

## Emily L. Que

University of Texas at Austin • Department of Chemistry  
105 E. 24<sup>th</sup> St., Stop A5300 • Austin, TX 78712  
Welch Hall, Room 4.156a • [emilyque@cm.utexas.edu](mailto:emilyque@cm.utexas.edu)

### Education

---

#### University of California at Berkeley

*Ph.D. in Chemistry*, completed August 2009 (GPA 3.99/4)

Thesis Research: Development of copper sensors for proton magnetic resonance imaging

#### University of Minnesota, Twin Cities

*B.S. in Chemistry*, completed May 2004

Graduated with honors, Summa Cum Laude

### Employment and Research History

---

#### Assistant Professor of Chemistry (August 2014 – present)

University of Texas at Austin, Department of Chemistry

Research group website: <https://quelab-utaustin.weebly.com>

#### Post-doctoral Research Associate (November 2009 – June 2014)

Northwestern University, Chemistry of Life Processes Institute

Advisors: Thomas V. O'Halloran and Teresa K. Woodruff

#### Doctoral Candidate (August 2004 – August 2009)

University of California at Berkeley, Department of Chemistry

Advisor: Christopher J. Chang

#### Undergraduate Researcher (January 2001 – June 2004)

University of Minnesota Twin Cities, Department of Chemistry

Advisors: Lawrence Que Jr. and Andreas Stein (separate research appointments)

### Honors and Awards

---

#### While at UT Austin:

National Science Foundation CAREER Award (2020)

Paul Saltman Lectureship, Metals in Biology Gordon Research Conference (2020)

Molecular Sensors and Molecular Logic Gates Emerging Investigator Award (2020)

Publication selected for JACS Young Investigator Virtual Issue (2019)

University of Texas College of Natural Sciences Teaching Excellence Award (2018)

Rom Rhone Professional Development Award (2019)

#### Prior to UT Austin:

ACS Division of Inorganic Chemistry Young Investigator Award (2010)

Society of Biological Inorganic Chemistry Travel Grant (2009)

Branch Graduate Fellowship, UC Berkeley (2007-2008)

Barry M. Goldwater Scholar (2003)

Undergraduate Research Scholarships, University of Minnesota (2001, 2002)

## Research Funding

---

### Current Grants:

- 1) **Targeted Molecular Strategies for Cellular Investigation of Metalloproteins**  
Sponsor: National Institutes of Health (R35 MIRA)  
Grant: 09/01/2019-08/31/2024 \$1,555,419 (single investigator)
- 2) **Chemical Probes for Interrogating Metalloenzyme Activity in Cells and In Vivo**  
Sponsor: The Welch Foundation  
Grant: 06/01/2018-05/31/2021 \$250,000 (single investigator)
- 3) **CAREER: Inorganic Scaffolds as Activity Based Probes for  $^{19}\text{F}$  Magnetic Resonance Biosensing**  
Sponsor: National Science Foundation  
Grant: 07/01/2020-06/30/2025 \$675,000 (single investigator)
- 4) **High-Sensitivity  $^{19}\text{F}$  MRI for Clinically Translatable Imaging of Adoptive NK Cell Brain Tumor Therapy**  
Sponsor: The Cancer Prevention Research Institute of Texas  
Grant: 08/01/2020-07/31/2023 \$887,713 (subcontractor, P.I. Sokolov, M.D. Anderson)  
*Note: grant awarded but specific start date in flux*

### Completed Projects:

- 1) **Exploring the Use of Cu(II) in  $^{19}\text{F}$  Magnetic Resonance Contrast Agents for Imaging Biological Redox**  
Sponsor: The Welch Foundation  
Grant: 06/01/2015-05/31/2018 \$195,000 (single investigator)

## Courses Taught

---

<b>Course Code</b>	<b>Course Title</b>	<b>Enrollment</b>	<b>Instructor Rating (Course Rating)</b>	<b>% of Enrolled Students Responding</b>
CH431 (Fall 2019)	Inorganic Chemistry	83	3.9 (3.6)	94%
CH341 (Sp 2019)	Lab Techniques in Inorganic Chemistry	11	4.6 (4.5)	100%
CH431 (Fall 2018)	Inorganic Chemistry	88	4.3 (3.9)	91%
CH341 (Sp 2018)	Lab Techniques in Inorganic Chemistry	10	4.8 (4.6)	100%
CH341 (Sp 2017)	Lab Techniques in Inorganic Chemistry	13	4.5 (4.5)	92%
CH431 (Fall 2016)	Inorganic Chemistry	106	3.8 (3.6)	97%
CH431 (Sp 2016)	Inorganic Chemistry	96	3.7 (3.5)	61%
CH341 (Sp 2015)	Lab Techniques in Inorganic Chemistry	16	4.7 (4.7)	94%
CH390K (Fall 2014)	Chemical Biology of Metals, Molecules, and Proteins	18	4.3 (3.5)	61%

## Students and Postdoctoral Scholars Advised

---

### Postdoctoral Scholars:

Arnab Banerjee (Nov. 2014 – Feb. 2016): Post-doctoral scholar, University of Coimbra

Dr. Meng Yu (Sept. 2015 – Apr. 2019): Post-doctoral scholar, University of Calgary

### Graduate Students:

Da Xie (Ph.D., Sept. 2014 – Dec. 2019): Consultant, Boston Consulting

Radhika Mehta\* (Sept. 2014 – present)

Audrey Fikes\* (Sept. 2014 – present)

Chinh Ngo\* (Aug. 2015 – present)

Kanchan Aggarwal (Sept. 2015 – present)

José S. Enriquez (M.S., Sept. 2015 – May 2018): Doctoral Student, M.D. Anderson

Rahul T. Kadakia (Sept. 2016 – present)

Sophia Beyer (M.S. Sept. 2016 – Aug. 2018): Technician, Worldwide Clinical Trials

Tyler L. King (Co-advised with Richard Jones: Sept. 2016 – present)

Daniel Cooke (Sept. 2018 – present)

*\*graduation delayed due to COVID-19 pandemic*

### Visiting Scholars:

Kathleen Prosser (Simon Fraser University, Fall 2017): Post-doctoral scholar, University of California San Diego

### Undergraduate Students:

Lauren Ohman (2019-2020): UC Davis Chemistry PhD Program

Gabriela Ibarra (2018): UIUC Chemistry PhD Program

Zachary Tobin (2018): Texas A&M Chemistry PhD Program

Reghan Conrey (2018-2019): Medical School

Emma Soles (NSF REU 2019)

Alyssa Felix-Thane (Austin Community College GREAT intern 2019-present)

Tommy Phan (2018-2019): Research Technician in Houston

Lorece Harris (2018)

Faraz Jafri (2018)

Dominique Tan (2018-present)

Elva Ye (2018-present)

Christopher Chung (2018-2019)

Christopher Hastings (2018-2020): University of Rochester Chemistry PhD Program

Jacks Reyna (2018-2020): UT San Antonio Chemistry PhD Program

Abigail Hinojosa (2017-2020): UC Berkeley Chemistry PhD Program

Danny Martinez (2017-2019)

Travis Berman (Austin Community College GREAT intern 2017-2018)

Alison Rerick (NSF REU 2017): Scripps Chemistry PhD Program

Mandira Banik (2016-2019): UIUC Chemistry PhD Program

Andrew Hanneman (2016-2018): Texas A&M Chemistry PhD Program

Eliza Neidhart (NSF REU 2016): UNC Chemistry PhD Program

Meredith Purchal (2016-2017): University of Michigan Chemical Biology PhD program

Bailey Bouley (2016-2018): UIUC Chemistry PhD Program

Rebekah Pressinger (2016)

Munaum Qureshi (2015-2016): University of Arizona Chemistry PhD program

Se Yong Kim (2015-2016): UT Austin Teaching Specialist

Khanh Pham (2015-2016)

Sebrina Yan (2015)

Vikraant Kohli (2014-2017): UT Austin Dell Medical School

**High School Students:**

Sonya Xu (Welch Summer Scholar, June 2016)  
Daniel Han (Welch Summer Scholar, June 2017)  
Bryan Kuglen (Welch Summer Scholar, June 2018)  
Amelia Hu (Welch Summer Scholar, June 2019)

**Educational and Outreach Activities**

---

**CREATE, Chemical Research At Texas** (Spring 2020-present)

Austin Community College (ACC) and UT Austin, Department of Chemistry

Program Website: [www.create-atx.org](http://www.create-atx.org)

- This is a program designed to attract community college students into STEM through a summer research program with opportunities in all areas of chemistry and related fields
- Co-leader with Prof. Sean Roberts (UT Chemistry Department) and Dr. Shawn Amorde (ACC), an expansion of the Green Energy at Texas (GREAT) program initiated by Roberts and Amorde
- Funded by NSF (EQ and SR)

**Freshman Research Initiative (FRI) Luminators Research Stream** (Summer 2016-present)

UT Austin College of Natural Sciences

FRI Website:

- The UT Austin FRI program provides research training and exposure to undergraduates starting in their freshman year.
- The Luminators FRI stream research focus is development of luminescent lanthanide complexes for biosensing purposes. Students also receive training in X-ray crystallography
- Co-PI with Prof. Richard Jones and Research Educator Dr. Lauren DePue

**Innovative New Chemistry for MRI Contrast Symposium**

Pacificchem Conference, December 2020, Honolulu, Hawaii

- Symposium co-organizer with Prof. Eric Gale (MGH). Supporting organizers include Prof. Peter Caravan (MGH), Prof. Kazuya Kikuchi (Osaka), Prof. Xiao-An Zhang (Toronto), and Prof. Ga-Lai Law (Hong Kong). Topics will span several strategies for making new contrast and imaging agents for magnetic resonance imaging

**ACS Award in Inorganic Chemistry: Symposium in honor of Lawrence Que, Jr.**

American Chemical Society National Meeting, Fall 2017, San Francisco, CA

- Symposium co-organizer with Prof. Michael Maroney (UMass-Amherst), topics included a wide range of topics in bioinorganic chemistry and catalysis

**New Directions for Sensing Metals in Biology Symposium**

Pacificchem Conference, December 2015, Honolulu, Hawaii

- Symposium co-organizer with Prof. Elizabeth New (U of Sydney) and Prof. Tasuku Hirayama (Gifu, Japan), topics spanned several strategies for making biosensors for metals and metal-based platforms for sensing

**Student Outreach**

ACS UT Austin Student Chapter (Fall 2016)

NSF REU Presentation (Summer 2017, Summer 2019)

UT Science Undergraduate Research Group (SURGe) Presentation (October 2018)

Faculty mentor for ChemWMN program (2 students mentored)

Faculty mentor for My Science My Life program (3 students mentored)

International Women's Day Panel (2017)

Symposium for Undergraduate Research Exploration in the College of Natural Sciences Poster Judge (2018)  
 Bold Women in Chemistry Discussion Leader (2018)  
 University of Minnesota Women in Science and Engineering guest speaker (2019)  
 Fun with Chemistry Guest Speaker (Summer 2018)  
 Judge for Siemens Competition in Math, Science, and Technology (2014)  
 Saturday morning Inorganic Chalk Talks (2014-present)

## Publications

### From Independent Career:

- 1) Prosser, K.E.; Xie, D.; Chu, A.; Varju, B.R.; Kadakia, R.T.; Que, E.L.\*; Walsby, C.J.\* "Hypoxia-Selective, Nucleus-Localizing, Copper(II) Pyridyl Amino-phenol Complexes: Towards MRI Hypoxia Theranostics." *Submitted May 2020*.
- 2) Aggarwal, K.; Kuka, T.P.; Banik, M.; Medellin, B.P.; Ngo, C.Q.; Xie, D.; Fernandes, Y.; Dangerfield, T.L.; Ye, E.; Bouley, B.; Johnson, K.A.; Zhang, Y.J.; Eberhart, J.K.; Que, E.L.\* "Visible light mediate bidirectional control over carbonic anhydrase activity in cells and in vivo using azobenzene sulfonamides." *Submitted May 2020*.
- 3) Kadakia, R.T.; Xie, D.; "Responsive Fluorinated Nanoemulsions for  $^{19}\text{F}$  Magnetic Resonance Detection of Cellular Hypoxia" *Dalton Trans. In revision*.
- 4) Yu, M.; Xie, D.; Kadakia, R.T.; Wang, W.; Que, E.L.\* "Harnessing Chemical Exchange:  $^{19}\text{F}$  magnetic resonance OFF/ON zinc sensing with a Tm(III) complex" *Chem. Commun. Accepted May 6, 2020* doi: 10.1039/d0cc01876g
- 5) He, J.; Aggarwal, K.; Katyal, N.; He, S.; Chiang, E.; Dunning, S.G.; Reynolds, J.; Steiner, A.; Henkelman, G.\*; Que, E.L.\*; Humphrey, S.M.\* "Reversible Solid-State Isomerism of Azobenzene-Loaded Large-Pore Isorecticular Mg-CUK-1" *J. Am. Chem. Soc.* 2020, 142, 6467-6471.
- 6) Xie, D.; Yu, M.; Kadakia, R.T.; Que, E.L.\* " $^{19}\text{F}$  Magnetic Resonance Activity-Based Sensing Using Paramagnetic Metals." *Acc. Chem. Res.* 2020, 53, 2-10.
- 7) Kadakia, R.T.; Xie, D.; Martinez Jr, D.; Yu, M.; Que, E.L.\* "A dual-responsive probe for detecting cellular hypoxia using  $^{19}\text{F}$  magnetic resonance and fluorescence." *Chem. Commun.* 2019, 55, 8860-8863.
- 8) Yu, M.; Bouley, B.S.; Xie, D.; Que, E.L.\* "Highly fluorinated metal complexes as dual  $^{19}\text{F}$  and PARACEST imaging agents." *Dalton Trans.* 2019, 48, 9337-9341.
- 9) Fikes, A.G.; Aggarwal, K.; Que, E.L.\*; "Glutathione-mediated activation of a disulfide containing  $\text{Fe}^{3+}$  complex." *Inorganica Chimica Acta*, 2019, 490, 139-143.
- 10) Ngo, C.; Mehta, R.; Greer, S.; Que, E.L.\* "Pull-down of metallated carbonic anhydrase using desthiobiotin-based probes." *ChemBiochem*, 2019, 20, 1003-1007.
- 11) Aggarwal, K.; Bahnik, M.; Medellin, B.; Que, E.L.\* "In situ photoregulation of carbonic anhydrase activity using azobenznesulfonamides." *Biochemistry*, 2019, 58, 48-53.
- 12) Xie, D. Ohman, L.E.; Que, E.L.\* "Towards Ni(II) complexes with spin switches for  $^{19}\text{F}$  MR based pH sensing ." *Magn. Reson. Mater. Phys., Biol. Med.* 2019, 32, 89-96.
- 13) Enriquez, J.S.; Yu, M.; Bouley, B.S.; Que, E.L.\* "Copper(II) complexes for cysteine detection using  $^{19}\text{F}$  magnetic resonance." *Dalton Trans.* 2018, 47, 15024-15030.
- 14) Yu, M.; Bouley, B.S.; Xie, D.; Enriquez, J.S.; Que, E.L.\* " $^{19}\text{F}$  PARASHIFT Probes for Magnetic Resonance Detection of  $\text{H}_2\text{O}_2$  and Peroxidase Activity." *J. Am. Chem. Soc.* 2018, 140, 10546-10552.
- 15) Mehta, R.; Qureshi, M.H.; Purchal, M.K.; Greer, S.M.; Gong, S.; Ngo, C.; Que, E.L.\* "A new probe for detecting zinc-bound carbonic anhydrase in cell lysates and cells." *Chem. Commun.* 2018, 54, 5442-5445.

- 16) Xie, D.; Kim, S.; Kohli, V.; Banerjee, A.; Yu, M.; Enriquez, J.S.; Luci, J.J.; Que, E.L.\* "Hypoxia-responsive <sup>19</sup>F MRI Probes with Improved Redox Properties and Biocompatibility." *Inorg. Chem.* 2017, 56, 6429-6437.
- 17) Yu, M.; Xie, D.; Phan, K.P.; Enriquez, J.S.; Luci, J.J.; Que, E.L.\* "A Co<sup>II</sup> complex for <sup>19</sup>F MRI-based detection of reactive oxygen species." *Chem. Commun.*, 2016, 52, 13885-88.
- 18) Yang X.; Wang S.; Schipper D.; Zhang L.; Li Z.; Huang S.; Yuan D.; Chen Z.; Gnanam A.J.; Hall J.W.; King T.L.; Que E.L.; Dieye Y.; Vadivelu J.; Brown K.A.; Jones R.A. "Self-assembly of high-nuclearity lanthanide-based nanoclusters for potential bioimaging applications." *Nanoscale*, 2016, 8, 11123-9.
- 19) Xie, D.; King, T.L.; Banerjee, A.; Kohli, V.; Que, E.L.\* "Exploiting copper redox for <sup>19</sup>F magnetic resonance-based sensing of cellular hypoxia" *J. Am. Chem. Soc.*, 2016, 138, 2937-40.

#### **From Post-doctoral Work:**

- 20) Garwin, S.A.; Kelley, M.S.; Sue, A.C.; Que, E.L.; Schatz, G.C.; Woodruff, T.L.; O'Halloran, T.V. "Interrogating intracellular zinc chemistry with a long stokes shift zinc probe ZincBY-4" *J. Am. Chem. Soc.* 2019, 141, 16696-16705.
- 21) Que, E.L.\*\*; Duncan, F.D.\*\*; Lee, H.C.\*\*; Hornick, J.E.; Vogt, S.; Fissore, R.; O'Halloran, T.V.; Woodruff, T.K. "Bovine eggs release zinc in response to parthenogenetic and sperm-induced egg activation" *Theriogenology*, 2019, 127, 41-48. \*\*Co-first authors.
- 22) Que, E.L.; Duncan, F.D.; Bayer, A.R.; Philips S.J.; Roth E.W.; Bleher R.; Gleber S.C.; Vogt S.; Woodruff T.K.; O'Halloran T.V. "Zinc sparks induce physiochemical changes in the egg zona pellucida that prevent polyspermy." *Integr. Biol.* 2017, 9, 135-144.
- 23) Duncan, F.E.\*\*, Que, E.L.\*\*, Zhang, N.\*\*; O'Halloran, T.V.; Woodruff, T.K. "The zinc spark is a hallmark of human egg activation" *Sci. Reports*, 2016, 6, 24737. \*\*Co-first authors.
- 24) Zhang, N.; Duncan, F.E.; Que, E.L.; O'Halloran, T.V.; Woodruff, T.K. "The fertilization-induced zinc spark is a novel biomarker of mammalian embryo quality and early development." *Sci. Reports*, 2016, 6, 22772.
- 25) Kong, B.Y.; Duncan, F.E.; Que, E.L.; Xu, Y.; Vogt, S.; O'Halloran, T.V.; Woodruff, T.K. "The inorganic anatomy of the mammalian preimplantation embryo and the requirement of zinc during the first mitotic divisions." *Dev. Dyn.* 2015, 244, 935-47.
- 26) Que, E.L.; Bleher, R.; Duncan, F.E.; Kong, B.Y.; Gleber, S.C.; Vogt, S.; Chen, S.; Garwin, S.A.; Bayer, A.R.; Dravid, V.P.; Woodruff, T.K.; O'Halloran, T.V. "Quantitative mapping of zinc fluxes in the mammalian egg reveals the origin of fertilization-induced zinc sparks," *Nature Chem.* 2015, 7, 130-9.
- 27) Kong, B.Y.; Duncan, F.E.; Que, E.L.; Kim, A.M.; O'Halloran, T.V.; Woodruff, T.K. "Maternally-derived zinc transporters ZIP6 and ZIP10 drive the mammalian oocyte-to-egg transition," *Mol. Hum. Reprod.* 2014, 20, 1077-1089.
- 28) Ya, R.; Que, E.L.; O'Halloran, T.V.; Woodruff, T.K. "Zinc as a key meiotic cell-cycle regulator in the mammalian oocyte," In *Zinc Signals in Cellular Functions and Disorders*. Fukada, T., Kambe, T., Eds; Springer: Japan, 2014, 315-343.
- 29) Yong, Y.P.; Gleber, S.C.; O'Halloran, T.V.; Que, E.L.; Bleher, R.; Vogt, S.; Woodruff, T.K.; Jacobsen, C. "Low-dose X-ray fluorescence tomography images using differential phase contrast," *J. Synchrotron Radiat.* 2014, 21, 229-234
- 30) Marvin, R. G.; Welford, J. L.; Kidd, M. J.; Murphy, S.; Ward, J.; Que, E. L.; Mayer, M. L.; Penner-Hahn, J. E.; Jaldar, K.; O'Halloran, T. V. "Fluxes in 'free' and total zinc are essential for progression of intraerythrocytic stages of Plasmodium falciparum," *Chem. Biol.* 2012, 19, 731-741.

#### **From Graduate Work:**

- 31) Que, E. L.; New, E. J.; Chang, C. J. "A cell-permeable gadolinium contrast agent for magnetic resonance imaging of copper in a Menkes disease model," *Chem. Sci.* 2012, 3, 1829-1834.

- 32) Que, E. L.; Chang, C. J. "Responsive magnetic resonance imaging contrast agents as chemical sensors for metals in biology and medicine," *Chem. Soc. Rev.* 2010, 39, 51-60.
- 33) Que, E. L.; Gianolio, E.; Baker, S. L.; Aime, S.; Chang, C.J. "A Copper-Activated Magnetic Resonance Imaging Contrast Agent with Improved Turn-On Relaxivity Response and Anion Compatibility," *Dalton Trans.* 2010, 39, 469-476.
- 34) Que, E. L.; Gianolio, E.; Baker, S. L.; Wong, A. P.; Aime, S.; Chang, C.J. "Copper Responsive Magnetic Resonance Imaging Contrast Agents," *J. Am. Chem. Soc.* 2009, 131, 8527-8536.
- 35) Que, E. L.; Domaille, D. W.; Chang, C. J. "Metals in Neurobiology: Probing Their Chemistry and Biology with Molecular Imaging," *Chem. Rev.* 2008, 108, 1517-1549.
- 36) Domaille, D. W.; Que, E. L.; Chang, C. J. "Synthetic Fluorescent Sensors for Studying the Cell Biology of Metals," *Nat. Chem. Biol.* 2008, 4, 168-175.
- 37) Que, E. L.; Chang, C. J. "A Smart Magnetic Resonance Contrast Agent for Selective Copper Sensing," *J. Am. Chem. Soc.* 2006, 128, 15942-15943.

#### **From Undergraduate Work:**

- 38) Chastek, T. T.; Que, E. L.; Jarzombeck, P.; Macosko, C. W.; Stein, A. "Synthesis of Lamellar Isobutyl Silicates and Dispersion in Polypropylene Melts." *J. Appl. Polymer Sci.* 2007, 105, 1456-1465.
- 39) Jensen, M. P.; Que, E. L.; Shan, X.; Rybak-Akimova, E.; Que, L., Jr. "Spectroscopic and kinetic studies of the reaction of [Cu(I)(6-PhTPA)]<sup>+</sup> with O<sub>2</sub>." *Dalton Trans.* 2006, 3523-3527.
- 40) Chastek, T. T.; Que, E. L.; Shore, J. S.; Lowy, R. J.; Macosko, C.; Stein, A. "Hexadecyl-functionalized lamellar mesostructured silicates and aluminosilicates designed for polymer-clay nanocomposites. Part I. Clay synthesis and structure." *Polymer.* 2005, 46, 4421-4430.
- 41) Jensen, M. P.; Lange, S. J.; Mehn, M. P.; Que, E. L.; Que, L., Jr. "Biomimetic Aryl Hydroxylation Derived from Alkyl Hydroperoxide at a Nonheme Iron Center. Evidence for an Fe(IV)=O Oxidant." *J. Am. Chem. Soc.* 2003, 125, 2113-2128.

#### **Invited Oral Presentations**

---

##### *Future Invitations*

- 1) Future of Molecular MRI Workshop 2.0, Caltech, June 2021
- 2) Pacificchem 2020, Innovative New Chemistry for MRI Contrast Symposium, December 2020
- 3) Pacificchem 2020, Activity-Based Sensing Symposium, December 2020

##### *Cancelled due to COVID-19 pandemic*

- 4) 15<sup>th</sup> European Biologic Inorganic Chemistry Conference, Iceland, August 2020
- 5) Molecular Sensors and Molecular Logic Gates Conference, Nevada, June 2020
- 6) Inorganic Gordon Research Conference, Rhode Island, June 2020
- 7) 2<sup>nd</sup> Texas Chemical Biology Conference, Texas A&M, May 2020
- 8) University of Chicago, Chemistry Department Seminar, April 9, 2020
- 9) Northwestern University, Chemistry Department Seminar, April 8, 2020
- 10) University of Wisconsin Madison, Chemistry Department Seminar, April 6, 2020
- 11) University of Buffalo, Chemistry Department Seminar, March 31, 2020
- 12) University of Rochester, Chemistry Department Seminar, March 30, 2020
- 13) Cornell University, Chemistry Department Seminar, March 26, 2020
- 14) University of California Santa Barbara, Chemistry Department Seminar, March 13, 2020
- 15) University of California Irvine, Chemistry Department Seminar, March 12, 2020

##### *Completed Presentations*

- 16) Davidson College, Inorganic Chemistry Course Virtual Seminar, April 30, 2020
- 17) University of Washington, Chemistry Department Seminar, March 3, 2020
- 18) University of California Berkeley, Chemistry Department Seminar, February 21, 2020
- 19) University of California Davis, Chemistry Department Seminar, February 20, 2020

- 20) University of Illinois Urbana Champaign, Chemistry Department Seminar, February 18, 2020
- 21) Indiana University, Chemistry Department Seminar, February 17, 2020
- 22) Saltman Lectureship, Metals in Biology Gordon Conference, January 19, 2020
- 23) University of California San Diego, Chemistry Department Seminar, January 17, 2020
- 24) University of Colorado Boulder, Biofrontiers Institute Seminar, October 30, 2019
- 25) Georgia Institute of Technology, Chemistry Department Seminar, October 1, 2019
- 26) Texas A&M University, Chemistry Department Seminar, September 9, 2019
- 27) 19<sup>th</sup> International Conference on Biological Inorganic Chemistry, Switzerland August 2019
- 28) Korea University, Chemistry Department Seminar, July 11, 2019
- 29) EWHA Women's University, Bioinorganic Seminar, July 9, 2019
- 30) University of Minnesota, Chemistry Department Seminar, April 25, 2019
- 31) Macalester College, Chemistry Department Seminar, April 24, 2019
- 32) Austin Community College, GREAT Seminar, March 13, 2019
- 33) Wayne State University, Chemistry Department Seminar, March 7, 2019
- 34) University of Michigan, Chemistry Department Seminar, March 6, 2019
- 35) St. Edward's University, Chemistry Department Seminar, March 1, 2019
- 36) University of Texas at Dallas, Chemistry Department Seminar, February 15, 2019
- 37) University of Oregon, Chemistry Department Seminar, November 16, 2018
- 38) American Chemical Society National Meeting "Chemical Approaches to Interrogate Cell Biology Symposium." Boston, MA, August 2018.
- 39) International Society for Macrocyclic and Supramolecular Chemistry, Quebec City, July 2018
- 40) Pittcon, Molecules and Materials for Advanced Bioimaging and Diagnostics Symposium, Florida, February 28, 2018
- 41) Metals in Biology Gordon Research Conference, California, January 2018
- 42) American Chemical Society National Meeting "Celebrating 60 years on the Division of Inorganic Chemistry" Symposium San Francisco April 5, 2017.
- 43) American Chemical Society National Meeting "ACS Award in Inorganic Chemistry: Symposium in honor of Lawrence Que, Jr." San Francisco April 2, 2017.
- 44) Southern Methodist University, Chemistry Department Seminar, February 10, 2017
- 45) American Chemical Society Southwest Regional Meeting, Bioinorganic Symposium, Galveston, TX, November 2016
- 46) University of Texas San Antonio, Chemistry Department Seminar, September 9, 2016
- 47) Canadian Society for Chemistry National Meeting, Bioinorganic Symposium, Nova Scotia, June 2016
- 48) Pacificchem 2015, New Directions for Sensing Metals in Biology Symposium, Hawaii, December 2015
- 49) American Chemical Society National Meeting "The Inorganic Chemistry of Neurobiology, Immunology and Bioenergy: New Faces" Symposim, San Francisco August 2014.

### **Contributed Oral Presentations**

---

- 1) American Chemical Society National Meeting, Inorganic Division, Philadelphia August 2016
- 2) American Chemical Society National Meeting, Organic Division, Philadelphia August 2016
- 3) American Chemical Society National Meeting, Inorganic Division, Orlando April 2019.

### **Professional Affiliations and Service**

---

#### **Reviewer:**

*Journals:* Journal of the American Chemical Society; Inorganic Chemistry; ACS Chemical Biology; Macromolecules; Accounts of Chemical Research; Organic Letters; Chemical Science; Chemical Communications; Dalton Transactions; Metallomics; Chemical Society Reviews; Inorganic Chemistry Communications; Inorganica Chimica Acta; Nature Methods;



ACS Applied Materials and Interfaces; ACS Central Science; Physical Chemistry Chemical Physics; Tetrahedron Letters; Biophysical Journal; Journal of Inorganic Biochemistry; Journal of Biological Inorganic Chemistry; Magnetic Resonance Materials in Physics, Biology, and Medicine; Molecular Reproduction and Development; Reproduction

*Grants:* NIH SBCA Study Section, NSF CHE CLP Study Section, NSF ad hoc, CONTEX, UT Austin Undergraduate Research Fellowship

**Professional Memberships:** American Chemical Society, Society for Biological Inorganic Chemistry, AAAS

**Professional Society Service:** ACS National Award Selection Committee (2017-2019)

**College/University Committees:** 21<sup>st</sup> Century Research Committee, Welch Hall Renovation Research Advisory Committee, Masters and PhD thesis committees for students in Molecular Biosciences and Chemical Engineering

**Departmental Committees:** Graduate Admissions (co-chair, 2015-present), Junior Faculty Hiring Committee (2015-2016), Chemistry Course and Curriculum Committee (2019-present), Senior Faculty Hiring Committee (2019), Joint Graduate Student-Faculty Committee (2019-present), Inorganic Division Graduate Student Requirements Coordinator (2018-present), Qualifying exam committees for inorganic and organic students, Masters and PhD thesis committees