. M. Mayer*, "Protonation and Proton-Coupled Electron Transfer at S-Ligated [4Fe-4S] Clusters." *Chem. Eur. J.*, **2015**, *21*, 9256 - 9260.
18. A. Albers, S. Demeshko, S. Dechert, **C. T. Saouma**, J. M. Mayer, and F. Meyer*, "Fast Proton-Coupled Electron Transfer Observed for a High Fidelity Structural and Functional [2Fe-2S] Rieske Model." *J. Am. Chem. Soc.*, **2014**, *136*, 3946 - 3954.
19. **C. T. Saouma**, Margaux M. Pinney[†], and J. M. Mayer*, "Electron Transfer and Proton-Coupled Electron Transfer Reactivity and Self-Exchange of Synthetic [2Fe-2S] Complexes: Models for Rieske and mitoNEET Clusters." *Inorg. Chem.*, **2014**, *53*, 3153 - 3161.
20. **C. T. Saouma** and J. M. Mayer*, "Do spin state and spin density affect hydrogen atom transfer reactivity?" *Chem. Sci.*, **2014**, *5*, 21 - 31.
21. **C. T. Saouma**, C. C. Lu, M. W. Day, and J. C. Peters*, "CO₂ reduction by Fe(I): solvent control of C-O cleavage versus C-C coupling." *Chem. Sci.*, **2013**, *4*, 4042 - 4051.
22. C. A. Laskowski, G. R. Morello, **C. T. Saouma**, T. R. Cundari, and G. L. Hillhouse*, "Single-Electron Oxidation of *N*-Heterocyclic Carbene-Supported Nickel Amides Yielding Benzylic C-H Activation." *Chem. Sci.*, **2013**, *4*, 170 - 174.
23. **C. T. Saouma**, C. C. Lu, and J. C. Peters*, "Mononuclear Five- and Six-Coordinate Iron Hydrazido and Hydrazine Species." *Inorg. Chem.*, **2012**, *51*, 10043 - 10054.
24. **C. T. Saouma**, W. Kaminsky, and J. M. Mayer*, "Decomposition of a Mixed-Valence [2Fe-2S] Cluster to Linear Tetra-Ferric and Ferrous Clusters." *Polyhedron*, **2013**, *58*, 60 - 64.
 - Invited contribution to the Michelle Millar special issue.
25. R. A. Kinney, **C. T. Saouma**, J. C. Peters*, and B. M. Hoffman*, "Modeling the Signatures of Hydrides in Metalloenzymes: ENDOR Analysis of a Di-iron Fe(μ -NH)(μ -H)Fe Core." *J. Am. Chem. Soc.*, **2012**, *134*, 12637 - 12647.
26. **C. T. Saouma**, W. Kaminsky, and J. M. Mayer*, "Protonation and Concerted Proton-Electron Transfer Reactivity of a Bis-Benzimidazolite Ligated [2Fe-2S] Model for Rieske Clusters." *J. Am. Chem. Soc.*, **2012**, *134*, 7293 - 7296.
27. **C. T. Saouma**, C. E. Moore, A. L. Rheingold, and J. C. Peters*, "A Five-Coordinate Phosphino/Acetate Iron(II) Scaffold That Binds N₂, N₂H₂, N₂H₄, and NH₃ in the Sixth Site." *Inorg. Chem.*, **2011**, *50*, 11285 - 11287.
28. **C. T. Saouma**, and J. C. Peters*, "M \equiv E and M=E Complexes of Iron and Cobalt that Emphasize Three-Fold Symmetry (E = O, N, NR)." *Coord. Chem. Rev.*, **2011**, *255*, 920 - 937.
 - Invited contribution to the "A Celebration of Harry B. Gray's 75th Birthday" issue.
29. **C. T. Saouma**, R. A. Kinney, B. M. Hoffman, and J. C. Peters*, "Transformation of an [Fe(η^2 -N₂H₃)]⁺ Species to π -Delocalized [Fe²(μ -N₂H₂)]^{2+/+} Complexes." *Angew. Chem. Int. Ed.*, **2011**, *50*, 3446 - 3449.
 - Featured as an SSRL Science Highlight (Dec. 2011).
30. **C. T. Saouma**, P. Müller, and J. C. Peters*, "Characterization of Structurally Unusual Diiron N_xH_y Complexes." *J. Am. Chem. Soc.*, **2009**, *131*, 10358 - 10359.
31. J.-U. Rhode, T. A. Betley, T. A. Jackson, **C. T. Saouma**, J. C. Peters, and L. Que Jr.*, "XAS Characterization of a Nitridoiron(IV) Complex with a Very Short Fe-N Bond." *Inorg. Chem.*, **2007**, *46*, 5720 - 5726.
32. C. C. Lu, **C. T. Saouma**, M. W. Day, and J. C. Peters*, "Fe(I)-Mediated Reductive Cleavage and Coupling of CO₂: An Fe^I(μ -O, μ -CO)Fe^{II} Core." *J. Am. Chem. Soc.*, **2007**, *129*, 4 - 5.

Invited Oral Presentations at American Chemical Society Meetings

1. ACS Northwest Regional Meeting (NORM), 2021: Invited talk to the inorganic section.
2. ACS Central Regional Meeting (Columbus, OH), 2020: Two talks, one invited. (*cancelled*)
3. ACS Southwest and Rocky Mountain Regional Meeting (El Paso, TX), 2019: Three talks, including two invited contributions.
4. 257th ACS National Meeting (Orlando, FL), 2019: Harry Gray Award for Creative Work by a Young Investigator: Symposium in honor of Jillian L. Dempsey.
5. 255th ACS National Meeting (New Orleans, LA), 2018: ACS Award in Inorganic Chemistry: Symposium in honor of James Moers Mayer.
6. 252nd ACS National Meeting (Philadelphia, PA), 2016: DIC Young Investigator Awardees-Where Are They Now? Symposium.

Invited Oral Presentations at Other Meetings

1. 43rd International Conference on Coordination Chemistry 2018 (Sendai, Japan).

Invited Virtual Seminars

1. Ionic VIPeR SLiThEr, "Impact of flipping on diversity and inclusivity," July 30th, 2020. Link to video: <https://www.youtube.com/watch?v=nFNSAYBnSZI>
2. Global Inorganic Discussion Weekday, August 10, 2020.

Invited Lectures at Universities and Colleges

1. University of Oregon. October 18, 2022. (confirmed)
2. Virginia Tech. March 25, 2022. (confirmed)
3. University of Pennsylvania. March 15, 2022 (confirmed)
4. Colgate University. March 1, 2022. (confirmed)
5. University of Indiana. February 21, 2022.
6. Hope College. February 18, 2022.
7. Calvin University. February 17, 2022.
8. University of Notre Dame. February 11, 2022.
9. Purdue University. February 8, 2022.
10. Washington University. October 21, 2021.
11. Utah State University. October 6, 2021.
12. UC Irvine. April 22, 2021. (virtual)
13. California Institute of Technology. April 16, 2021. (virtual)
14. Yale University. April 12, 2021. (virtual)
15. University of Michigan. March 30, 2021. (virtual)
16. University of Minnesota. March 17, 2021. (virtual)
17. University of Wisconsin. March 17, 2021. (virtual)
18. Princeton University. March 16, 2021. (virtual)
19. UI Chicago. March 11, 2021. (virtual)
20. University of Washington. March 9, 2021. (virtual)
21. NC State. February 11, 2021. (virtual)
22. University of Illinois, Urbana-Champaign. February 9, 2021. (virtual)
23. Johns Hopkins University. February 3, 2021. (virtual)

24. University of North Carolina. January 19, 2021. (virtual)
25. Trinity University. November 19, 2020. (virtual)
26. UCLA. November 18, 2020. (virtual)
27. UC Davis. November 17, 2020. (virtual)
28. University of Rochester. November 16, 2020. (virtual)
29. University of Chicago. October 13, 2020. (virtual)
30. The Ohio State University. October 21, 2020. (virtual)
31. University of Kansas. October 16, 2020. (virtual)
32. Michigan State University. October 12, 2020. (virtual)
33. Texas A&M. October 7, 2020. (virtual)
34. BYU Idaho. September 24, 2020. (virtual)
35. Texas Christian University. February, 2020.
36. Carnegie Mellon University. March, 2019.
37. University of West Virginia. March, 2019.
38. Cal State Chico. January, 2019.
39. Macalester College. February, 2017.
40. Western Washington University. February, 2017.
41. Boise State University. March, 2015.
42. Central Washington University. May, 2014.
43. Colorado College. April, 2014.

Other Talks and Poster Presentations

1. Pacifichem 2021 (virtual): oral presentation.
2. Renewable Energy: Solar Fuels Gordon Research Conference 2020 (Lucca, IT): poster presentation. (*cancelled*)
3. Electrochemistry Gordon Research Conference 2020 (Ventura, CA): poster presentation.
4. Organometallics Gordon Research Conference 2019 (Newport, RI): poster presentation.
 - Selected for a poster talk.
5. Inorganic Reaction Mechanisms Gordon Research Conference 2019 (Galveston, TX): poster presentation.
6. Organometallics Gordon Research Conference 2018 (Newport, RI): poster presentation.
7. 3rd International PCET Meeting 2018 (Blowing Rock, NC): poster presentation.
8. Organometallics Gordon Research Conference 2017 (Newport, RI): poster presentation.
9. Inorganic Reaction Mechanisms Gordon Research Conference 2017 (Galveston, TX): poster presentation.
10. Organometallics Gordon Research Conference 2016 (Newport, RI): poster presentation.
11. 251st ACS National Meeting 2016 (San Diego, CA): three oral presentations.

Professional Service

Conference and Symposium Organization

1. Co-founder and co-organizer, Utah Inorganic/Organometallics Symposium (UIOS), 2014 - present.
2. Co-organizer of the ACS Award in Inorganic Chemistry symposium in honor of James Mayer, 2018.

3. Co-chair, Organometallics Gordon Research Seminar, 2011.
4. Co-founder and co-organizer, Metals in Synthesis seminar series (MIT), 2008 – 2009.

Manuscript Referee

Accounts of Chemical Research, ACS Catalysis, ACIE, Chemical Communications, Chemistry- A European Journal, ChemSusChem, Coordination Chemistry Reviews, Dalton Transactions, Inorganic Chemistry, Journal of the American Chemical Society, Nature Catalysis, Organometallics.

Ad Hoc Proposal Referee

ACS PRF (2016 – 2021), DOE BES (2018, 2019), DOE Early Investigator (2020), NSF CAREER (2018), NSF (2021), University of Utah Undergraduate Research Opportunity Program reviewer (2014 – present).

Proposal Panel

NSF (4 x 2020), University of Utah College of Science Seed funding (2021).

External PhD Examiner

- Pablo Pérez (Ni cross-reactions, EPFL, Lausanne, 2015).
- Yeonji Oh (CO₂ electrocatalysis, EPFL, Lausanne, 2015).

COACH Workshops

- February (20, 27) 2021: 2-day virtual workshop on effective communication and negotiations to the OSU FOCUS group and UofU Curie Club.
- July 2019: workshop on effective negotiations at BYU as part of the annual UIOS.

Chemistry Women Mentorship Network (CHEMWMN)

- Mentor, 2016 – present.

Disabled in STEM

- Mentor, 2022 – present.

Misc. Synergistic Activities

ACCESS

- College of Science summer program for incoming freshman women interested in the sciences.
- Contributed to curriculum development (2018), admissions (2018 - present), taught a unit on alternative energy (2014 – present), and mentored ACCESS students in my research group (2019).

Funding

Current:

1. Proposal Title: CAREER: Understanding how catalyst modification impacts performance thermodynamic and kinetic parameters pertinent to catalytic hydrogenation of polar carbonyl bonds
Source: NSF CAREER (Chemistry CSDM-B)
Period: 4/1/2020 – 3/31/2025
Role: PI
Amount: \$675,833.
2. Proposal Title: Electrocatalytic hydrogenations

Source: University of Utah, Department of Chemistry COVID-19 Supplement

Period: 09/1/2021 - 08/31/2022

Role: PI

Amount: \$60,000 (1 year post doc salary/benefits).

Pending/Planned:

1. Proposal Title: Understanding the thermodynamic and kinetic properties of electrochemically generated metal hydrides for selective CO₂ reduction and bio-oil hydrogenation
Source: DOE BES
Period: 08/1/2022 - 07/31/2025
Role: PI
Amount: \$552,666.
2. Proposal Title: The role of temperature and carbon dioxide capture molecules in the electrochemical production of liquid fuels.
Source: DOE
Period: 08/1/2022 - 07/31/2025
Role: co-PI (with Oana Luca, University of Colorado; Rebecca Giesecking, Brandeis University)
Amount: \$350k per year.
Status: submitted pre-application for internal competition; white paper due March 16th.
3. Dreyfuss Teacher Scholar Award (\$100,000).
4. Marrion Milligan Mason Award (\$55,000).

Prior:

1. Proposal Title: Aminophenol ligands for CO₂ reduction
Source: University of Utah, College of Science SEED Grant
Period: 01/1/2021 - 12/31/2021
Role: PI
Amount: \$20,000.
2. Proposal Title: Non-Innocent Heterobimetallic Scaffolds for Carbon Dioxide Reduction
Source: ACS PRF
Period: 9/1/2016 - 8/31/2019 (1-year extension granted)
Role: PI
Amount: \$110,000
3. Proposal Title: Conversion of Carbon Dioxide to Carbon Monoxide and Methanol
Source: Utah Energy Research Triangle Principle Energy Issues Program
Period: 5/1/2014-3/31/2015
Role: co-PI (also D. H. Ess, BYU; Y. Sun, Utah State)
Amount: \$128,333 (split equally amongst the three co-PIs)

Rejected (2021):

1. Proposal Title: Temperature and location effects on CO₂ conversion mechanisms probed by optical gas imaging (OGI)
Source: Research Corporation for Science Advancement (NES Scialog)
Period: 02/1/2022 - 01/31/2023
Role: co-PI (with Oana Luca, University of Colorado; Rebecca Giesecking, Brandeis University)
Amount: \$150,000 (\$50,000 to CTS).
2. Proposal Title: Development of homogeneous electrocatalytic hydrogenations

Source: NSF
Period: 7/1/2021 - 6/30/2024
Role: PI
Amount: \$533,880

3. Sloan Fellowship (\$75,000).

Chemistry Department Service

2019 - present	Technical Support Committee (glass shop) Admissions (inorganic)
2018 - 2019	Seminar & Colloquium Committee (inorganic) Undergraduate Education Committee ChemSAC Adviser Technical Support Committee (glass shop)
2016 - 2018	Seminar & Colloquium Committee (inorganic) Safety and Sustainability Committee ChemSAC Adviser Technical Support Committee (glass shop)
2015 - 2016	Seminar & Colloquium Committee (inorganic) Safety and Sustainability Committee Curie Club Technical Support Committee (glass shop)
2014 - 2015	Seminar & Colloquium Committee (inorganic) Safety and Sustainability Committee Curie Club Technical Support Committee (X-Ray)

Laboratory Personnel

Current Members:

Member	Start Date	Project
<i>Post Docs</i>		
Dr. Sudheer Kurup	January 2022	electrocatalytic hydrogenations
Dr. Carlos Lugo	March 2022	thermodynamics
<i>Undergraduate Students</i>		
Alison Wang	August 2020	CO ₂ electrocatalysis
Lillee Casselman	January 2021	electrocatalytic hydrogenations
Sophie Steckel	January 2021	electrocatalytic hydrogenations
Maria Hernandez Rivera	May 2021	aminophenol ligands
Pierce Wratten	May 2021	hydrogenations
Andrew Larkin	August 2021	hydrogenations
Gary Perea	August 2021	hydrogenations
Lauren Gilbert	January 2022	CO ₂ electrocatalysis

Former Members:

Member	Dates in Group or Graduation Date	Current Position
<i>Post Docs</i>		
Dr. Tatyana Elkin	2016 - 2017	Los Alamos National Labs
Dr. Soumen Saha	2020 - 2021	Post doc in MSE department
<i>Graduate Students</i>		
Cheryl Mathis, PhD	2019	Post doc with Amy Barrios, Univ. of Utah
Moumita Bhattacharya, PhD	2020	Research scientist, RTI carbon capture group
Kevin Schlenker, PhD	2021	Consultant, Kline Group
Christina Dobsen-Jones, MS	2014	Quality control chemist, Pharma-Tech Industries
Leslie Mueller, MS	2017	Process engineer, Intel
Larsen Caldwell, MS	2017	Research scientist, Amalgamated Resources LLC
Fang Wang, MS	2019	High school teacher in China
<i>BS/MS Students</i>		
Sophia Kosloski, BS/MS	2018	PhD program at USC
<i>Undergraduates</i>		
Sepher Sebghati, BS	2018	PhD program at Univ. of Utah
Jackson Geary, BS	2018	PhD program at UW
Kevin Chandler, BS	2019	MS from UCLA
Yotam Ardon, BS	2019	PhD program at UPenn
Madeika Vercella	Jan. - Aug. 2019	Undergraduate at Univ. of Utah
Mallory Philliber	June - Dec. 2019	Undergraduate at Univ. of Utah
Austin Cannon, BS	2020	PhD program at UPenn
Trevor Ryba, BS	2021	
<i>REU Students</i>		
Eleni Spanolios	Summer 2018	PhD program at Univ. of Minnesota
Max Reese	Summer 2019	PhD program at OSU
Jesse Hepner	Summer 2021	Junior at Albion College

Student Awards:

Ph.D. Students:

- Moumita Bhattacharya Utah Office of Graduate Studies Travel Award (2016)
Walling Thesis Award (2021)
- Cheryl Mathis TA of the Semester (2015)
Anthony W. Czarnik Curie Club Graduate Teaching Award (2017)
Utah Office of Graduate Studies Travel Award (2019)
Walling Thesis Award (2020)

Undergraduate Students:

(UROP Scholars must write a proposal that is evaluated by faculty in the College of Science; eligible for one renewal)

- Austin Cannon UROP Scholar (2017, 2018)
Department of Chemistry Undergraduate Research Award (2020)
Fontaine Fellow, UPenn (2021)
- Lillie Casselman UROP Scholar (2021 x 2)
- Jackson Geary Lloyd E. and Florence M. West Endowed Fellowship in Chemistry, UW (2019)
NSF GRFP (2021)
- Sophia Kosloski Department of Chemistry Undergraduate Research Award (2018)
- Andrew Larkin UROP Scholar (2022)
- Gary Perea UROP Scholar (2021)

- Sophie Steckel UROP Scholar (2021, 2022)
- Madeika Vercella UROP Scholar (2018)
- Alison Wang UROP Scholar (2020, 2021)

TAs:

- Skylar Blank Anthony W. Czarnik Curie Club Graduate Teaching Award (2021)

Undergraduates not in research group:

- Nominate 15 - 20 undergraduates from my classes each year for departmental awards (on top of group undergraduates); all Resilience Award winners have been nominated by me (new award in 2021, to highlight the achievements of students who have overcome many hardships).

Course Work Taught

Fall 2021	Chemistry 7100 (Inorganic Chemistry)
Fall 2021	Chemistry 3100 (Inorganic Chemistry)
Fall 2020	Chemistry 3100 (Inorganic Chemistry)
Fall 2019	Chemistry 3100 (Inorganic Chemistry)
Fall 2018	Chemistry 3100 (Inorganic Chemistry)
Fall 2018	Chemistry 5730 (Advanced Inorganic Lab)
Fall 2017	Chemistry 3100 (Inorganic Chemistry)
Fall 2017	Chemistry 5730 (Advanced Inorganic Lab)
Fall 2017	Introduction to Laboratory Safety (taught with safety committee)
Spring 2017	Chemistry 7160 (Organometallic Chemistry)
Fall 2016	Chemistry 5730 (Advanced Inorganic Lab)
Fall 2016	Chemistry 7100 (Principles of Inorganic Chemistry)
Fall 2016	Introduction to Laboratory Safety (taught with safety committee)
Spring 2016	Ethics course (1 lecture)
Spring 2016	Chemistry 7160 (Organometallic Chemistry)
Spring 2016	Chemistry 7110 (Inorganic Mechanisms)
Fall 2015	Chemistry 7100 (Principles of Inorganic Chemistry)
Fall 2015	Introduction to Laboratory Safety (taught with safety committee)
Spring 2015	Ethics course (1 lecture)
Spring 2015	Chemistry 7110 (Inorganic Mechanisms)
Spring 2015	Chemistry 7160 (Organometallic Chemistry)
Fall 2014	Chemistry 7100 (Principles of Inorganic Chemistry)
Fall 2014	Introduction to Laboratory Safety (2 lectures)