

**Henry S. La Pierre, Ph.D.***Associate Professor*

School of Chemistry and Biochemistry and the Nuclear and Radiological Engineering and Medical  
Physics Program in the School of Mechanical Engineering  
Georgia Institute of Technology

**I. Earned Degrees**

A.B., <i>magna cum laude</i>	Chemistry	2002 – 2006	Harvard University (advisors: J.T. Shaw; moved to UC-Davis and summer research with M. Murakami, U. Kyoto)
Ph.D.	Inorganic Chemistry	2006 – 2011	University of California, Berkeley (advisors: J. Arnold, F.D. Toste, and R.G. Bergman)

**II. Employment History**

2011 – 2014	Postdoctoral Scholar, Friederich-Alexander University, Erlangen-Nuremberg, DE (advisor: Karsten Meyer)
2014 – 2016	Director's Postdoctoral Fellow, Los Alamos National Laboratory, Los Alamos, NM USA (Advisor: Stosh A. Kozimor)
2016 – 2022	Assistant Professor, School of Chemistry and Biochemistry and the Nuclear and Radiological Engineering and Medical Physics Program in the School of Mechanical Engineering (Courtesy Appt.), Georgia Institute of Technology, Atlanta, GA USA
2022 –	Associate Professor, School of Chemistry and Biochemistry and the Nuclear and Radiological Engineering and Medical Physics Program in the School of Mechanical Engineering (Courtesy Appt.), Georgia Institute of Technology, Atlanta, GA USA
2022 –	Joint Faculty, Pacific Northwest National Laboratory, Richland, WA USA

**III. Honors and Awards**

2022	<a href="#">Alfred P. Sloan Research Fellowship</a>
2020 – 2025	<a href="#">CAREER Award</a> , National Science Foundation (NSF)
2020	Dalton Transactions New Talent: Americas
2018	<a href="#">Ralph E. Powe Junior Faculty Enhancement Award</a> , Oak Ridge Associated Universities (ORAU)
2018 – 2022	<a href="#">Beckman Young Investigator Award</a> , Arnold & Mabel Beckman Foundation
2018 – 2020	Blanchard Assistant Professorship, Georgia Institute of Technology (GT)
2014 – 2016	<a href="#">Director's Postdoctoral Fellowship</a> , Los Alamos National Laboratory
2014	Poster Prize – <i>European f-Element Chemistry Conference</i> – Nürnberg, DE
2009 – 2010	William G. Dauben Fellowship – Berkeley
2009	Outstanding Graduate Student Instructor Award in Chemistry 3a, Spring 2008 – Berkeley
2006 – 2011	National Science Foundation (NSF) Pre-Doctoral Fellowship
2005	Herchel Smith Harvard Summer Undergraduate Research Fellowship – Kyoto University
2002	National Merit Scholar

#### IV. Research, Scholarship, and Creative Activities

Group Website [www.lapierregroup.com](http://www.lapierregroup.com)

Citations Google Scholar: **1468** citations; H-index = **21**; i10-index = **28**.

Profiles [\[Google Scholar\]](#), [\[ORCID: 0000-0002-0895-0655\]](#)

Authorship <sup>φ</sup> next to item number indicates Georgia Tech research.

**Boldface** indicates graduate student<sup>G</sup>, undergraduate student<sup>UG</sup>, and postdoc<sup>PD</sup> supervised by La Pierre

<sup>+</sup> next to author indicates joint first authorship

\* indicates corresponding authorship

#### A. Refereed Publications and Submitted Articles

##### **A1. Published and Accepted Journal Articles**

(40 total; 20 from Georgia Tech research)

- 40<sup>φ</sup>. **Natalie T. Rice**,<sup>G</sup> Ivan A. Popov, Rebecca K. Carlson, Samuel M. Greer, **Andrew C. Boggiano**,<sup>G</sup> Benjamin W. Stein, John Bacsá, Enrique R. Batista, Ping Yang, and Henry S. La Pierre,\* “Spectroscopic and Electrochemical Characterization of a Pr<sup>4+</sup> Imidophosphorane Complex and the Redox Chemistry of Nd<sup>3+</sup> and Dy<sup>3+</sup> Complexes,” *Dalton Transactions*, **2022**, Accepted.
- 39<sup>φ</sup>. Fabrizio Ortu, Simon Randall, David J. Moulding, Adam Woodward, Andrew Kerridge, Karsten Meyer, Henry S. La Pierre,\* and Louise Natrajan,\* “Photoluminescence of Pentavalent Uranyl Amide Complexes,” *Journal of the American Chemical Society*, **2021**, 143, 33, 13184–13194. DOI: 10.1021/jacs.1c05184
- 38<sup>φ</sup>. **Luis M. Aguirre Quintana**,<sup>G</sup> Yan Yang, **Arun Ramanathan**,<sup>G</sup> **Ningxin Jiang**,<sup>G</sup> John Bacsá, Laurent Maron, and Henry S. La Pierre,\* “Chalcogen-Atom Abstraction Reactions of Di-Iron Imidophosphorane Complex,” *Chemical Communications*, **2021**, 57, 6664-6667; DOI: 10.1039/D1CC02195H.
- 37<sup>φ</sup>. **Thaige P. Gomba**,<sup>G+</sup> Samuel M. Greer,<sup>+</sup> **Natalie T. Rice**,<sup>G</sup> **Ningxin Jiang**,<sup>G</sup> Joshua Telser, Benjamin W. Stein, and Henry S. La Pierre,\* “High-Frequency and -Field EPR Spectroscopic Analysis of Metal-Ligand Covalency in a 4f<sup>7</sup> Valence Series (Eu<sup>2+</sup>, Gd<sup>3+</sup>, Tb<sup>4+</sup>),” *Inorganic Chemistry*, **2021**, 60, 9064-9073. DOI: 10.1021/acs.inorgchem.1c01062
- 36<sup>φ</sup>. Marcus J. Daum,<sup>+</sup> **Arun Ramanathan**,<sup>G+</sup> Alexander I. Kolesnikov, Stuart Calder, Martin Mourigal,\* and Henry S. La Pierre,\* “Collective excitations in the tetravalent lanthanide honeycomb antiferromagnet, Na<sub>2</sub>PrO<sub>3</sub>,” *Physical Review B*, **2021**, 103, L121109; [\[DOI\]](#).
- 35<sup>φ</sup>. **Arun Ramanathan**,<sup>G</sup> Johannes E. Liessen, and Henry S. La Pierre,\* “In-Plane Cation Ordering and Sodium Displacements in Layered Honeycomb Oxides with Tetravalent Lanthanides: Na<sub>2</sub>LnO<sub>3</sub> (Ln = Ce, Pr, and Tb),” *Inorganic Chemistry*, **2021**, 60, 3, 1398–1410; [\[DOI\]](#).
- 34<sup>φ</sup>. **Luis M. Aguirre Quintana**,<sup>G</sup> **Ningxin Jiang**,<sup>G</sup> John Bacsá, and Henry S. La Pierre,\* “Homoleptic Cerium tris(Dialkylamido)imidophosphorane Guanidinate Complexes,” *Dalton Transactions*, **2020**, 49, 14908-14913; [\[DOI\]](#).
- 33<sup>φ</sup>. **Ningxin Jiang**,<sup>G</sup> **Arun Ramanathan**,<sup>G</sup> Ryan E. Baumbach, and Henry S. La Pierre,\* “Synthesis of a d<sup>2</sup>, S=1 Kagome Lattice Antiferromagnet, (CH<sub>3</sub>NH<sub>3</sub>)<sub>2</sub>NaV<sub>3</sub>F<sub>12</sub>,” *Chemical Science*, **2020**, 11, 11811-11817; [\[DOI\]](#).

**A1. Published and Accepted Journal Articles – Continued**

- 32<sup>φ</sup>. **Thaige P. Gomba**,<sup>G,+</sup> **Arun Ramanathan**,<sup>G,+</sup> **Natalie T. Rice**,<sup>G,+</sup> and Henry S. La Pierre,\* “The chemical and physical properties of tetravalent lanthanides: Pr, Nd, Tb, and Dy,” *Dalton Transactions*, **2020**, 49, 15945-15987; [DOI].
- 31<sup>φ</sup>. **Natalie T. Rice**,<sup>G</sup> Ivan A. Popov, **Dominic R. Russo**,<sup>UG</sup> **Thaige P. Gomba**,<sup>G</sup> **Arun Ramanathan**,<sup>G</sup> John Bacsa, Enrique R. Batista, Ping Yang, and Henry S. La Pierre,\* “Comparison of tetravalent cerium and terbium ions in a conserved, homoleptic imidophosphorane ligand field,” *Chemical Science*, **2020**, 11, 6149-6159; [DOI].
- 30<sup>φ</sup>. **Ningxin Jiang**,<sup>G</sup> **Arun Ramanathan**,<sup>G</sup> John Bacsa, and Henry S. La Pierre,\* “Synthesis of a  $d^1$ -titanium fluoride kagome lattice antiferromagnet,” *Nature Chemistry*, **2020**, 12, 691–696; [DOI]. [News and Views by Kelsey A. Collins and Danna E. Freedman, “Taking Titanium for a Spin,” *Nature Chemistry*, **2020**, 12, 670-671]
- 29<sup>φ</sup>. **Natalie T. Rice**,<sup>G</sup> Karl McCabe, John Bacsa, Laurent Maron, and Henry S. La Pierre,\* “Two-Electron Oxidative Atom Transfer at a Homoleptic, Tetravalent Uranium Complex,” *Journal of the American Chemical Society*, **2020**, 142, 16, 7368–7373; [DOI].
- 28<sup>φ</sup>. **Luis M. Aguirre Quintana**,<sup>G</sup> **Ningxin Jiang**,<sup>G</sup> John Bacsa, and Henry S. La Pierre,\* “Coinage metal *tris*(dialkylamido)imidophosphorane complexes as transmetallation reagents for cerium complexes,” *Dalton Transactions*, **2020**, 49, 5420-5423; [DOI].
- 27<sup>φ</sup>. **Thaige P. Gomba**,<sup>G</sup> **Ningxin Jiang**,<sup>G</sup> John Bacsa, Henry S. La Pierre,\* “Synthesis of homoleptic, divalent lanthanide (Sm, Eu) complexes via oxidative transmetallation,” *Dalton Transactions*, **2019**, 48, 16869-1687; [DOI].
- 26<sup>φ</sup>. **Ningxin Jiang**,<sup>G</sup> and Henry S. La Pierre,\* “Frustrated Magnetism in a 2-D Ytterbium Fluoride,” *Inorganic Chemistry*, **2019**, 58(18), 12152-12156; [DOI].
- 25<sup>φ</sup>. **Natalie T. Rice**,<sup>G</sup> Ivan A. Popov, **Dominic R. Russo**,<sup>UG</sup> John Bacsa, Enrique R. Batista, Ping Yang, Joshua Telser, and Henry S. La Pierre,\* “Design, Isolation, and Spectroscopic Analysis of a Tetravalent Terbium Complex,” *Journal of the American Chemical Society*, **2019**, 141(33), 13222-13233; [DOI].
- 24<sup>φ</sup>. **Ningxin Jiang**,<sup>G</sup> Xiaojian Bai, John Bacsa, Martin Mourigal, and Henry S. La Pierre,\* “Synthesis and Magneto-Structural Characterization of  $\text{Yb}_3(\text{OH})_7\text{SO}_4 \cdot \text{H}_2\text{O}$ : a Frustrated Quantum Magnet with Tunable Stacking Disorder,” *Inorganic Chemistry*, **2019**, 58(15), 10417-10423; [DOI].
- 23<sup>φ</sup>. **Thaige P. Gomba**,<sup>G</sup> **Natalie T. Rice**,<sup>G</sup> **Dominic R. Russo**,<sup>UG</sup> **Luis M. Aguirre-Quintana**,<sup>G</sup> **Brandon J. Yik**,<sup>G</sup> John Bacsa, Henry S. La Pierre,\* “Diethyl ether adducts of trivalent lanthanide iodides,” *Dalton Transactions*, **2019**, 48, 8030-8033; [DOI]. [La Pierre lab synthetic and spectroscopic research.]
- 22<sup>φ</sup>. **Natalie T. Rice**,<sup>G,+</sup> Jing Su,<sup>+</sup> **Thaige P. Gomba**,<sup>G</sup> **Dominic R. Russo**,<sup>UG</sup> Joshua Telser, Lukas Palatinus, John Bacsa, Ping Yang, Enrique R. Batista, and Henry S. La Pierre,\* “Homoleptic Imidophosphorane Stabilization of Tetravalent Cerium,” *Inorganic Chemistry*, **2019**, 58(8), 5289-5304; [DOI].

**A1. Published and Accepted Journal Articles – Continued**

21. Jing Su, Enrique R. Batista, Sharon E. Bone, Kevin S. Boland, Joseph A. Bradley, Samantha K. Cary, David L. Clark, Steven D. Conradson, Alex S. Ditter, Jason M. Keith, Andrew Kerridge, Matthias W. Loeble, Richard L. Martin, Stefan G. Minasian, Veronika Mocko, Henry S. La Pierre, Nikolas Kaltsoyannis, Stosh A. Kozimor, Marianne P. Wilkerson, Laura E. Wolfsberg, Gerald T. Seidler, David K. Shuh, Ping Yang, “Energy Degeneracy Driven Covalency in Actinide Bonding,” *Journal of the American Chemical Society*, **2018**, 140(51), 17977-17984; [\[DOI\]](#).
20. Megan E. Fieser, Chad T. Palumbo, Henry S. La Pierre, Dominik P. Halter, Vamsee K. Voora, Joseph, W. Ziller, Filipp Furche, Karsten Meyer, and William J. Evans, “Comparisons of Lanthanide / Actinide +2 Ions in a Tris(aryloxo)arene Coordination Environment,” *Chemical Science*, **2017**, 8(11), 7424-7433; [\[DOI\]](#).
19. Ralph Zehnder, James Boncella, Justin N. Cross, Stosh A. Kozimor, Marissa Monreal, Henry S. La Pierre, Brian Scott, Aaron Tondreau, Matthias Zeller, “Network Dimensionality of Selected Uranyl(VI) Coordination Polymers and Octopus like Uranium(IV) Clusters,” *Crystal Growth and Design*, **2017**, 17(10), 5568-5582; [\[DOI\]](#).
18. John J. Kiernicki, Maryline G. Ferrier, Juan S. Lezama Pacheco, Henry S. La Pierre, Benjamin W. Stein, Matthias Zeller, Stosh A. Kozimor, Suzanne C. Bart, “Examining the Effects of Ligand Variation on the Electronic Structure of Uranium Bis(imido) Species,” *Journal of the American Chemical Society*, **2016**, 138 (42), 13941-13951; [\[DOI\]](#).
- 17<sup>φ</sup>. Christopher J. Hörger, Henry S. La Pierre,\* Frank W. Heinemann, Laurent Maron, Andreas Scheurer, and Karsten Meyer, “Uranium(III) Reductive Disproportionation of Nitric Oxide,” *Chemical Communications*, **2016**, 52(72), 10854-10857; [\[DOI\]](#)
16. Maryline G. Ferrier, Enrique R. Batista, John M. Berg, Eva R. Birnbaum, Justin N. Cross, Jonathan W. Engle, Stosh A. Kozimor, Henry S. La Pierre, Juan S. Lezama Pacheco, Benjamin W. Stein, S. Chantal E. Stieber, Justin J. Wilson, “Spectroscopic and Computational Investigation of Actinium Coordination Chemistry,” *Nature Communications*, **2016**, 7, 12312; [\[DOI\]](#).
15. Samantha K. Cary, Maryline G. Ferrier, Stosh A. Kozimor, Ryan E. Baumbach, Mark A. Silver, Juan S. Lezama Pacheco, Henry S. La Pierre, Benjamin W. Stein, Alexandra A. Arico, Danielle L. Gray, and Thomas E. Albrecht-Schmitt, “Monomers, Dimers, and Helical Chains: Complexities of Cerium and Plutonium Phenanthrolinecarboxylates,” *Inorganic Chemistry*, **2016**, 55(9), 4373-4380; [\[DOI\]](#).
14. Henry S. La Pierre,\* Michael Rosenzweig, Boris Kosog, Christina Hauser, Frank W. Heinemann, Stephen T. Liddle, and Karsten Meyer, “Charge Control of the Inverse *trans*-Influence,” *Chemical Communications*, **2015**, 51, 16671-16674; [\[DOI\]](#).
13. Dominik P. Halter, Henry S. La Pierre, Frank W. Heinemann, and Karsten Meyer, “Uranium(IV) Halide (F<sup>-</sup>, Cl<sup>-</sup>, Br<sup>-</sup>, and I<sup>-</sup>) Monoarene Complexes,” *Inorganic Chemistry*, **2014**, 53(16), 8418–8424; [\[DOI\]](#).
12. Henry S. La Pierre, Andreas Scheurer, Frank W. Heinemann, Wolfgang Hieringer, and Karsten Meyer, “Synthesis and Characterization of a Uranium(II) Monoarene Complex Supported by  $\delta$  Backbonding,” *Angewandte Chemie, International Edition*, **2014**, 53(28), 7158–7162; [\[DOI\]](#).

**A1. Published and Accepted Journal Articles – Continued**

11. Henry S. La Pierre, Hajime Kameo, Dominik P. Halter, Frank W. Heinemann, and Karsten Meyer, “Coordination and Redox Isomerization in the Reduction of a Uranium(III) Monoarene Complex,” *Angewandte Chemie, International Edition*, **2014**, 53 (28), 7154–7157; [DOI].
10. Henry S. La Pierre, Frank W. Heinemann, and Karsten Meyer, “Well-Defined Molecular Uranium(III) Chloride Complexes,” *Chemical Communications*, **2014**, 50(30), 3962–3964; [DOI].
9. Henry S. La Pierre and Karsten Meyer, “Activation of Small Molecules by Molecular Uranium Complexes,” *Progress in Inorganic Chemistry*, **2014**, 58, 303–415; [DOI].
8. Henry S. La Pierre, Stefan G. Minasian, Mark Abubekurov, Stosh A. Kozimor, David K. Shuh, Tolek Tyliczszak, John Arnold, Robert G. Bergman, and F. Dean Toste, “Vanadium Bisimide Bonding Investigated by X-ray Crystallography, <sup>51</sup>V and <sup>13</sup>C Nuclear Magnetic Resonance Spectroscopy, and V L<sub>3,2</sub>-Edge X-ray Absorption Near-Edge Structure Spectroscopy,” *Inorganic Chemistry*, **2013**, 52 (19), 11650–11660; [DOI].
7. Thomas L. Gianetti,<sup>+</sup> Henry S. La Pierre,<sup>+</sup> and John Arnold, “Group 5 Imides and Bis(imides) as Selective Hydrogenation Catalysts,” *European Journal of Inorganic Chemistry*, **2013**, 22-23, 3771–3783; [DOI].
6. Henry S. La Pierre and Karsten Meyer, “Uranium-Ligand Multiple Bonding in Uranyl Analogues, [L=U=L]<sup>n+</sup>, and the Inverse *trans*-Influence,” *Inorganic Chemistry*, **2013**, 52 (2), 529–539; [DOI].
5. Henry S. La Pierre, John Arnold, Robert G. Bergman, and F. Dean Toste, “Carbon Monoxide, Isocyanide, and Nitrile Complexes of a *d*<sup>0</sup> Vanadium Bisimide:  $\pi$  Back-Bonding Derived from the  $\pi$  Symmetry Bisimido Ligand Orbitals,” *Inorganic Chemistry*, **2012**, 51 (24), 13334–13344; [DOI].
4. Boris Kosog, Henry S. La Pierre, Melissa A. Denecke, Frank W. Heinemann, and Karsten Meyer, “Oxidation State Delineation via U L<sub>III</sub>-Edge XANES in a Series of Isostructural Uranium Coordination Complexes,” *Inorganic Chemistry*, **2012**, 51 (14), 7940–7944; [DOI].
3. Boris Kosog, Henry S. La Pierre, Frank W. Heinemann, Stephen T. Liddle, and Karsten Meyer, “Synthesis of Uranium (VI) Terminal Oxo Complexes: Molecular Geometry Driven by the Inverse *Trans*-Influence,” *Journal of the American Chemical Society*, **2012**, 134 (11), 5284–5289; [DOI].
2. Henry S. La Pierre, John Arnold, and F. Dean Toste, “(Z)-Selective, Semihydrogenation of Alkynes Catalyzed by a Cationic, Vanadium Bisimido Complex,” *Angewandte Chemie, International Edition*, **2011**, 50(17), 3900–3903; [DOI].
1. Sameer Urgaonkar, Henry S. La Pierre, Israel Meir, Henrik Lund, Debabrata RayChaudhuri, and Jared T. Shaw, “Synthesis of Antimicrobial Natural Products Targeting FtsZ: (+/-)-Dichamanetin and (+/-)-2''-hydroxy-5''-benzylisouvarinol,” *Organic Letters*, **2005**, 7, 5609–5612; [DOI].

**B. Other Publications and Creative Products****B.1 Editorials – Non-Refereed**

- 2<sup>φ</sup>. **Julie E. Niklas**<sup>PD</sup> and Henry S. La Pierre, News and Views, “Californium—carbon bond captured in a complex,” *Nature*, **2021**, 599, 379-380.

- 1<sup>φ</sup>. Yinyin Bao, Amaury Bossion, Davide Brambilla, Jillian M. Buriak, Kang Cai, Long Chen, Joya A. Cooley, Juan-Pablo Correa-Baena, John M. Dagdelen, Miriam Z. Fenniri, Matthew K. Horton, Hrishikesh Joshi, Brian V. Khau, Grit Kupgan, Henry S. La Pierre, Chengcheng Rao, Adrienne M. Rosales, Dong Wang, and Qifan Yan, “Snapshots of Life-Early Career Materials Scientists Managing in the Midst of a Pandemic,” *Chemistry of Materials*, **2020**, *32*, 9, 3673–3677; [DOI].

## B.2 Dissertation

1. H.S. La Pierre (Dir: J. Arnold, R. G. Bergman, F. D. Toste), “Neutral and Cationic Vanadium Bisimido Complexes: Their Synthesis, Characterization, and Application in the Binding, Activation, and Catalytic Functionalization of Small Molecules,” Ph.D. Dissertation, University of California, Berkeley (December 2011).

## C. Presentations

### C1. Upcoming Invited Presentations

- 12<sup>φ</sup>. “TBD,”  
**Western Regional ACS Meeting**, October 19-22, 2022, Las Vegas, NV.
- 11<sup>φ</sup>. “High-Valent U, Np, and Pu Imidophosphorane Mono-Oxo Complexes,”  
**Actinides Revisited**, September 2022, Dresden, DE.
- 10<sup>φ</sup>. “High-Valent U, Np, and Pu Imidophosphorane Mono-Oxo Complexes,”  
**Plutonium Futures**, September 2022, Avignon, FR.
- 9<sup>φ</sup>. “Uranium and Neptunium Imidophosphorane Mono-Oxo Complexes,”  
Symposium on “Emerging Areas in Inorganic Chemistry,” **264<sup>th</sup> ACS National Meeting**, August 21-25, 2022, Chicago, IL.
- 8<sup>φ</sup>. “Redox Chemistry of the Rare-Earth Elements,”  
**29<sup>th</sup> Rare Earth Research Conference Summer School**, June 2022, Philadelphia, PA
- 7<sup>φ</sup>. “Bonding, Reactivity, and Magnetism of Tetravalent Lanthanide Ions in Molecules and Extended Solids,”  
**29<sup>th</sup> Rare Earth Research Conference**, June 2022, Philadelphia, PA. (Delayed from summer 2020 due to COVID-19)
- 6–1<sup>φ</sup>. “Electron (De)Localization in *f*-Element Systems: From Fundamental Questions to QIS Design Principles,”  
**Oak Ridge National Laboratory**, 08/18/2022  
**Florida State University**, TBD (delayed due to COVID)  
**Washington State University**, TBD (delayed due to COVID)  
**Los Alamos National Laboratory**, TBD (delayed due to COVID)  
**CNRS-Paris/Ecole Polytechnique**, TBD (delayed due to COVID)  
**Berkeley Actinide Group (UC-Berkeley/LBNL)**, TBD (delayed due to COVID)

### C2. Invited Presentations at Conferences

- 10<sup>φ</sup>. “TBD,”  
**2022 Molecular Magnetism in North America (MAGNA) Conference**, May 1-5, 2022, Gainesville, FL.



**C2. Invited Presentations at Conferences – Continued**

- 9<sup>φ</sup>. “Redox Chemistry and Spectroscopy of High-Valent Lanthanides,”  
Symposium on “Rare Earth Separations: From Fundamentals to Advanced Processes,” **263<sup>rd</sup> ACS National Meeting**, March 20-24, 2022, San Diego, CA.
- 8<sup>φ</sup>. “Synthesis and characterization of  $d^1$  and  $f^1$  frustrated magnets,”  
**North American Solid-State Chemistry Conference**, July 2021, Virtual.
- 7<sup>φ</sup>. “Electron (De)Localization in  $f$ -Element Systems,”  
**DOE – Heavy Element Chemistry Contractors Meeting**, June 11<sup>th</sup>, 2021, Gaithersburg, MD (Virtual).
- 6<sup>φ</sup>. “ $f$ -Block Material Design Driven by Control of  $f$ - and  $d$ -Orbital Covalency,” **BYI Mid-Grant Review**, Virtual, Irvine, CA September 18<sup>th</sup>, 2020.
- 5<sup>φ</sup>. “Synthesis and spectroscopy of tetravalent lanthanide (Ce and Tb) complexes,” **259<sup>th</sup> ACS National Meeting**, Philadelphia, PA March 2020 (cancelled due to COVID-19).
- 4<sup>φ</sup>. “History of the valence electronic structure of the actinides,”  
**Southeast Regional Meeting of the American Chemical Society (SERMACS)**, November, 2019, Savannah, GA.
- 3<sup>φ</sup>. “Molecular tetravalent lanthanide complexes,”  
**Southeast Regional Meeting of the American Chemical Society (SERMACS)**, November, 2019, Savannah, GA.
- 2<sup>φ</sup>. “Electron Delocalization in the  $f$ -Block,”  
**DOE – Heavy Element Chemistry Contractors Meeting**, April 2019, Gaithersburg, MD (Poster).
- 1<sup>φ</sup>. “Bulky, Weak-Field Ligand Complexes of  $f$ -Block Ions,”  
**SERMACS**, November 2<sup>nd</sup>, 2018, Augusta, GA.

**C3. Invited Presentations at Universities and Institutes**

- 18–35<sup>φ</sup>. “Electron (De)Localization in  $f$ -Element Systems: From Fundamental Questions to QIS Design Principles,”  
**Missouri S&T**, 10/04/2021  
**Notre Dame, Actinide Center of Excellence** 10/01/2021  
**Georgia Institute of Technology**, 09/09/2021  
**University of California, Santa Barbara** 5/28/2021  
**California Institute of Technology**, 5/07/2021  
**University of California, Los Angeles** 5/05/2021  
**University of Kansas**, 4/30/201  
**University of Texas, El Paso**, 3/19/2021  
**Cornell University**, 3/08/2021  
**University of Rochester**, 3/01/2021  
**University of Chicago**, 2/26/2021  
**University of Washington**, 2/16/2021  
**University of California, Berkeley** 2/12/2021

**Northwestern University**, 01/27/21  
**Pacific Northwest National Laboratory**, 01/19-20/2021  
**Colorado School of Mines**, 11/20/2020  
**Texas A&M**, 11/18/2020  
**Columbia University**, 11/12/2020

- 15–17<sup>φ</sup>. “Electron Delocalization in the *f*-Block,”  
**University of Southern California**, February 18<sup>th</sup>, 2020  
**University of California, Irvine**, February 13<sup>th</sup>, 2020  
**University of Georgia**, April 22<sup>nd</sup>, 2019
- 14<sup>φ</sup>. “Spectroscopic Mapping of *f*-element Magnetic Exchange,”  
ORNL-GT CNMS Meeting, **Georgia Institute of Technology**, January 31<sup>st</sup>, 2017.
- 8–13. “Applications of Actinide Covalency,”  
**Washington State University**, February 3–5, 2016  
**Ohio State University**, January 25–27, 2016.  
**University of Delaware**, December 15–17, 2015.  
**Brown University**, December 2–4, 2015.  
**San Diego State University**, November 22–24, 2015.  
**Georgia Institute of Technology**, November 16–18, 2015.
7. “Fundamental Structure and Bonding in Actinide Complexes and Materials”  
**George-August-Universität Göttingen**, March 25–26, 2015.
- 4–6. “Fundamental Paradigms of Structure and Reactivity in Uranium Coordination Complexes,”  
**University of Wyoming**, January 12–15, 2014.  
**University of Arizona**, January 7–10, 2014.  
**University of Iowa**, December 15–17, 2013.
3. “Reduction and Oxidation Reactions of a Uranium(III) Monoarene Complex,”  
**University of Manchester**, November 28–30, 2013.
2. “Metal-Ligand Cooperation in Catalysis, Weak-Bonding Interactions, and Low-Valent Complexes,”  
**Kansas State University**, December 18–20, 2012.
1. “PHIP NMR Analysis of Alkyne Semihydrogenation Catalyzed by a Cationic Vanadium Bisimido Complex,” Alexander Pines Group Seminar, **University of California, Berkeley**, CA, February 12, 2010.

#### C4. Contributed Presentations at Conferences – Talks

- 7<sup>φ</sup>. “Perturbing the Balance Between Ionic and Covalent Bonding in Early Actinide Complexes,” 257<sup>th</sup> ACS National Meeting, Orlando, FL, March, 2019.
- 6<sup>φ</sup>. “Weak-Field Ligands in *f*-Element Chemistry,” 255<sup>th</sup> ACS National Meeting, New Orleans, LA, March 21<sup>st</sup>, 2018.
5. “Synthesis, Structure, and Electronic Spectroscopy of Actinide Complexes and Materials,” 250<sup>th</sup> ACS National Meeting, Boston, MA, August 19<sup>th</sup>, 2015.



**C4. Contributed Presentations at Conferences – Talks - Continued**

4. “Catalytic Hydrogenation of Alkynes by a Cationic Vanadium Bisimido Complex,” 239<sup>th</sup> ACS National Meeting, San Francisco, CA, March 24, 2010.
3. “Synthesis of a Cationic Vanadium Bisimido Complex and its Reversible Addition of H<sub>2</sub>,” International Symposium on Bio-Environmental Chemistry, Osaka University, Osaka, JP, December 19-20, 2009.
2. “Synthesis of Vanadium Bisimido Complexes: Progress Towards a C–H Bond Functionalization Reaction,” UC-Berkeley Graduate Research Seminar Series, University of California, Berkeley, CA, January 24, 2008.
1. “Synthesis and Thermal Ring-opening Reaction of 3-(1-silacyclobutyl)cyclobutene,” Herchel Smith Undergraduate Science Research Symposium, Harvard University, Cambridge, MA, February 27, 2006.

**C5. Contributed Presentation at Conferences – Posters**

- 12<sup>φ</sup>. “*f*-Block Material Design Driven by Control of *f*- and *d*-Orbital Covalency,” Ningxin Jiang, Xiaojian Bai, John Bacsá, Martin Mourigal, and Henry S. La Pierre, 2019 Beckman Symposium, Irvine, CA, August 8-12<sup>th</sup>, 2019.
- 11<sup>φ</sup>. “Lanthanide and Actinide Imidophosphorane Chemistry: Molecular Models of Mixed-Valent *f*-Element Materials,” Henry S. La Pierre, Natalie T. Rice, Thaige P. Gompa, Dominic P. Russo, Joshua Telser, Lukas Palatinus, John Bacsá, Plutonium Futures 2018 – The Science, San Diego, California, September 9<sup>th</sup> – 14<sup>th</sup>, 2018.
- 10<sup>φ</sup>. “*f*-Block Material Design Driven by Control of *f*- and *d*-Orbital Covalency,” Ningxin Jiang, Xiaojian Bai, John Bacsá, Martin Mourigal, and Henry S. La Pierre, 2018 Beckman Symposium, Irvine, CA, August 12-15<sup>th</sup>, 2018.
- 9<sup>φ</sup>. “Homoleptic Imidophosphorane Stabilization of Tetravalent Cerium,” Henry S. La Pierre, Natalie T. Rice, Jing Su, Thaige P. Gompa, Dominic R. Russo, Joshua Telser, Lukas Palatinus, John Bacsá, Ping Yang, Enrique R. Batista, Gordon Research Conference on Inorganic Chemistry, Biddeford, Maine, June, 2018.
8. “Synthesis, Characterization, and Reactivity of a Uranium(II) Monoarene Complex,” Henry S. La Pierre, Dominik P. Halter, Hajime Kameo, Andreas Scheurer, Wolfgang Hieringer, Frank W. Heinemann, and Karsten Meyer, Gordon Research Conference on Inorganic Chemistry, University of New England, Maine, June, 2014.
7. “Synthesis, Characterization, and Reactivity of a Uranium(II) Monoarene Complex,” Henry S. La Pierre, Dominik P. Halter, Hajime Kameo, Andreas Scheurer, Wolfgang Hieringer, Frank W. Heinemann, and Karsten Meyer, COST Action CM1006, *European f-Element Chemistry*, EUFEN 3, Nürnberg, DE, April 12-15<sup>th</sup>, 2014. – Poster Prize.
6. “Reduction and Oxidation Reactions of a Uranium(III) Monoarene Complex,” Henry S. La Pierre, Dominik P. Halter, Hajime Kameo, Frank W. Heinemann, and Karsten Meyer, Gordon Research Conference on Organometallics, Salve Regina University, Rhode Island, July, 2013.

**C5. Contributed Presentations at Conferences – Posters – Continued**

5. “Group 5 Imides: Two Approaches for Directing Selective, Catalytic Hydrogenation,” Henry S. La Pierre, Thomas L. Gianetti, Robert G. Bergman, F. Dean Toste, and John Arnold, Gordon Research Conference on Organometallics, Salve Regina University, Rhode Island, July, 2011.
4. “Catalytic Hydrogenation *via* [1,2]-addition of H<sub>2</sub> to an Imido Ligand of a Cationic Vanadium Bisimido Complex,” Henry S. La Pierre, John Arnold, and F. Dean Toste, CaRLa Winter School 2010, Catalysis Research Laboratory (CaRLa) at University of Heidelberg, Heidelberg, DE, March 6-12, 2010.
3. “Group 14 Element Substituent Effect on Cyclobutene Ring-Opening,” Ippei Usui, Soichiro Konno, Henry S. La Pierre, Munehiro Hasegawa, Masahiro Murakami, Nippon Kagakkai Koen Yokosku (Conference of the Chemical Society of Japan), Nihon University, Tokyo, JP, March 27-30, 2006.
2. “Synthesis and Thermal Ring-opening Reaction of 3-(1-silacyclobutyl)cyclobutene,” Henry S. La Pierre, Ippei Usui, and Masahiro Murakami, Herchel Smith Undergraduate Science Research Symposium, Harvard University, Cambridge, MA, February 27, 2006.
1. “Studies in the Synthesis and Mechanism of Action of Antimicrobial Phenolic Natural Products,” Henry S. La Pierre, Michael L. Fingerhood, Israel Meir, and Jared T. Shaw, Gordon Research Conference on Natural Products, Tilton School, New Hampshire, July, 2004.

**C6. Contributed Presentations at Conferences by La Pierre Group Students and Postdocs**

**Bold** denotes student presenter

- 13<sup>φ</sup>. “Kitaev Materials beyond the Iridates,” **Arun Ramanathan**<sup>G</sup> and Henry S. La Pierre, APS March Meeting, Denver, CO March 16<sup>th</sup>, 2021.
- 12<sup>φ</sup>. “Synthesis of *d*<sup>1</sup>-titanium fluoride kagome lattice antiferromagnets” **Ningxin Jiang**<sup>G</sup> and Henry S. La Pierre. STUCK Meeting (Scientific Talks Under Crummy Konditions), Virtual, July 29<sup>th</sup>, 2020.
- 11<sup>φ</sup>. “High Valent *f*-element Imidophosphorane Complexes” **Natalie T. Rice**<sup>G</sup> and Henry S. La Pierre, Angular Momentum, Virtual, Invited Talk, August 4<sup>th</sup>, 2020.
- 10<sup>φ</sup>. “High Valent *f*-element Imidophosphorane Complexes” **Natalie T. Rice**<sup>G</sup> and Henry S. La Pierre. STUCK Meeting (Scientific Talks Under Crummy Konditions), Virtual, May 13<sup>th</sup>, 2020.
- 9<sup>φ</sup>. “Synthesis of a *d*<sup>1</sup>-titanium fluoride kagome lattice antiferromagnet,” **Ningxin Jiang**<sup>G</sup> and Henry S. La Pierre, Princeton Summer School on Condensed Matter Physics, June 8<sup>th</sup>, 2020.
- 8<sup>φ</sup>. “Kitaev material candidates beyond the d-block,” **Arun Ramanathan**<sup>G</sup> and Henry S. La Pierre, Princeton Summer School on Condensed Matter Physics, June 12<sup>th</sup>, 2020.
- 7<sup>φ</sup>. “Kitaev Materials beyond the Iridates,” **Arun Ramanathan**<sup>G</sup> and Henry S. La Pierre, APS March Meeting, Denver, CO March 2020 (cancelled due to COVID-19).
- 6<sup>φ</sup>. “Late Transition-Metal *Tris*(Dialkylamido)imidophosphorane Complexes,” **Luis M. Aguirre-Quintana**<sup>G</sup> and Henry S. La Pierre, 259<sup>th</sup> ACS National Meeting, Philadelphia, PA March 2020 (cancelled due to COVID-19).

**C6. Contributed Presentations at Conferences by La Pierre Group Students and Postdocs – Continued**

- 5<sup>φ</sup>. “Synthesis and Spectroscopy of High-Valent Lanthanides,” **Natalie T. Rice**,<sup>G</sup> and Henry S. La Pierre, SSRL User Meeting, Palo Alto, CA September 2019 (poster).
- 4<sup>φ</sup>. “Synthesis and Spectroscopy of Mixed-Valent Lanthanide Complexes,” **Thaige P. Gompa**,<sup>G</sup> Henry S. La Pierre, SSRL User Meeting, Palo Alto, CA September 2019 (poster).
- 3<sup>φ</sup>. “Homoleptic Imidophosphorane Cerium Complexes: Potent Thermodynamic Reductants and Stabilization of Tetravalent Oxidation State,” **Natalie T. Rice**,<sup>G</sup> Jing Su, Enrique R. Batista, John Bacsá, Ping Yang, and Henry S. La Pierre, 257<sup>th</sup> ACS National Meeting, Orlando, FL March, 2019 (talk).
- 2<sup>φ</sup>. “Magneto-Structural Characterization of Two Novel Ytterbium Frustrated Magnets,” **Ningxin Jiang**,<sup>G</sup> Xiaojian Bai, John Bacsá, Martin Mourigal, and Henry S. La Pierre, 257<sup>th</sup> ACS National Meeting, Orlando, FL March, 2019 (talk).
- 1<sup>φ</sup>. “Homoleptic, Homobimetallic *f*-block Complexes,” **Thaige P. Gompa**,<sup>G</sup> John Bacsá, Henry S. La Pierre, 257<sup>th</sup> ACS National Meeting, Orlando, FL March, 2019 (talk).

**D. Other Scholarly and Creative Accomplishments****D1. Beamtime and Instrumentation Proposals – Awarded**

- 18<sup>φ</sup>. “Large Single Crystal Growth of the Tetravalent Lanthanide Perovskite, SrPrO<sub>3</sub>,” NSF-PARADIM Proposal, Henry S. La Pierre (PI), **Awarded**, (Off-site, prop. 250).
- 17<sup>φ</sup>. “Controlling exchange anisotropy in lanthanides by tuning spin-orbit coupling of the ligand in Cs<sub>3</sub>Ln<sub>2</sub>X<sub>9</sub> (Ln = Dy; X = Cl, Br, I),” NIST-DCS Beam Time Proposal, Henry S. La Pierre (PI), **Awarded**, (28326); Delayed – Facility down.
- 16<sup>φ</sup>. “Probing the single-ion behavior and crystal field excitations of tetravalent lanthanides in Li<sub>8</sub>LnO<sub>6</sub> compounds comprising isolated Ln Sites,” ORNL-SNS Beam Time Proposal, Henry S. La Pierre (PI), **Awarded**, (On-site, IPTS-25707.1).
- 15<sup>φ</sup>. “Probing the CEF states of 5d orbitals in tetravalent lanthanides at L<sub>3</sub>-edge using RIXS,” APS Beam Time Proposal, Henry S. La Pierre (PI), **Awarded**, (On-site, GUP-70056, COVID-delay).
- 14<sup>φ</sup>. “HFEP of isostructural 4f<sup>7</sup>, 8S<sub>7/2</sub>, Tb<sup>4+</sup>, Gd<sup>3+</sup>, and Eu<sup>2+</sup> Complexes,” NHMFL Proposal, Henry S. La Pierre (PI), **Awarded**, (On-site, P19275).
- 13<sup>φ</sup>. “Variable Temperature PXRD Analysis of a Ti<sup>3+</sup> based kagome lattice compound, (CH<sub>3</sub>NH<sub>3</sub>)<sub>2</sub>NaTi<sub>3</sub>F<sub>12</sub>,” ORNL-CNMS Proposal, Henry S. La Pierre (PI), **Awarded**, (Mail-in, Rapid-Access, CNMS2020-R-00237).
- 12<sup>φ</sup>. “Single-ion and collective excitations in the Na<sub>2</sub>LnO<sub>3</sub> (Ln = Ce<sup>4+</sup>, Pr<sup>4+</sup>, Tb<sup>4+</sup>) family of rare-earth honeycomb lattices,” ORNL-SNS Beam Time Proposal, Henry S. La Pierre (PI), **Awarded**, (On-site, IPTS-23500.1).
- 11<sup>φ</sup>. “Low-temperature magnetic structure characterization of a d1 kagome lattice antiferromagnet,” ORNL-SNS Beam Time Proposal, Henry S. La Pierre (PI), **Awarded**, (Mail-in, IPTS-24651).

**D1. Beamtime and Instrumentation Proposals – Awarded – Continued**

- 10<sup>φ</sup>. “Dependence of Lanthanide Covalent Bonding on Magnetic Exchange Measured by O K-edge XAS,” APS Beam Time Proposal, Henry S. La Pierre (PI), **Awarded**, (On-site, GUP-68339)
- 9<sup>φ</sup>. “Structural Characterization of Tetravalent Lanthanide Kitaev Materials Na<sub>2</sub>MO<sub>3</sub> (M = Ce, Pr, and Tb),” APS Beam Time Proposal, Henry S. La Pierre (PI), **Awarded**, (Mail-in, PXR samples, GUP-64852)
- 8<sup>φ</sup>. “Structural Characterization of Tetravalent Lanthanide Kitaev Materials Na<sub>2</sub>MO<sub>3</sub> (M = Ce, Pr, and Tb),” APS Beam Time Proposal, Henry S. La Pierre (PI), **Awarded**, (Mail-in, PDF samples, GUP-66723)
- 7<sup>φ</sup>. EXTENSION: “Expanding the Tetravalent Chemistry of the Lanthanides,” SSRL Beam Time Proposal 5151, Henry S. La Pierre (PI), **Awarded** (80, 8-hour shifts) starting 11/01/2018 (now ends 5/31/2022).
- 6<sup>φ</sup>. “Ligand K-edge XAS Constraint of Magnetic Superexchange in f-Element Complexes,” SSRL Beam Time Proposal 5646, Henry S. La Pierre (PI), **Awarded** (18, 8-hour shifts) starting 11/01/2017.
- 5<sup>φ</sup>. “Expanding the Tetravalent Chemistry of the Lanthanides,” SSRL Beam Time Proposal 5151, Henry S. La Pierre (PI), **Awarded** (80, 8-hour shifts) starting 11/01/2018.
- 4<sup>φ</sup>. “Ligand K-edge XAS Constraint of Magnetic Superexchange in f-Element Complexes,” SSRL Beam Time Proposal 4954, Henry S. La Pierre (PI), **Awarded** (32, 8-hour shifts) starting 11/01/2017.
3. “Structural Determination of Quaternary Rare-earth Molybdenum Uranium Oxides, (RE<sub>4</sub>MoUO<sub>10</sub>), of the Tetragonal RE<sub>2</sub>MoO<sub>5</sub> type,” Henry S. La Pierre, Stosh A. Kozimor, and Juan S. Lezama-Pacheco, APS Beamline; **Approved**, April 2015 – measurement delayed.
2. “Quantitative Analysis of Actinyl (U, Np, and Pu) Orbital Mixing,” Stosh A. Kozimor, Tonya Vitova, and Henry S. La Pierre, TALISMAN: ANKA/INE Beamline; **Approved**, 5 days beam time in October – November 2015.
1. “U L<sub>3</sub>-edge High Resolution (HR)-XANES Studies on a Series of Pseudo-Isostructural U(II)-U(VI) Complexes,” Henry S. La Pierre, Melissa Denecke, and Karsten Meyer, ANKA: INE Beamline; Prop. #A2014-024-006737 **Approved**, March 17<sup>th</sup> – March 19<sup>th</sup>, 2015.

**D2. Beamtime and Instrumentation Proposals – Pending**

- 5<sup>φ</sup>. “Expanding the Tetravalent Chemistry of the Lanthanides,” SSRL Beam Time Proposal, Henry S. La Pierre (PI), **Pending** (new submission for next two years).
- 4<sup>φ</sup>. “Direct Observation of Ligand Field Interactions in Formally Tetravalent Lanthanide Compounds,” ALS Beam Time Proposal, Stefan G. Minasian (co-PI), Henry S. La Pierre (co-PI), **Pending**, RAPIDD.
- 3<sup>φ</sup>. “Probing the effect of spin-orbit coupling of ligands on crystal field excitations of trivalent lanthanides in Cs<sub>3</sub>Ln<sub>2</sub>X<sub>9</sub> (Ln = Dy, Yb; X = Cl, Br, I),” ORNL-SNS Beam Time Proposal, Henry S. La Pierre (PI), **Delayed Review** (Facility down), (On-site, IPTS-26587.1).



*Award:* President's Graduate Fellowship (GT)  
Thank-a-Teacher (GT, Fall 2021)  
Advanced to candidacy, Spring 2021

5. Arun Ramanathan                      Ph.D. student (Georgia Tech Chemistry, spring 2018 – present)  
*Awards:* National School on Neutron and X-ray Scattering (ANL)  
Quantum Alliance Graduate Research Fellowship (GT, 2021)  
William Starnes Graduate Research Fellowship (GT, 2021)  
Quantum Alliance Graduate Research Fellowship (GT, 2022)  
Advanced to candidacy, Spring 2019

*Former:*

4. Ningxin Jiang                              Ph.D. student (Georgia Tech Chemistry, fall 2017 – 2021)  
*Thesis:* Synthesis and Characterization of Solid-State and Molecular Quantum Magnetic Materials  
*Subsequently:* Postdoctoral Fellow at University of Chicago with Prof. John Anderson
3. Luis M. Aquirre-Quintana      Ph.D. student (Georgia Tech Chemistry, fall 2016 – 2021)  
*Awards:* President's Graduate Fellowship (GT)  
Conacyt Graduate Fellowship  
*Thesis:* Tuning the Electronic Properties and Redox Chemistry of Late Transition Metal and f-Element Molecular Compounds Using Weak-Field Ligands  
*Subsequently:* Postdoctoral Fellow at Lawrence Berkeley National Laboratory with Prof. Rebecca Abergel
2. Thaige P. Gomba                      Ph.D. student (Georgia Tech Chemistry, fall 2016 – 2021)  
*Awards:* Emerson and President's Graduate Fellowship (GT)  
Advanced to candidacy, Fall 2017, Graduating August 2021  
*Thesis:* Synthesis and Spectroscopic Characterization of Low- and High-Valent Weak-Field Lanthanide Complexes  
*Subsequently:* Postdoctoral Fellow at Los Alamos National Laboratory with Dr. Benjamin Stein and Dr. Aaron Tondreau
1. Natalie T. Rice                              Ph.D. student (Georgia Tech Chemistry, , fall 2016 – 2021)  
*Awards:* Sepcic Pfeil Ph.D. Fellowship (GT)  
President's Graduate Fellowship (GT)  
*Thesis:* "High-Valent *f*-Element Imidophosphorane Complexes: Electronic Structure and Reactivity"  
*Subsequently:* Director's Postdoctoral Fellow at Los Alamos National Laboratory with Dr. Stosh A. Kozimor

## **B2. MS Students**

(1 total, 1 graduated)

*Former*

1. Brandon J. Yik                              M.S. student (Georgia Tech Chemistry, fall 2016 – Spring 2019)  
Research MS Thesis, Completion in Spring 2019  
"Ligand Design for Developing *f*-Element Photochemistry"  
Subsequently: Ph.D. Candidate in Chemical Education, University of South Florida

**B3. Undergraduate Students**

(9 total, 5 graduated)

*Current*

9. Hailey Akins (Georgia Tech Chemistry, expected Spring 2024)  
*Award:* President's Undergraduate Research Award, Spring 2022 (\$1,500)

*Former*

8. Ryan Wainer (Georgia Tech Chemistry, expected Spring 2022)  
 Now Chemistry Ph.D. student at Stanford University with Prof. Hemala Karunadasa
7. Ashi Mummareddy (Georgia Tech Chemistry, expected Spring 2024)
6. Razeen Basunia (Georgia Tech Chemistry, expected Spring 2024)
5. Dominic R. Russo (Georgia Tech Chemistry, Graduated Spring 2017)  
*Award:* President's Undergraduate Research Award, Spring 2017 (\$1,500)  
 Now Chemistry Ph.D. student at University of California, Berkeley with Prof. Jeffrey Long
4. Michael Zott (Georgia Tech Chemistry, Graduated Spring 2018)  
 Now Chemistry Ph.D. student at California Institute of Technology with Prof. Jonas Peters
3. Kirsten Martin (Georgia Tech Chemistry, Graduated Spring 2017)  
 Now Chemistry Ph.D. student at Stony Brook University with Prof. Eszter Boros
2. Tilak Patel (Georgia Tech Chemistry, Graduated Spring 2019)  
*Award:* President's Undergraduate Research Award, Summer 2018 (\$1,500)  
 Now Post-Bac Studies for Medical School
1. Benjamin Jean (Georgia Tech Chemistry, Graduated Spring 2019)  
 Now Materials Science and Engineering Ph.D. student at Georgia Tech

**B4. Service on Thesis Committees***In progress*

Christian Owens	Ph.D. student (Georgia Tech Chemistry, 2021 – present)
Eric Towles	Ph.D. student (Georgia Tech Chemistry, 2020 – present)
Andrew Hill	Ph.D. student (Georgia Tech Chemistry, 2020 – present)
Edgar Aldama	Ph.D. student (Georgia Tech Chemistry, 2019 – present)
Daniel L. Bodine	Ph.D. student (Georgia Tech Chemistry, 2019 – present)
Chenxiao Wang	Ph.D. student (Georgia Tech Chemistry, 2019 – present)
Mina Song	Ph.D. student (Georgia Tech Chemistry, 2019 – present)
Shangye Ma	Ph.D. student (Georgia Tech Chemistry, 2018 – present)
Declan McCarthy	Ph.D. student (Georgia Tech Chemistry, 2018 – present)
Christopher Kuehner	Ph.D. student (Georgia Tech Chemistry, 2016 – present)
Meghan Benda	Ph.D. student (Georgia Tech Chemistry, 2016 – present)

*Completed – Ph.D.*

Yi Cao	Ph.D. (Georgia Tech Chemistry, 2016 – 2021)
Anthony Llyod	Ph.D. (Georgia Tech Chemistry, 2016 – 2020)
Samuel Baxter	Ph.D. (Georgia Tech Chemistry, 2016 – 2020)
Zhiheng Lyu	Ph.D. (Georgia Tech Chemistry, 2016 – 2020)

*Completed – M.S.*

Christopher Sato	M.S. (Georgia Tech Chemistry, 2015 – 2017)
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**B5. Mentorship of Postdoctoral Fellows and Visiting Scholars***Current:*

5. Dr. Maximillian G. Bernbeck Postdoctoral Scholar (starting Spring 2023)  
Ph.D. University of California, San Diego (Advisor: Prof. Jeffrey D. Rinehart)
4. Dr. Michael Roy Postdoctoral Scholar, January 2022 – present  
Ph.D. University of Wisconsin (Advisor: Prof. John F. Berry).
3. Dr. Julie E. Niklas Postdoctoral Scholar, June 2020 – present  
Ph.D. Auburn University (Advisor: Prof. Anne E. Gorden).

*Former:*

2. Dr. Cory J. Windorff Postdoctoral Scholar, April 2020 – June 2020  
Ph.D. University of California, Irvine (Advisor: Prof. William J. Evans).  
Now Assistant Professor at New Mexico State University
1. Dr. Kai Wang Postdoctoral Scholar, October 2018 – December 2019  
Ph.D. University of Edinburgh (Advisor: Prof. Polly Arnold).

**C. Educational Innovations and Other Contributions****C1. Course Development**

3. CHEM 6172 (For Fall 2021): Physical Methods in Inorganic Chemistry (a complete update of the curriculum)
2. CHEM/NRE 4803/8803: Radiochemistry and Actinide Chemistry (New course from scratch co-taught with Dr. Biegalski)
1. CHEM 6170: Inorganic Chemistry I; updated coordination chemistry course for first-year chemistry graduate students

**VI. Service****A. Professional Contributions****A1. Conference Organizing**

2. Member of the Organizing Committee for **Actinides 2021 International Conference** (managed by the American Nuclear Society), in Tallahassee, FL (Hosted by Florida State University), September 2021 (Recently officially delayed due to COVID-19).  
Now Actinides 2023 International Conference (details pending)  
[See [www.actinides2021.com](http://www.actinides2021.com)]
1. Symposium on “Reactive Electropositive Metal Complexes (working title),” in development for the **ACS National Meeting** (delayed due to COVID-19) with Stefan G. Minasian, Heather L. Buckley, Neil C. Tomson, and Thomas L. Gianetti.

**A2. Advisory Committees**

1. Elected to the Stanford Synchrotron Radiation Lightsource (SSRL) User Executive Committee, 2017 – 2020.

**A3. Membership in Professional Societies**

3. Member of the American Chemical Society, 2009 –
2. Member of the American Association for the Advancement of Science (AAAS), 2017 –
1. Member of the American Nuclear Society (ANS), 2017 –

**A4. Peer Reviewing – Journals**

1. Paper Reviewer for *Nature*, *Nature Communications*, *Journal of the American Chemical Society*, *Chemical Science*, *Angewandte Chemie*, *Chemistry: A European Journal*, *Inorganic Chemistry*, *Inorganic Chemistry Frontiers*, *Journal of Physical Chemistry*, *Chemical Communications*, *Dalton Transactions*, *Organometallics*, *Chemical Reviews*, *Chem*, *ACS Organic & Inorganic Au*, *Comments on Inorganic Chemistry*, *Structure and Bonding*, *Coordination Chemistry Reviews*, *Inorganica Chimica Acta*, *Australian Journal of Chemistry*, *Polyhedron*.  
Review 30-40 papers per year.

**A5. Peer Reviewing – Proposals**

1. Proposal Reviewer for: DOE – Heavy Element Chemistry Program, DOE – Early Career Research Program, DOE – Nuclear Energy University Program, DOE – SCGSR, DOE – Energy Frontier Research Center, NSF – Panel Reviewer, NSF – *Ad Hoc* Reviewer, NSF – GRFP, SSRL – User Proposals, NHMFL – User Proposals, American Chemical Society – Petroleum Research Fund.

**B. Public and Community Service****B1. Outreach Programs**

2. “Redox Chemistry of the Rare-Earth Elements,”  
**29<sup>th</sup> Rare Earth Research Conference Summer School**, June 2022, Philadelphia, PA
1. Judge for 2016 Siemens Competition in Math, Science, and Technology Regional Final, 2016

**C. Institute Contributions****C1. 2022 – 2023**

6. Member of the Georgia Institute of Technology Radiation Safety Committee (campus-wide)
5. Member of the School of Chemistry and Biochemistry Strategic Planning (5-year Academic Program Review)
4. Member of the School of Chemistry and Biochemistry Faculty Search Committee
3. Member of the GT/SRNL M&O Team
2. Elected Member of School of Chemistry and Biochemistry Executive Committee (2<sup>nd</sup> Term)
1. Member of the School of Chemistry and Biochemistry Graduate Recruiting Committee

**C2. 2021 – 2022**

4. Member of the School of Chemistry and Biochemistry Faculty Search Committee
3. Member of the GT/SRNL M&O Team (Formal structure still in development)
2. Elected Member of School of Chemistry and Biochemistry Executive Committee (2<sup>nd</sup> Term)
1. Member of the School of Chemistry and Biochemistry Graduate Recruiting Committee

**C3. 2020 – 2021**

3. Member of Georgia Tech SRNL M&O capture team (Battelle-led)
2. Elected Member of School of Chemistry and Biochemistry Executive Committee (1<sup>st</sup> Term)
1. Member of the School of Chemistry and Biochemistry Safety Committee

**C4. 2019 – 2020**

7. Quantum Hiring Initiative (Cross-College), Chair
6. Member of Georgia Tech SRNL M&O capture team (Battelle-led)
5. Member of the School of Chemistry and Biochemistry Strategic Planning Committee
4. Elected Member of School of Chemistry and Biochemistry Executive Committee (1<sup>st</sup> Term)
3. Member of the School of Chemistry and Biochemistry Seminar Committee
2. Member of the School of Chemistry and Biochemistry Safety Committee
1. Member of the FY20 Blue Ribbon Panels for IMat: Materials Research Physical Infrastructure

**C5. 2018 – 2019**

4. Member of the School of Chemistry and Biochemistry Faculty Search Committee
3. Member of the School of Chemistry and Biochemistry Graduate Recruiting Committee
2. Member of the School of Chemistry and Biochemistry Safety Committee
1. Member of the FY19 Blue Ribbon Panels for IMat: Materials Research Physical Infrastructure

**C6. 2017 – 2018**

3. Member of the School of Chemistry and Biochemistry Graduate Recruiting Committee
2. Member of the School of Chemistry and Biochemistry Safety Committee
1. Member of the School of Chemistry and Biochemistry Seminar Committee

**C7. 2016 – 2017**

2. Member of the School of Chemistry and Biochemistry Graduate Recruiting Committee
1. Member of the School of Chemistry and Biochemistry Services Committee