PHILLIP J. MILNER

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CURRENT POSITION

Associate Professor, Chemistry and Chemical Biology — Cornell University, 2024–
Assistant Professor, Chemistry and Chemical Biology — Cornell University, 2018–2024

PROFESSIONAL ASSOCIATIONS

Faculty Fellow, Cornell Atkinson Center for Sustainability — Cornell University, 2020−
Field Member, Chemical and Biomolecular Engineering — Cornell University, 2020−
Cornell Center for Materials Research — Cornell University, 2019−
Cornell Energy Systems Institute — Cornell University, 2019−

EDUCATION

Postdoctoral Fellow (Advisor: Jeffrey Long) — University of California, Berkeley 2015–2018
Ph.D. Chemistry (Advisor: Stephen Buchwald) — Massachusetts Institute of Technology, 2015
B.A. Chemistry and Mathematics, *with honors* — Hamilton College, 2010

ADDITIONAL RESEARCH EXPERIENCE

Undergraduate Research Assistant (Advisor: Ian Rosenstein) — Hamilton College, 2006–2010
NSF REU Fellow (Advisor: Scott Snyder) — Columbia University, 2009
Undergraduate Research Assistant (Advisor: Gary Molander) — University of Pennsylvania, 2008

AWARDS AND FELLOWSHIPS

ACS Award in Pure Chemistry, **2026**
Journal of Materials Chemistry Emerging Investigator Lectureship (Runner-up), **2024**
Rising Star in Materials Science (named by *ACS Materials Au*), **2023**
Camille Dreyfus Teacher-Scholar Award, **2023**
Robert A. and Donna B. Paul Award for Excellence in Advising (Cornell), **2021**
NSF CAREER Award, **2021**
ACS Division of Organic Chemistry Academic Young Investigator, **2021**
ACS DIC Award for Undergraduate Research (with Faith Chen), **2020**
Scialog Fellow (Negative Emissions Science), **2020**
DOE Early Career Award, **2020**
NIH Maximizing Investigator's Research Award (MIRA), **2020**
ACS PRF Doctoral New Investigator Award, **2019**
NIH Ruth L. Kirschstein NRSA Postdoctoral Fellowship, **2016**
CERC-WET Fellowship (UC Berkeley), **2016**
ACS Division of Organic Chemistry Graduate Fellowship, **2014** (*declined)*
Award for Outstanding Teaching (MIT), **2011**

NSF Graduate Research Fellowship, **2010**
Norton Prize in Chemistry (Hamilton), **2010**
Underwood Senior Prize in Chemistry (Hamilton), **2010**
Barry M. Goldwater Scholarship, **2009**
Donald J. Denney Prize in Physical Chemistry (Hamilton), **2009**
Edward Huntington Memorial Mathematical Prize Scholarship (Hamilton), **2009**
ACS POLYED Award for Achievement in Organic Chemistry (Hamilton), **2008**
CRC Press First Year Prize in Chemistry (Hamilton), **2007**
STEM Talent Expansion Program/Dreyfus Grant (Hamilton), **2006**
Hans H. Schambach Scholarship (Hamilton), **2006**
Featured as part of "Emerging Investigator" issues in the following journals: *ACS Mater. Au* (2023), *Chem. Mater.* (2023), *CrystEngComm* (2022), *Dalton Trans.* (2020)

INVITED PRESENTATIONS (pending presentations in *italics*)

2026: *Telluride Meeting on Catalysis under Confinement; Inorganic Chemistry Gordon Research Conference; 10th International Conference on Metal-Organic Frameworks (MOF2026); ACS National Conference (ORGN, INOR); Oregon State University; New York University; Telluride Meeting on Electrochemical CO_2 Capture; Southern Illinois University Carbondale; University of Rhode Island*

2025: Pacifichem; Washington University Saint Louis; Telluride Meeting on Synthetic Porous Frameworks; ACS Rochester Collegiate Symposium; University of Colorado, Boulder; Cornell Climate Change Seminar

2024*:* Ohio University; Stony Brook University; 9th International Conference on Metal-Organic Frameworks (MOF2024); Ewha Womans University; Seoul National University; Korea University; Korea Institute of Science and Technology; Pohang University of Science and Technology (POSTECH); Shanghai Jiao Tong University (SJTU); Nanjing University; East China University of Science and Technology (ECUST); Shanghai Institute for Organic Chemistry (SIOC); Advances in Materials for Sustainable Energy Symposium (Shanghai); Arkema USA; Bucknell University; Princeton University; ACS National Meeting (INOR), Spring; University of Pennsylvania; Chemical Separations Gordon Research Conference (GRC); Novonordisk Foundation COR Research Center; 9th International Conference on Metal-Organic Frameworks Catalysis Webinar

2023: University of Illinois, Chicago; University of Michigan, Ann Arbor; University of California, San Diego; University of California, Irvine; University of California, Los Angeles; University of California, Riverside; University of Southern California; California Institute of Technology; University of Minnesota, Twin Cities; University of Illinois, Urbana-Champaign; Stanford University; Yale University; Northwestern University; Harvard University; University of California, Berkeley; Massachusetts Institute of Technology; Telluride Meeting on Catalysis under Confinement; Telluride Meeting on Synthetic Porous Frameworks; Columbia University; University of Iowa; Pennsylvania State University; University of Indiana, Bloomington; Purdue University; Colorado State University; ACS National Conference (INOR), Spring; Brandeis University; University of Maryland; Johns Hopkins University; Southern Methodist University; University of North Texas; Rice University; University of Oregon; University of Washington; University of Texas at Austin; University of Chicago; University of Rochester; University of Notre Dame; The Ohio State University; University of North Carolina, Chapel Hill

2022: Texas A&M University; University of Wisconsin, Madison; NYU Molecular Design Institute; Wayne State University; Michigan State University; Advanced Functional Materials for Emerging Science and Technology (Clarkson); ACS Northeast Regional Meeting (2 talks); Foster Chemistry Colloquium, University at Buffalo; Dartmouth College; Colorado School of Mines

2021: University of Pittsburgh; SUNY Geneseo; Siena College; University of Vermont; Union College; Franklin & Marshall College; Ithaca College; Colgate University; Young Academic Investigators Symposium (ORGN), ACS National Conference, Fall; North American Solid-State Chemistry Conference; ACS Mid-Atlantic Regional Meeting

2019: University of California, Berkeley; Hamilton College

2015: National Organic Symposium (Poster)

2014: ACS Division of Organic Chemistry Graduate Research Symposium

2013: Boston Symposium on Organic and Bioorganic Chemistry

PUBLICATIONS (undergraduate co-author; *corresponding author; ‡contributed equally)

In review:

94) Sijing Meng, Ivan Keresztes, Tristan H. Lambert*, Phillip J. Milner*. "Interrogating the Carboxylation of Potassium β-Diketonates and β-Diketiminates by Carbon Dioxide." *In review*. [ChemRxiv]

93) Shikhar Singh, Prince Ochonma, Tristan A. Pitt, Vaidik R. Shah, Preston Hollopeter, Phillip J. Milner, Greehma Gadikota, Yong L. Joo*. "Polyamine-Appended, Intentionally Defective UiO-66-NH_2 (Zr) based Metal Organic Frameworks for Enhanced Low-Pressure CO_2 Capture and Humid Temperature-Swing Cycling." *In review.* [Preprint]

2026:

92) Mary C. Eaton, Akash K. Ball, Katrina E. Doherty, Sky Chen, Daniel T. Nakamura, Tyler J. Azbell, Heather J. Kulik, and **Phillip J. Milner***. "Caging the Chlorine Radical: Chemoselective Photocatalytic C(sp^3)–H Functionalization Enabled by Terminal Cu–Cl Sites in a Metal-Organic Framework." *J. Am. Chem. Soc.* **2026**, *In Press*. [Link] [ChemRXiv]

2025:

91) Jiachen He, Joharimanitra Randrianandraina, Husain Adamji, Valerie Chang, Yihuan Lai, Truong N. Nguyen, Yuriy Román-Leshkov, Heather J. Kulik, Jung-Hoon Lee, **Phillip J. Milner***. "Photochemical Fluoroalkylations with Fluorinated Gases Facilitated by a Robust Metal-Organic Framework." *J. Am. Chem. Soc.* **2025**, *In Press*. [Link]

90) Susannah Powell, Hongyi Ban, Yi Sang, Daewon Kim, **Phillip J. Milner**, Matthew Reid, Damian E. Helbling*. "Sorption and Desorption of Per- and Polyfluoroalkyl Substances (PFASs) on Umodified Iron Oxide and Silica Clay Minerals." *Environ. Sci.: Process Impacts* **2025**, *In Press*. [Link]

89) Muhammad A. Khan*, Zehn Xu, Muhammad Muzammil, Samuel Bird, Monica Munawar, Fariah Salam, Niamh A. Hartley, Jack Taylor, Kamran Amin, Jianheng Ling, Henry R. N. B. Enninful, Naveed Z. Ali, Kai Hetze, Sijia Cao, Yan Lu, Zhixiang Wei, Martin Oschatz, **Phillip J. Milner**, Alexander C. Forse*. "Electrochemical CO_2 Capture by a Quinone-Based Covalent Organic Framework." *J. Am. Chem. Soc.* **2025**, *147*, 47036–47043. [Link] [ChemRXiv]

88) Bayu I. Z. Ahmad, **Phillip J. Milner***. "Untapped Defect-Engineering Strategy: Cluster Dehydroxylation of Zirconium-Based MOFs." *Chem* **2025**, *11*, 102823. [Link]

87) Kepler Petzall, Benjamin J. Rhodes, Yongqiang Wang, Teehat Trisukhon, Hari Kukreja, S. Alexandra Lim, **Phillip J. Milner**, Alexander C. Forse*. "Developing Joule-Heating Regeneration of Carbon-Based Adsorbents for Direct Air Capture." *Chem. Eng. J.* **2025**, *524*, 169247. [Link] [ChemRXiv]

86) Zayim M. Jamil, Tristan A. Pitt, Clarisse A. Doligon, Ronald T. Jerozal, **Phillip J. Milner***. "High-Concentration Aqueous Synthesis of Salicylate-Based Metal-Organic Frameworks." *J. Mat. Chem. A* **2025**, *13*, 37403–37412. [Link] [ChemRXiv]

85) Juhyung Choi, Sungin Kim, Ji Yong Choi, Sejin Park, Kwanghwi Je, Shikai Liu, Jiahong Jiang, Shaojinlin Yang, Christopher J. Pollock, Rafael Guzman-Soriano, Kathryn Bairley, Bayu Ahmad, **Phillip J. Milner**, Erik H. Thiede, Yun Jeong Hwang*, Jihye Park*, Yao Yang*. "Dynamic Evolution from Single-Atom Catalysts to Active Nanograins for CO_2 Reduction." *J. Am. Chem. Soc.* **2025**, *147*, 37808–37818. [Link]

84) Kaitlyn T. Keasler, Jaehwan Kim, Julia C. Pitolaj, **Phillip J. Milner***. "Defluorinative Coupling of (NH)-Heteroarenes and Unactivated Vinyl Fluorides Enabled by Metal–Organic Frameworks." *J. Am. Chem. Soc.* **2025**, *147*, 32776–32785. [Link] [ChemRXiv]

83) Bayu I. Z. Ahmad, **Phillip J. Milner***. "Chemisorptive Carbon Capture Sees the Light." *Trends Chem.*, **2025**, *7*, 529–540. [Link]

82) Reum N. Scott*, **Phillip J. Milner***, Julia Dshemuchadse*. "A Coarse-Grained Simulation Toolkit for Metal–Organic Framework Synthesis." *Phys. Chem. Chem. Phys.* **2025**, *27*, 17183–17197. [Link] [ChemRXiv]

81) Sayan Maiti, Jatan K. Sharma, Melika E. Kenari, Nilanjan Seal, Jianheng Ling, Matthew A. Addicoat, Thomas W. Kasel, Haoyuan Chen, Tomče Runčevski, **Phillip J. Milner**, Francis D'Souza*, and Anindita Das*. "Effects of a Single Atom Substitution on the Physical Properties, Excited State Dynamics, and Iodine Capture Performance of Emissive Covalent Organic Frameworks." *ChemSusChem* **2025**, *In Press.* [Link]

80) S. Alexandra Lim‡, Mary E. Zick‡, Jaehwan Kim, Benjamin J. Rhodes, Joharimanitra Randrianandraina, Tristan A. Pitt, Ronald T. Jerozal, Jung-Hoon Lee, Alexander C. Forse, **Phillip J. Milner***. "Carbon Capture from Natural Gas Flue Emissions and Air via (Bi)Carbonate Formation in a Cyclodextrin-Based Metal-Organic Framework." *J. Am. Chem. Soc.* **2025**, *147*, 25715–25726. [Link] [ChemRxiv]

79) Jianheng Ling‡, Amy L. Vonder Haar‡, Kiser Z. Colley, Juno Kim, Andrew J. Musser,* **Phillip J. Milner***. "Polymer Connectivity Governs Electrophotocatalytic Activity in the Solid State." *Nat. Chem.* **2025**, *17*, 1853–1861. [Link] [Preprint] *Highlighted by Cornell Chronicle.*

78) Bayu I. Z. Ahmad, Kiser Z. Colley, Andrew J. Musser, **Phillip J. Milner***. "A Fully Light-Driven Approach to Separate Carbon Dioxide from Emission Streams." *Chem* **2025,** *In Press*. [Link] [ChemRXiv] *Highlighted by Cornell Chronicle and One Earth.*

77) Tristan A. Pitt, David C. Bain, Mark Del Campo, Andrew J. Musser, **Phillip J. Milner***. "Controlled Growth and Interconversion of Photoluminescent Metal-Organic Frameworks Under High-Concentration Conditions." *Chem. Mater.* **2025**, *37*, 2964–2975. [Link]

76) Ronald T. Jerozal, Jaehwan Kim, Carolyn Ma, Tristan A. Pitt, Jung-Hoon Lee, **Phillip J. Milner***. "Enhancing Selective Hydrofluorocarbon Greenhouse Gas Capture via Halogenation of Metal-Organic Frameworks." *J. Am. Chem. Soc.* **2025**, *147*, 7127–7136. [Link] [ChemRXiv]

75) Sijing Meng, Tristan H. Lambert*, **Phillip J. Milner***. "Harnessing Oxidized Amines as Robust Sorbents for Carbon Capture." *J. Am. Chem. Soc.* **2025**, *147*, 6786–6794. [Link] [ChemRXiv] *Highlighted by Nature Energy.*

2024:

74) Bayu I. Z. Ahmad, Ronald T. Jerozal,‡ Sijing Meng,‡ Changwan Oh, Yeongsu Cho, Heather J. Kulik*, Tristan H. Lambert*, **Phillip J. Milner***. "Defect-Engineered Metal–Organic Frameworks as Bioinspired Heterogeneous Catalysts for Amide Bond Formation." *J. Am. Chem. Soc.* **2024**, *146*, 34743–34752. [Link] [ChemRXiv]

73) Melika E. Kenari,‡ Sayan Maiti,‡ Jianheng Ling, Xena El-Shamy, Hiren Bagga, Matthew A. Addicoat, **Phillip J. Milner**, Anindita Das*. "Toward Pore Size-Selective Photoredox Catalysis Using Bifunctional Microporous 2D Triazine-Based Covalent Organic Frameworks." *ACS Omega*, **2024**, *9*, 49249–49258. [Link]

72) Benjamin J. Rhodes, Lars L. Schaaf, Mary E. Zick, Suzi M. Pugh, Jordon S. Hilliard, Shivani Sharma, Casey R. Wade, **Phillip J. Milner**, Gábor Csányi, Alexander C. Forse*. "^{17}O NMR Spectroscopy Reveals CO_2 Speciation and Dynamics in Hydroxide-Based Carbon Capture Materials." *ChemPhysChem* **2024**, e202400941. [Link] [ChemRXiv]

71) Dasol Jin, Mihail R. Krumov, Ruth M. Mandel, **Phillip J. Milner**, Héctor D. Abruña*. "Prussian Blue Analogue Framework Hosts for Li–S Batteries." *ACS Energy Lett.* **2024**, *9*, 5822–5829. [Link]

70) Abigail K. Nason, Wisarttra Phamonpon, Tristan A. Pitt, Ronald T. Jerozal, **Phillip J. Milner**, Nadnudda Rodthongkum, Jin Suntivich*. "Reactive Depolymerization of Polyethylene Terephthalate Textiles into Metal–Organic Framework Intermediates Produces Additive-Free PET Monomers." *Chem. Mater.* **2024**, *36*, 10319–10326. [Link]

69) Tristan A. Pitt, Tyler J. Azbell, Jaehwan Kim, Zixiao Shi, David A. Muller, Matthew A. Addicoat, **Phillip J. Milner***. "A Strongly Reducing sp^2 Carbon-Conjugated Covalent Organic Framework Formed by *N*-Heterocyclic Carbene Dimerization." *Angew. Chem. Int. Ed.* **2024**, e202416480. [Link]

68) Ruth M. Mandel, Piyusha S. Lotlikar, Kaitlyn T. Keasler, Elena Y. Chen, Justin J. Wilson, **Phillip J. Milner***. "Gas Delivery Relevant to Human Health using Porous Materials." *Chem. Eur. J.* **2024**, *30*, e202402163. [Link]

67) Yihuan Lai, **Phillip J. Milner***. "Paired Electrolysis Enables Reductive Heck Coupling of Unactivated (Hetero)Aryl Halides and Alkenes." *Angew. Chem. Int. Ed.* **2024**, *63*, e202408834. [Link] [ChemRXiv]

66) Ruth M. Mandel,‡ Piyusha S. Lotlikar,‡ Tomče Runčevski, Jung-Hoon Lee, Joshua J. Woods, Tristan A. Pitt, Justin J. Wilson, **Phillip J. Milner***. "Transdermal Hydrogen Sulfide Delivery Enabled by Open-Metal-Site Metal–Organic Frameworks." *J. Am. Chem. Soc.* **2024**, *146*, 18927–18937. [Link] [ChemRxiv]

65) Sean M. Griffin,‡ David C. Bain,‡ Arjun Halder, Stavrini Tsangari, **Phillip J. Milner**, Andrew J. Musser*. "Unveiling Long-Lived Dual Emission in a Tetraphenylethylene-Based Metal–Organic Framework." *MRS Commun.*, **2024**, *14*, 949–956. [Link]

64) Huaiguang Li, Mary E. Zick, Teedhat Trisukhon, Matteo Signorile, Xinyu Liu, Helen Eastmond, Shivani Sharma, Tristan Spreng, Jack Taylor, Jamie Gittins, Cavan Farrow, S. Alexandra Lim, Valentina Crocellà, **Phillip J. Milner**, Alexander C. Forse*. "Capturing Carbon Dioxide from Air with Charged Sorbents." *Nature*, **2024**, *630*, 654–659. [Link] [ChemRXiv] *Highlighted by Cornell University, the University of Cambridge, ASME, and BBC.*

63) Bevan S. Whitehead, William W. Brennessel, Shane S. Michtavy, Hope A. Silva, Jaehwan Kim, **Phillip J. Milner**, Marc D. Porosoff, Brandon R. Barnett*. "Selective Adsorption of Fluorinated Super Greenhouse Gases within a Metal-Organic Framework with Dynamic Corrugated Ultramicropores." *Chem. Sci.* **2024**, *15*, 5964–5972. [Link] [ChemRXiv]

62) Tyler J. Azbell, **Phillip J. Milner*.** "Cobalt(III) Halide Metal-Organic Frameworks Drive Catalytic Halogen Exchange." *J. Am. Chem. Soc.* **2024**, *146*, 11164–11172. [Link] [ChemRXiv]

61) David C. Bain, Julia Chang, Yihuan Lai, Thomas Khazanov, **Phillip J. Milner**, Andrew J. Musser*. "Torsional Disorder in Tetraphenyl [3]-Cumulenes: Insight into Excited State Quenching." *Photochem.* **2024**, *4*, 138–150. [Link]

60) Tristan A. Pitt, Haojun Jia, Tyler J. Azbell, Mary E. Zick, Aditya Nandy, Heather J. Kulik, **Phillip J. Milner***. "Benchmarking Nitrous Oxide Adsorption and Activation in Metal-Organic Frameworks Bearing Coordinatively Unsaturated Metal Centers." *J. Mater. Chem. C* **2024**, *12*, 3164–3174. [Link] [ChemRXiv]

59) Jaehwan Kim, Jianheng Ling, Yihuan Lai, **Phillip J. Milner***. "Redox-Active Organic Materials: From Energy Storage to Redox Catalysis." *ACS Materials Au*, **2024**, *4*, 258–273. [Link]

2023:

58) Arjun Halder, David C. Bain, Tristan A. Pitt, Zixiao Shi, Julia Oktawiec, Jung-Hoon Lee, Stavrini Tsangari, Marcus Ng, José J. Fuentes-Rivera, Alexander C. Forse, Tomče Runčevski, David A. Muller, Andrew J. Musser, **Phillip J. Milner***. "Kinetic Trapping of Photoluminescent Frameworks During High-Concentration Synthesis of Nonemissive Metal-Organic Frameworks." *Chem. Mater.* **2023**, *35*, 10086–10098. [Link] [ChemRXiv]

57) Reum N. Scott,* Claire E. Frank, Maya M. Martirossyan, **Phillip J. Milner***, Julia Dshemuchadse*. "Two-Dimensional Metal-Organic Framework Self-Assembly and Defect Engineering Studied via Coarse-Grained Simulations." *Chem. Mater.* **2023**, *35*, 10050–10059. [Link]

56) Tyler J. Azbell,‡ Tristan A. Pitt,‡ Ronald T. Jerozal, Ruth M. Mandel, **Phillip J. Milner***. "Simplifying the Synthesis of Metal-Organic Frameworks." *Acc. Mater. Res.* **2023**, *4*, 867–878. [Link]

55) Kaitlyn T. Keasler, Mary E. Zick,‡ Emily E. Stacy,‡ Jung-Hoon Lee, Jaehwan Kim, Lida Aeindartehran, Tomče Runčevski, **Phillip J. Milner***. "Handling Fluorinated Gases as Solid Reagents using Metal-Organic Frameworks." *Science*, **2023**, *381*, 1455–1461. [Link] [ChemRXiv] *Highlighted by Cornell Chronicle, Synform, the Royal Society of Chemistry, Org. Proc. Res. Dev. "Some Items of Interest to Process R&D Chemists and Engineers," and the Cornell Daily Sun.*

54) Jaehwan Kim, Yogita Shirke, **Phillip J. Milner***. "Flexible Backbone Effects on the Redox Properties of Perylene Diimide-Based Polymers." *ACS Appl. Mater. Interfaces* **2024**,*16*, 48713–48721. [Link]

53) Yihuan Lai, Arjun Halder, Jaehwan Kim, Thomas J. Hicks, **Phillip J. Milner***. "Electroreductive Radical Borylation of Unactivated (Hetero)Aryl Chlorides Without Light by Using Cumulene-Based Redox Mediators." *Angew. Chem. Int. Ed.* **2023**, e202310246. [Link] [ChemRXiv]

52) Jaehwan Kim,‡ Minh H. Le,‡ Makayla C. Spicer, Casandra M. Moisanu, Suzi M. Pugh, **Phillip J. Milner***. "Zinc Bromide: A General Mediator for the Ionothermal Synthesis of Microporous Polymers via Cyclotrimerization Reactions." *J. Mater. Chem. A*, **2023**, *11*, 17159–17166. [Link] [ChemRXiv]

51) Bayu I. Z. Ahmad,‡ Kaitlyn T. Keasler,‡ Emily E. Stacy,‡ Sijing Meng, Thomas J. Hicks, **Phillip J. Milner***. "MOFganic Chemistry: Challenges and Opportunities for Metal–Organic Frameworks in Synthetic Organic Chemistry." *Chem. Mater.* **2023**, *35*, 4883–4896. [Link] [ChemRXiv]

50) Ronald T. Jerozal, Tristan A. Pitt, Samantha N. MacMillan, **Phillip J. Milner***. "High-Concentration Self-Assembly of Zirconium- and Hafnium-Based Metal–Organic Materials." *J. Am. Chem. Soc.*, **2023**, *145*, 13273–13283. [Link] [ChemRXiv]

49) Yelin Ko, Tyler J. Azbell, **Phillip J. Milner**, Juan Hinestroza*. "Upcycling of Dyed Polyester Fabrics into Copper-1,4-Benzenedicarboxylate (CuBDC) Metal-Organic Frameworks." *Ind. Eng. Chem. Res.* **2023**, *62*, 5771–5781. [Link] *Highlighted by Cornell Chronicle and phys.org.*

48) Tyler J. Azbell, Tristan A. Pitt, Melissa M. Bollmeyer, Christina Cong, Kyle M. Lancaster, **Phillip J. Milner***. "Ionothermal Synthesis of Metal-Organic Frameworks Using Low-Melting Metal Salt Precursors." *Angew. Chem. Int. Ed.* **2023**, e202218252. [Link] [ChemRXiv]

47) Abigail K. Nason, Ronald T. Jerozal, **Phillip J. Milner**, Jin Suntivich*. "Reactive Crystallization via Metal-Organic-Framework Formation Enables Separation of Terephthalic Acid from Textile Impurities." *ACS Sustainable Chem. Eng.*, **2023**, *11*, 18–22. [Link] *Highlighted by Cornell Chronicle and phys.org.*

46) Christina Cong,‡ Jaehwan Kim,‡ Cara Gannett, Héctor D. Abruña, **Phillip J. Milner***. "Unexpected Direct Synthesis of Tunable Redox-Active Benzil-Linked Polymers via the Benzoin Reaction." *ACS Appl. Poly. Mater.*, **2023**, *5*, 1056–1066. [Link] [ChemRXiv]

45) Arjun Halder, David C. Bain, Julia Oktawiec, Matthew A. Addicoat, Stavrini Tsangari, José J. Fuentes-Rivera, Tristan A. Pitt, Andrew J. Musser,* **Phillip J. Milner***. "Enhancing Dynamic Spectral Diffusion in Metal-Organic Frameworks Through Defect Engineering." *J. Am. Chem. Soc.* **2023**, *145*, 1072–1082. [Link] [ChemRXiv]

44) Sayan Maiti, Jatan K. Sharma,‡ Jianheng Ling,‡ Dylan Tietje-Mckinney, Matthew P. Heaney, Tomče Runčevski, Matthew A. Addicoat, Francis D'Souza*, **Phillip J. Milner***, Anindita Das*. "Emissive Substoichiometric Covalent Organic Frameworks for Water Sensing and Harvesting." *Macromol. Rapid Comm.* **2023**, *44*, 2200751. [Link]

43) Mary E. Zick, Donovan Cho,‡ Jianheng Ling,‡ **Phillip J. Milner***. "Carbon Capture Beyond Amines: CO_2 Sorption at Nucleophilic Oxygen Sites in Materials." *ChemNanoMat* **2023**, 9, e202200436. [Link]

2022:

42) Tyler J. Azbell,‡ Ruth M. Mandel,‡ Jung-Hoon Lee, **Phillip J. Milner***. "Reactive Chlorine Capture by Dichlorination of Alkene Linkers in Metal-Organic Frameworks." *ACS Appl. Mater. Interfaces*, **2022**, *14*, 53928–53935. [Link] [ChemRXiv]

41) Cara N. Gannett,‡ Jaehwan Kim,‡ David Tirtariyadi, **Phillip J. Milner***, Héctor D. Abruña*. "Investigation of Ion-Electrode Interactions of Linear Polyimides and Alkali Metal Ions for Next Generation Alternative-Ion Batteries." *Chem. Sci.* **2022**, *13*, 9191–9201. [Link] [ChemRXiv]

40) Elena Y. Chen,‡ Ruth M. Mandel,‡ **Phillip J. Milner***. "Comparing Solvothermal and Mechanochemical Routes towards the Metal-Organic Framework Mg_2(*m*-dobdc)." *CrystEngComm* **2022**, *24*, 7292–7297. [Link] [ChemRXiv]

39) Mary E. Zick, Suzi M. Pugh, Jung-Hoon Lee, Alexander C. Forse, **Phillip J. Milner***. "Carbon Dioxide Capture at Nucleophilic Hydroxide Sites in Oxidation-Resistant Cyclodextrin-Based Metal-Organic Frameworks." *Angew. Chem. Int. Ed.* **2022**, *61*, e202206718. [Link] [ChemRXiv] *Highlighted by Cornell Chronicle, phys.org, and local news sources.*

38) Faith E. Chen,‡ Tristan A. Pitt,‡ Diane Okong'o, Luc G. Wetherbee, José J. Fuentes-Rivera, **Phillip J. Milner***. "A Structure-Activity Study of Aromatic Acid Modulators for the Synthesis of Zirconium-Based Metal-Organic Frameworks." *Chem. Mater.* **2022**, *34*, 3383–3394. [Link]

2022:

37) Jaehwan Kim,‡ Casandra M. Moisanu,‡ Cara Gannett, Arjun Halder, José J. Fuentes-Rivera, Sean H. Majer, Kyle M. Lancaster, Alexander C. Forse, Héctor D. Abruña, **Phillip J. Milner***. "Conjugated Microporous Polymers via Solvent-Free Ionothermal Cyclotrimerization of Methyl Ketones." *Chem. Mater.* **2021**, *33*, 8334–8342. [Link]

36) Faith E. Chen,‡ Ruth M. Mandel,‡ Joshua J. Woods, Jung-Hoon Lee, Jaehwan Kim, Jesse Hsu, José J. Fuentes-Rivera, Justin J. Wilson, **Phillip J. Milner***. "Biocompatible Metal-Organic Frameworks for the Storage and Therapeutic Delivery of Hydrogen Sulfide." *Chem. Sci.* **2021**, *12*, 7848–7857. [Link]

35) Zihao Wang, Arvin Bilegsaikhan, Ronald T. Jerozal, Tristan A. Pitt, **Phillip J. Milner***. "Evaluating the Robustness of Metal-Organic Frameworks for Synthetic Chemistry." *ACS Appl. Mater. Interfaces*, **2021**, *13*, 17517–17531. [Link]

34) Jonathan B. Lefton, Kyle B. Pekar, Uroob Haris, Mary E. Zick, **Phillip J. Milner**, Alexander R. Lippert, Ljupčo Pejov, Tomče Runčevski*. "Defect Engineering and Amorphization of Zn-MOF-74 by Postsynthetic Adsorbate–Framework Interactions." *J. Mater. Chem. A* **2021**, *9*, 19698–19704. [Link]

33) Mary E. Zick, Jung-Hoon Lee, Miguel I. Gonzalez, Ever O. Valasquez, Adam A. Uliana, Jaehwan Kim, Jeffrey R. Long, **Phillip J. Milner***. "Fluoroarene Separations in Metal–Organic Frameworks with Two Proximal Mg^{2+} Coordination Sites." *J. Am. Chem. Soc.*, **2021**, *143*, 1948–1958. *Highlighted in:* Nelson, Y. A.; Spokoyny, A. M. *Matter* **2021**, *4*, 8, 2645–2647. [Link]

32) Jen-Yu Huang, Yuanze Xu, **Phillip J. Milner**, Tobias Hanrath*. "Processing-Structure-Performance Relationships of Microporous Metal-Organic Polymers for Size-Selective Separations." *ACS Appl. Mater. Interfaces*, **2021**, *13*, 3521–3527. [Link]

31) Alexander C. Forse,* **Phillip J. Milner***. "New Chemistry for Enhanced Carbon Capture: Beyond Ammonium Carbamates." *Chem. Sci.* **2021**, *12*, 508–516. [Link]

2020:

30) Zihao Wang, Zongzhe Li, Marcus Ng, **Phillip J. Milner***. "Rapid Mechanochemical Synthesis of Metal–Organic Frameworks using Exogenous Organic Base." *Dalton Trans.* **2020**, *49*, 16238–16244. [Link]

2019:

29) José J. Fuentes-Rivera, Mary E. Zick, M. Alexander Düfert*, **Phillip J. Milner***. "Overcoming Halide Inhibition of Suzuki-Miyaura Couplings with Biaryl Monophosphine-Based Catalysts." *Org. Proc. Res. Dev.* **2019**, *23*, 1631–1637. [Link]

Before Cornell:

28) Ziting Zhu, Hsinhan Tsai, Surya T. Parker, Jung-Hoon Lee, Yuto Yabuuchi, Henry Z. H. Jiang, Yang Wang, Shuoyan Xiong, Alexander C. Forse, Bhavish Dinakar, Adrian Huang, Chaochao Dun, **Phillip J. Milner**, Alex Smith, Pedro Guimarães Martins, Katie R. Meihaus, Jeffrey J. Urban, Jeffrey A. Reimer, Jeffrey B. Neaton, Jeffrey R. Long*. "High-Capacity, Cooperative CO_2 Capture in a Diamine-Appended Metal-Organic Framework through a Combined Chemisorptive and Physisorptive Mechanism." *J. Am. Chem. Soc.* **2024**, *146*, 6072–6083.

27) Ziting Zhu, Surya T. Parker, Alexander C. Forse, Jung-Hoon Lee, Rebecca L. Siegelman, **Phillip J. Milner**, Hsinhan Tsai, Mengshan Ye, Maria V. Paley, Adam A. Uliana, Julia Oktawiec, Bhavish Dinakar, Stephanie A. Didas, Katie R. Meihaus, Jeffrey A. Reimer, Jeffrey B. Neaton, Jeffrey R. Long*. "Cooperative Carbon Dioxide Capture in Diamine-Appended Magnesium-Olsalazine Frameworks." *J. Am. Chem. Soc.* **2023**, *145*, 17151–17163. [Link]

26) Bhavish Dinakar, Alexander C. Forse, Henry Z. H. Jiang, Ziting Zhu, Jung-Hoon Lee, Eugene J. Kim, Surya T. Parker, Connor J. Pollak, Rebecca L. Siegelman, **Phillip J. Milner**, Jeffrey A. Reimer*, Jeffrey R. Long*. "Overcoming Metastable CO_2 Adsorption in a Bulky Diamine-Appended Metal–Organic Framework." *J. Am. Chem. Soc.* **2021**, *143*, 15258–15270. [Link]

25) Eugene J. Kim, Rebecca L. Siegelman, Henry Z. H. Jiang, Alexander C. Forse, Jung-Hoon Lee, Jeffrey D. Martell, **Phillip J. Milner**, Joseph M. Falkowski, Jeffrey B. Neaton, Jeffrey A. Reimer, Simon C. Weston, Jeffrey R. Long*. "Cooperative Carbon Capture and Steam Regeneration with Tetraamine-Appended Metal–Organic Frameworks." *Science* **2020**, *369*, 392–396. [Link] *Highlighted by Berkeley News.*

24) Jeffrey D. Martell,‡ **Phillip J. Milner,**‡ Rebecca L. Siegelman, Jeffrey R. Long*. "Kinetics of CO_2 Adsorption in Diamine-Appended Mg_2(dobpdc) Metal–Organic Frameworks." *Chem. Sci.* **2020**, *11*, 6457–6471. [Link]

23) Victor Y. Mao, **Phillip J. Milner,** Jung-Hoon Lee, Alexander C. Forse, Eugene J. Kim, Rebecca L. Siegelman, C. Michael McGuirk, Leo B. Porter-Zasada, Jeffrey B. Neaton, Jeffrey A. Reimer, Jeffrey R. Long*. "Cooperative Carbon Dioxide Adsorption in Alcoholamine- and Alkoxyalkylamine-Functionalized Metal–Organic Frameworks." *Angew. Chem. Int. Ed.* **2020**, *59*, 19468–19477. [Link]

22) Jun Xu*, Yifei Michelle Liu, Andrew S. Lipton, Jinxing Ye, Gina L. Hoatson, **Phillip J. Milner,** Thomas M. McDonald, Rebecca L. Siegelman, Alexander C. Forse, Berend Smit, Jeffrey R. Long, Jeffrey A. Reimer. "Amine Dynamics in Diamine-Appended Mg_2(dobpdc) Metal-Organic Frameworks." *J. Phys. Chem. Lett.* **2019**, *10*, 7044–7049. [Link]

21) Sohee Jeong,‡ **Phillip J. Milner**,‡ Liwen F. Wan,‡ Yi-Sheng Liu, Julia Oktawiec, Edmond W. Zaia, Alexander C. Forse, Noemi Leick, Thomas Gennett, Jinghua Guo, David Prendergast*, Jeffrey R. Long*, Jeffrey J. Urban*. "Runaway Carbon Dioxide Conversion Leads to Enhanced Uptake in a Nanohybrid Form of Porous Magnesium Borohydride." *Adv. Mater.*, **2019**, *31*, 1904252. [Link] *Highlighted by C&EN News.*

20) Rebecca L. Siegelman,‡ **Phillip J. Milner**,‡ Alexander C. Forse, Jung-Hoon Lee, Kristen A. Colwell, Jeffrey B. Neaton, Jeffrey A. Reimer, Simon C. Weston, Jeffrey R. Long*. "Water Enables Effective CO_2 Capture from Natural Gas Flue Emissions in an Oxidation-Resistant Diamine-Appended Metal–Organic Framework." *J. Am. Chem. Soc.* **2019**, *141*, 13171–13186. [Link] *Highlighted by Lawrence Berkeley National Lab.*

19) Rebecca L. Siegelman,‡ **Phillip J. Milner**,‡ Eugene J. Kim, Simon C. Weston*, Jeffrey R. Long*. "Challenges and Opportunities for Adsorption-Based CO_2 Capture from Natural Gas Combined Cycle Emissions." *Energy Environ. Sci.* **2019**, *12*, 2161–2173. [Link]

18) C. Michael McGuirk, Rebecca L. Siegelman, Walter S. Drisdell, Tomče Runčevski, **Phillip J. Milner**, Julia Oktawiec, Liwen F. Wan, Gregory M. Su, Henry Z. H. Jiang, Douglas A. Reed, Miguel I. Gonzalez, David Prendergast, Jeffrey R. Long*. "Cooperative and Reversible Chemisorption of Carbon Disulfide in Diamine-Appended Metal–Organic Frameworks." *Nat. Commun.* **2018**, *9*, 5133. [Link]

17) Alexander C. Forse, **Phillip J. Milner,** Jung-Hoon Lee, Halle N. Redfearn, Julia Oktawiec, Rebecca L. Siegelman, Jeffrey D. Martell, Bhavish Dinakar, Leo B. Porter-Zasada, Miguel I. Gonzalez, Jeffrey B. Neaton*, Jeffrey R. Long*, Jeffrey A. Reimer*. "Elucidating CO_2 Chemisorption in Diamine-Appended Metal–Organic Frameworks." *J. Am. Chem. Soc.* **2018**, *140*, 18016–18031. [Link]

16) Miguel I. Gonzalez,‡ Matthew T. Kapelewski,‡ Eric D. Bloch, **Phillip J. Milner**, Douglas A. Reed, Matthew R. Hudson, Jarad A. Mason, Gokhan Barin, Craig M. Brown, Jeffrey R. Long*. "Separation of Xylene Isomers Facilitated by the Interaction of One Molecule with Two Metal Sites in the Metal–Organic Frameworks Co_2(dobdc) and Co_2(*m*-dobdc)." *J. Am. Chem. Soc.* **2018**, 140, 3412–3422. [Link]

15) Alexander C. Forse, Miguel I. Gonzalez, Rebecca L. Siegelman, Velencia J. Witherspoon, Sudi Jawahery, Rocio Mercado, **Phillip J. Milner**, Jeffrey D. Martell, Berend Smit, Bernard Blümich, Jeffrey R. Long*, Jeffrey A. Reimer*. "Unexpected Diffusion Anisotropy of Carbon Dioxide in the Metal–Organic Framework Zn_2(dobpdc)." *J. Am. Chem. Soc.* **2018**, *140*, 1663–1673. [Link]

14) **Phillip J. Milner**, Jeffrey D. Martell, Rebecca L. Siegelman, David Gygi, Simon C. Weston, Jeffrey R. Long*. "Overcoming Double-Step CO_2 Adsorption and Minimizing Water Co-Adsorption in Bulky Diamine-Appended Variants of Mg_2(dobpdc)." *Chem. Sci.* **2018**, *9*, 160–174. [Link]

13) Jeffrey D. Martell, Leo B. Porter-Zasada, Alexander C. Forse, Rebecca L. Siegelman, Miguel I. Gonzalez, Julia Oktawiec, Tomče Runčevski, Jiawei Xu, Monika Srebro-Hooper, **Phillip J. Milner**, Kristen A. Colwell, Jochen Autschbach, Jeffrey A. Reimer, Jeffrey R. Long*. "Enantioselective Recognition of Ammonium Carbamates in a Chiral Metal–Organic Framework." *J. Am. Chem. Soc.* **2017**, *139*, 16000–16012. [Link]

12) **Phillip J. Milner**, Rebecca L. Siegelman, Alexander C. Forse, Miguel I. Gonzalez, Tomče Runčevski, Jeffrey D. Martell, Jeffrey A. Reimer, Jeffrey R. Long*. "A Diaminopropane-

Appended Metal–Organic Framework Enabling Efficient CO_2 Capture from Coal Flue Gas via a Mixed Adsorption Mechanism." *J. Am. Chem. Soc.* **2017**, *139*, 13541–13553. [Link]

11) Rebecca L. Siegelman, Thomas M. McDonald, Miguel I. Gonzalez, Jeffrey D. Martell, **Phillip J. Milner**, Jarad A. Mason, Adam H. Berger, Abhoyjit S. Bhown, Jeffrey R. Long*. "Controlling Cooperative CO_2 Adsorption in Diamine-Appended Mg_2(dobpdc) Metal–Organic Frameworks." *J. Am. Chem. Soc.* **2017**, *139*, 10526–10538. [Link]

10) Dianne J. Xiao, Julia Oktawiec, **Phillip J. Milner,** Jeffrey R. Long*. "Pore Environment Effects on Catalytic Cyclohexane Oxidation in Expanded Fe_2(dobdc) Analogues." *J. Am. Chem. Soc.* **2016**, *138*, 14371–14379. [Link]

9) **Phillip J. Milner,** Yang Yang, Stephen L. Buchwald*. "In-Depth Assessment of the Pd-Catalyzed Fluorination of 5-Membered Heteroaryl Bromides." *Organometallics* **2015**, *34*, 4775–4780. [Link]

8) Hong Geun Lee,‡ **Phillip J. Milner,**‡ Michael S. Placzek, Stephen L. Buchwald*, Jacob M. Hooker*. "Virtually Instantaneous, Room-Temperature [^{11}C]-Cyanation using Biaryl Phosphine Pd(0) Complexes." *J. Am. Chem. Soc.* **2015**, *137*, 648–651. [Link]

7) Adam M. Levinson, **Phillip J. Milner,** Scott A. Snyder*. "Studies in Selective 6-Membered Bromoether Formation via Bromonium and Thiiranium-induced Cyclizations." *Tetrahedron Lett.* **2015**, *56*, 3553–3556. [Link]

6) **Phillip J. Milner,** Thomas Kinzel, Yong Zhang, Stephen L. Buchwald*. "Studying Regioisomer Formation in the Pd-Catalyzed Fluorination of Aryl Triflates by Deuterium Labeling." *J. Am. Chem. Soc.* **2014**, *136*, 15757–15766. [Link]

5) Hong Geun Lee,‡ **Phillip J. Milner,**‡ Michael T. Colvin, Loren Andreas, Stephen L. Buchwald*. "Structure and Reactivity of $(L•Pd)_n$•(1,5-cyclooctadiene) Species (n = 1-2) Bearing Biaryl Phosphine Ligands." *Inorg. Chim. Acta* **2014**, *422*, 188–192. [Link]

4) Hong Geun Lee, **Phillip J. Milner,** Stephen L. Buchwald. "Pd-Catalyzed Nucleophilic Fluorination of Aryl Bromides*." *J. Am. Chem. Soc.* **2014**, *136*, 3792–3795. [Link] *Highlighted in C&EN News.*

3) Hong Geun Lee,‡ **Phillip J. Milner,**‡ Stephen L. Buchwald*. "An Improved Catalyst System for the Efficient Pd-Catalyzed Fluorination of (Hetero)aryl Triflates." *Org. Lett.* **2013**, *15*, 5602–5605. [Link]

2) **Phillip J. Milner,** Thomas J. Maimone, Mingjuan Su, Jiahao Chen, Peter Müller, Stephen L. Buchwald*. "Investigating the Dearomative Rearrangement of Biaryl Phosphine-Ligated Pd(II) Complexes." *J. Am. Chem. Soc.* **2012**, *134*, 19922–19934. [Link]

1) Thomas J. Maimone, **Phillip J. Milner,** Thomas Kinzel, Yong Zhang, Michael K. Takase, Stephen L. Buchwald*. "Evidence for In Situ Catalyst Modification During the Pd-Catalyzed Conversion of Aryl Triflates to Aryl Fluorides." *J. Am. Chem. Soc.* **2011**, *133*, 18106–18109. [Link]

PATENTS

10) Provisional Patent Application No. 63/690,02. "Cobalt/Iron Oxide Framework Hosts, Methods of Making Same and Uses Thereof." H. D. Abruna, D. Jin, M. R. Krumov, **P. J. Milner**, R. M. Mandel, filed September 3rd, 2024.

9) Provisional Patent Application No. Appl No. 63/659,801. "New Mechanism of Carbon Capture enabled by Strong Hydrogen Bonding." T. H. Lambert, **P. J. Milner**, S. Meng, filed June 13th, 2024.

8) Patent Application No. PCT/US24/42589. "Methods for Carbon Dioxide Separation and Materials and Systems for Same." **P. J. Milner**, B. I. Z. Ahmad, filed August 15th, 2024.

7) Patent Application No. 63/393,431**:** "Methods of Purification of Recycled Monomers, and Recycled Monomers and Uses Thereof." J. Suntivich, A. K. Nason, **P. J. Milner**, R. T. Jerozal, filed July 29th, 2023.

6) Patent Application No. PCT/2023/019456: "Storage and Delivery of Gaseous Chemical Reactants in Chemical Process Using Metal-Organic Frameworks." **P. J. Milner**, K. E. MacMillan, M. E. Zick, filed April 21st, 2023.

5) Patent Application No. 18/128,821: "Metal-Organic Frameworks for the Storage and Delivery of Hydrogen Sulfide, Methods of Making and Uses of Same." **P. J. Milner**, J. J. Wilson, Ruth M. Mandel, Joshua J. Woods, Faith E. Chen, filed March 30th, 2023.

4) US Patent No. 11458431: "Amine-Appended Metal-Organic Frameworks with a New Mechanism for CO_2 Separations." J. R. Long, **P. J. Milner**, R. L. Siegelman, filed February 17, 2017; awarded October 4, 2022.

3) US Patent No. 11014067: "Polyamine-Appended Metal–Organic Frameworks for Carbon Dioxide Separations." S. C. Weston, J. Falkowski, J. R. Long, E. J. Kim, J. D. Martell, **P. J. Milner**, R. L. Siegelman, filed October 30, 2018; awarded May 25th, 2021.

2) US Patent No. 10780388: "Metal–Organic Frameworks Appended with Cyclic Diamines for Carbon Dioxide Capture." J. R. Long, S. C. Weston, **P. J. Milner**, R. L. Siegelman. Filed August 3, 2018; awarded September 22, 2020.

1) US Patent No. 10953385: "Overcoming Two Carbon Dioxide Adsorption Steps in Diamine-Appended Metal–Organic Frameworks." J. R. Long, S. C. Weston**, P. J. Milner**, J. D. Martell, R. L. Siegelman. Filed July 25, 2018; awarded March 23, 2021.

TEACHING

Graduate

CHEM 6690: Modern Catalytic Reactions in Organic Synthesis
Spring 2025: Instructor rating: 4.30/5.00; overall course rating: 4.40/5.00

CHEM 6070 / MSE 6210: Solid State Chemistry
Spring 2022: Instructor rating: 4.83/5.00; overall course rating: 4.83/5.00
Spring 2021: Instructor rating: 4.50/5.00; overall course rating: 4.67/5.00
Spring 2020: Instructor rating: 4.89/5.00; overall course rating: 4.85/5.00
Fall 2018: Instructor rating: 4.11/5.00; overall course rating: 4.22/5.00

Undergraduate

CHEM 3600: Honors Organic Chemistry II
Fall 2025: Instructor rating: 4.33/5.00; overall course rating: 4.33/5.00
Fall 2024: Instructor rating: 4.54/5.00; overall course rating: 4.23/5.00
Fall 2022: Instructor rating: 4.33/5.00; overall course rating: 4.00/5.00
Fall 2021: Instructor rating: 4.43/5.00; overall course rating: 4.29/5.00

Fall 2020: Instructor rating: 4.25/5.00; overall course rating: 4.38/5.00
Fall 2019: Instructor rating: 4.21/5.00; overall course rating: 4.05/5.00

CHEM 3590: Honors Organic Chemistry I
Spring 2024: Instructor rating: 4.19/5.00; overall course rating: 4.31/5.00

ADDITIONAL ACTIVITIES AND SERVICE

To Cornell University

Associate Director of Graduate Studies, **2025–**
Organizer of Baker Symposium, **2023**
"What I Wish I Knew Before Joining Cornell as an Assistant Professor" panel, **2023**
Faculty Advisor for Chemistry Peer Advisors, **2021–**
Faculty Advisor for the Professional Chemistry Fraternity, **2022–2023**
Co-organizer of Department viewing of "Picture a Scientist," **2021**
Co-organizer of Department viewing of "Forgotten Genius," **2021**
Chemistry Career-Oriented Webinar, **2019**
Faculty mentor at GET SET Teaching Workshop Conference, **2019**
Grant Reviewer, Cornell Atkinson Center for Sustainability
Teaching and Advising Award Committee, College of Arts and Sciences
Department Committees: Industrial Relations; Student Awards (Chair); Diversity, Equity, and Inclusion (Co-Chair); Graduate Student; Faculty Search; Seminar (Chair); Safety

To the Chemistry Community

International Organizing Committee, MOF2028
Standing member, MRAE panel (NIH NIGMS), **2025–2029**
Chair, Cornell ACS Local Section, **2026–2027**
Chair-Elect, Cornell ACS Local Section, **2025**
NSF Early Career Investigator Workshop (Mentor), **2024**
Ad hoc Reviewer for: NIH, Department of Energy, National Science Foundation, ACS Petroleum Research Fund, Swiss National Science Foundation, German Research Foundation, UKRI Funding Service

MENTORING

Post-docs

Tristan Pitt; Current
Daewon Kim; Current
Jiachen He; Current
Reum Scott (2021–2024, NSF ASCEND, joint with Julia Dshemuchadse)
Arjun Halder (2019–2023)

Graduate Students

Kerui Jian; Current
Liam Almekinder (joint with Marissa Lavignino); Current
Katrina Doherty; Current
Priyadarshini Baidya; Current
Shuyi Lin (joint with Geoff Coates); Current

Carolyn Ma; Current
Yujing Wang (joint with Andrew Musser); Current
Clarisse Doligon; Current
Phuong Nguyen; Current
Daniel Nakamura (NSF GRFP); Current
S. Alexandra Lim (NSF GRFP HM); Current
Emily Stacy (NSF GRFP); Current
Yihuan Lai (BMS Fellow, ACS DOC GRS, Bauer); Current
Bayu Ahmad (Arkema Fellow, Semlitz Fellow, Bauer); Current
Mary Eaton (NSF GRFP); Current
Sijing (Zoe) Meng, PhD ’25 (joint with Tristan Lambert)
Kaitlyn Keasler, PhD ’25 (BMS Fellow, ACS DOC GRS, Bauer, Wentink)
Tristan Pitt, PhD ’25 (NSF GRFP HM, Bauer, Wentink)
Jianheng (Allen) Ling, PhD ’25
Ronald Jerozal, PhD ’24 (NSF GRFP HM)
Ruth Mandel, PhD ’24 (ACS DIC YI, Bauer)
Jaehwan Kim, PhD ’24 (PMSE Future Leader, Bauer, Wentink)
Tyler Azbell, PhD ’24 (ACS DOC GRS)
Mary Zick, PhD ’23 (NSF GRFP HM, ACS DIC YI, Bauer, Wentink)
José Fuentes-Rivera, MS ’21
Grzegorz Skrzypek

Cornell Undergraduate Students

Lucy Kim ’28
Ellie Campbell ’28
Sonja Larson ’27
Stephanie Chen ’27
Oliver Lambert ’27
Paige Burch ’27
Sky Chen ’27
Julia Pitolaj ’25
Zayim Jamil ’25
Ian Lillie ’25
Valerie Chang ’25
Elena Chen ’24
Donovan Cho ’25
Drew Soshensky ’25
Thomas Hicks ’23
Minh Le ’24
Arvin Bilgesaikhan ’23
Kadeem Whyte ’22
Diane Okong’o
Casandra Moisanu ’21
Luc Wetherbee ’21
Christina Cong ’21
Faith Chen ’21
Marcus Ng

Marc Morizano ’20
Elizabeth Skapley ’21
Cathy Ly ’21
Mickayla Smith ’21

Visiting Students

Trevor Coates, Villanova University
Sharmin Akther Rupa, Imperial College London
Yogita Shirke, KUST
Makayla Spicer, Hamilton College
Yanyao Cai, Nanjing University
Zihao Wang, Nankai University
Zongzhe Li, Beihang University
Cordelia Beck-Horton, SUNY Fredonia