

NATHANAEL H. HUNTER
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Kenyon College
Department of Chemistry
Tomsich 318
Gambier, OH 43022

EDUCATION

Ph.D., The Ohio State University
Chemistry Graduate Program
Dr. Christine Thomas, Advisor

Columbus, OH
December 2022

B.S., John Carroll University
Chemistry and Philosophy
Dr. Chrystal Bruce, Advisor
Magna cum laude

University Heights, OH
May 2017

RESEARCH EXPERIENCE

Kenyon College
Assistant Professor

Gambier, OH
2025-Present

Texas A&M University
NSF MPS-ASCEND Postdoctoral Research Fellow
Dr. François Gabbai, Advisor
Synthesis of base-supported organobismuth compounds for anion transport and catalysis.

College Station, TX
2023-2025

The Ohio State University
Graduate Research Fellow
Dr. Christine Thomas, Advisor
Synthesis of heterobimetallic complexes for catalysis and small molecule activation containing earth-abundant transition metals.

Columbus, OH
2017-2022

The University of Wisconsin-Madison
Research Experiences for Undergraduates (REU)
Dr. Randall Goldsmith, Advisor
Spectroelectrochemical studies of lithium-ion responsive fluorophores.

Madison, WI
2016

John Carroll University
Undergraduate Research Assistant
Dr. Chrystal Bruce, Advisor
Computational studies of ligand binding in small protein systems: correlating binding events with conformational changes in the dynamic structures of FABP5.

University Heights, OH
2014-2017

PUBLICATIONS

Şit, F.; **Hunter, N. H.**; Maltz, L. T.; Gabbai, F. P. Lewis Acidity of the $\text{SbCl}_3/o\text{-chloranil}$ system. *Angewandte Chemie: International Edition*. **2025**, e202505893. <https://doi.org/10.1002/anie.202505893>

Hunter, N. H.; Gabbai, F. P. Bismuthenium Cations for the Transport of Chloride Anions via Pnictogen Bonding. *Angewandte Chemie: International Edition*. **2025**, 64, e202414699. <https://doi.org/10.1002/anie.202414699>

Hunter, N.H.; Thomas, C. M. Polarized Metal-Metal Multiple Bonding and Reactivity of Phosphinoamide-Bridged Heterobimetallic Group IV / Cobalt Compounds. *Dalton Transactions* **2024**, 53, 1. 15764-15781

<https://doi.org/10.1039/D4DT02064B>

Hunter, N. H.; Stevens, J. E.; Moore, C. E.; Thomas, C. M. One Bridge, Three Bonds: A Frontier in Multiple Bonding in Heterobimetallic Complexes. *Inorganic Chemistry* **2023**, 62, 659-663.

<https://doi.org/10.1021/acs.inorgchem.2c03716>

Hunter, N. H.; Lane, E. L.; Gramigna, K. M.; Moore, C. E.; Thomas, C. M. C-H Bond Activation Facilitated by Bis(phosphinoamide) Heterobimetallic Zr/Co Complexes. *Organometallics* **2021**, 40, 3689-3696.

<https://doi.org/10.1021/acs.organomet.1c00511>

Hunter, N. H.; Bakula, B. C.; Bruce C. D. Molecular dynamics simulations of apo and holo forms of fatty acid binding protein 5 and cellular retinoic acid binding protein II reveal highly mobile protein, retinoic acid ligand, and water molecules. *Journal of Biomolecular Structure and Dynamics*. **2018**, 36, 1893-1907.

<https://doi.org/10.1080/07391102.2017.1337591>

Padilla, N. A.*; Rea, M. T.*; Foy, M.; Upadhyay, S. P.; Desrochers, K. A.; Derus, K.; Knapper, K. A.; **Hunter, N. H.;** Wood, S.; Hinton, D. A.; Cavell, A. C.; Masias, A. G.; Goldsmith, R. H. Tracking Lithium Ions via Widefield Fluorescence Microscopy for Battery Diagnostics. *ACS Sensors*. **2017**, 2, 903-908.

<https://doi.org/10.1021/acssensors.7b00087>

PRESENTATIONS

Hunter, N. H.; Gabbaï, F. P. “Synthesis and reactivity of base-supported organopnictogen Lewis acids” Abstract accepted for an oral presentation at the American Chemical Society Southwest Regional Meeting; Waco, TX; October 23, 2024.

Hunter, N. H.; Gabbaï, F. P. “Synthesis and Reactivity of Base-Supported Organopnictogen Lewis Acids” Poster presentation at the 2024 Organometallic Gordon Conference; Newport, RI; July 7, 2024.

Hunter, N. H.; Gabbaï, F. P. “Synthesis and Reactivity of Base-Supported Pnictogen Lewis Acids” Poster presentation at the 2022 Inorganic Chemistry Gordon Conference; Newport, RI; June 2, 2024.

Hunter, N. H.; Gabbaï, F. P. “Synthesis and anion transport activity of base-supported organobismuth Lewis Acids” Oral presentation at the American Chemical Society Southwest Regional Meeting; Oklahoma City, OK; November 15, 2023.

Hunter, N. H.; Thomas, C. M. “Synthesis and characterization of phosphinoamide supported group 4/cobalt heterobimetallic compounds” Poster presentation at the 2022 Inorganic Chemistry Gordon Conference; Newport, RI; May 31, 2022

Hunter, N. H.; Thomas, C. M. “Synthesis and characterization of phosphinoamide supported heterobimetallic complexes” Oral presentation at the American Chemical Society National Meeting; San Diego, CA; March 22, 2022

Hunter, N. H.; Thomas, C. M. “Synthesis and characterization of zirconium/cobalt early-late heterobimetallic complexes.” Oral presentation at the American Chemical Society National Meeting; Virtual Presentation; August 2021

Hunter, N. H.; Thomas, C. M. “C–H bond activation facilitated by a Zirconium/Cobalt Early-Late Heterobimetallic complex” Oral Presentation at Ohio Inorganic Weekend; Virtual Presentation; October 2020.

Hunter, N. H.; Lane, E. L.; Gramigna, K. M.; Thomas, C. M. “C–H bond activation facilitated by a Zirconium/Cobalt Early-Late Heterobimetallic complex” Oral Presentation at the American Chemical Society National Meeting; Virtual Presentation; August 2020.

Hunter, N. H.; Thomas, C. M. "C–H bond activation of Pyridines and terminal alkynes facilitated by a family of Early-Late Heterobimetallic complexes" Oral presentation at STUCK seminar; Virtual Presentation, Spring 2020.

AWARDS, HONORS, AND FUNDING

MPS-ASCEND Postdoctoral Fellowship

The National Science Foundation – \$100,000/yr for 2 years

July 2023-July 2025

Dean's Distinguished University Fellowship

The Ohio State University – 5 semesters of support

August 2017-December 2022

TEACHING EXPERIENCE

Texas A&M University

Inorganic Chemistry Laboratory

College Station, TX

Autumn 2024

The Ohio State University

Graduate Teaching Associate

Dept. of Chemistry & Biochemistry

Inorganic Chemistry Laboratory

Coordination Chemistry (Graduate Level)

General Chemistry for Majors (Recitation and Lab)

Columbus, OH

Spring 2020

Autumn 2019

Autumn 2019

John Carroll University

Undergraduate Teaching Assistant

Department of Chemistry

Physical Chemistry Laboratory

Organic Chemistry I Laboratory

Organic Chemistry II Laboratory

University Heights, OH

Autumn 2016, Spring 2017

Autumn 2015-2016

Spring 2015-2017

RELATED PROFESSIONAL EXPERIENCE

Texas A&M University

Undergraduate Research Scholars (URS) Proposal Reviewer

Worked directly with the URS program to review students' proposals for a year-long faculty-mentored research project in a science or engineering field.

College Station, TX

August 2024 - Present

CMC Pharmaceuticals

Research Chemist

Analyzed the shelf life of various APIs, using UV-vis spectrometry, HPLC, and other analytical methods.

Cleveland, OH

June 2016-June 2017

PROFESSIONAL MEMBERSHIPS & ACTIVITIES

American Chemical Society

2015-Present