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EDUCATIONAL AND PROFESSIONAL BACKGROUND

07/2020 – present	University of Mississippi <i>Associate Professor of Chemistry</i>
07/2014 – 06/2020	University of Mississippi <i>Assistant Professor of Chemistry</i>
02/2011 – 05/2014	University of California, Berkeley <i>Postdoctoral Research Associate</i> Advisor: Prof. Christopher J. Chang
08/2005 – 05/2011	University of North Carolina at Chapel Hill <i>Ph.D. Chemistry</i> Advisors: Profs. Thomas J. Meyer and Joseph L. Templeton
08/2001 – 05/2005	North Carolina State University <i>B. S. Chemistry with Honors, Summa Cum Laude</i> Advisors: Profs. Christopher B. Gorman and James D. Martin

HONORS AND AWARDS

<i>Dr. Michael Edmonds New Scholar Award</i>	University of Mississippi, 2020
<i>NSF CAREER Award</i>	University of Mississippi, 2019–2024
<i>ACS PRF Doctoral New Investigator Award</i>	University of Mississippi, 2018–2020
<i>Future Faculty Fellowship</i>	Univ. of North Carolina at Chapel Hill, 2008
<i>Graduate Assistance in Areas of Natl. Need Fellowship</i>	Univ. of North Carolina at Chapel Hill, 2007–2009
<i>ACS Analytical Chemistry Award</i>	North Carolina State University, 2005
<i>Undergraduate Research Fellowship</i>	North Carolina State University, 2004–2005
<i>Phi Beta Kappa Honor Society</i>	North Carolina State University, 2004
<i>Phi Kappa Phi Honor Society</i>	North Carolina State University, 2004

CURRENT RESEARCH GROUP MEMBERS (start year)

Graduate Students

1. Anthony Devdass (2017)
2. Md Ershad (2021)
3. Jannatul Ferdous (2021)
4. Sha Tamanna Sahil (2017)
5. Zane Turner (2018)

Undergraduates *Honors College

1. Christopher Austin (S2022)
2. Alex Bromley (F2021)*
3. Grace Calhoun (F2021)
4. Caroline Hodge (S2020)*
5. Skylar Nichols (S2022)*

GRADUATE THESES / DISSERTATIONS COMPLETED (graduation year, degree)

- | | |
|--------------------------------------|-----------------------------------|
| 1. Lizhu Chen (2019, M.S.) | 2. Hunter A. Dulaney (2016, M.S.) |
| 3. Joseph M. Lee (2019, M.S.) | 4. Kayla A. Milano (2019, M.S.) |
| 5. Sayontani Sinha Roy (2021, Ph.D.) | 6. Kallol Talukdar (2020, Ph.D.) |
| 7. Weiwei Yang (2019, Ph.D.) | |

PAST POSTDOCTORAL ASSOCIATES

Xiaojun Su	08/2016 – 01/2019	Tsinghua University (Ph.D.)
Shrabanti Bhattacharya	05/2020 – 11/2021	Indian Association of the Cultivation of Science (Ph.D.)

UNDERGRADUATE ALUMNI (last year, semesters) *Honors College, ^REU student, †Taylor Medal

1. Emily Ables (2017, 2)	2. Eva Amatya (2019, 4)*	3. Nicole Bay (2019, 3)
4. Logan Bell (2015, 2)	5. Andrew Boyd (2020, 2)	6. Dawson Buettner (2019, 3)*
7. Colleen Chernowsky (2017, 1)^	8. Ansu Edwards (2021, 4)*	9. Sarah Farmer (2015, 2)
10. Allie Funderbunk (2015, 1)	11. Katrina Gateley (2015, 1)	12. Jacqueline Gledhill (2015, 2)
13. Ryan Harvey (2014, 1)	14. Ryan Higgins (2016, 5)	15. Michael Holland (2015, 1)
16. Allison Hunter (2017, 2)	17. Asala Issa (2018, 2)	18. Amir Khadivi (2016, 4)
19. Shannon Kirkland (2017, 2)	20. Hannah Kline (2018, 1)^	21. Chase Lance (2020, 3)*^†
22. Madeline Mixon (2017, 1)	23. Skylar Nash (2019, 4)	24. Rebekah Nelson (2017, 3)
25. Winston Pitts (2017, 4)	26. Ankita Purohit (2015, 1)	27. Manpreet Singh (2016, 4)*
28. Elizabeth Sleeper (2019, 1)	29. Jordan Spell (2016, 1)^	30. Natalie Taylor (2019, 3)
31. Cameron Trussell (2019, 1)^	32. Joseph Vaughan (2019, 4)*†	33. Morgan Ward (2021, 1)^

PAST HIGH SCHOOL STUDENT GROUP MEMBERS (month and year of research)

1. Ting Li (July 2015)	2. Robert Simmons (July 2015)	3. Mayukh Datta (July 2016)
4. Quristan Wilson (July 2016)	5. Yingjie Cheng (June 2017)	6. Vivienne Tenev (June 2017)
7. Makenzie Heron (July 2018)	8. Lillian Le (July 2018)	9. Brady Suttles (July 2018)
10. Ryley Fallon (July 2019)	11. Uriel Anaya-Witrigo (July 2019)	12. Nicholas Djedjos (June 2021)
13. Nina Patel (June 2021)	14. Anika Ravi (June 2021)	

Research Mentor as a Graduate Student or Postdoc

03/2012 – 06/2013	UC Berkeley Undergraduate Subha Mohan (Medical School at UCLA)
01/2009 – 05/2010	UNC-CH Undergraduate Adam Preslar (Ph.D. Chemistry, Northwestern)

PUBLICATIONS Undergraduate authors in red

43. Nugegoda, D.; Bhattacharya, S.; Hunt, L. A.; Schwartz, S. J.; Hammer, N. I.; **Jurss, J. W.**; Delcamp, J. H. Designing Self-Assembled Dye-Redox Shuttle Systems in Dye-Sensitized Solar Cells for Enhanced Low Light Power Conversion. *Submitted*.

42. Devdass, A.; Watson, J.; Firestone, E.; Hamann, T. W.; Delcamp, J. H.; **Jurss, J. W.** An Efficient Copper-based Redox Shuttle for DSCs Under Low-Light Conditions. *In revision*.

41. Sinha Roy, S.; Talukdar, K.; Sahil, S. T.; **Jurss, J. W.** Electrochemical and Light-driven CO₂ Reduction by Amine-Functionalized Rhenium Catalysts: A Comparison Between Primary and Tertiary Amine Substitutions. *In revision*.

40. **Jurss, J. W.**; Concepcion, J. J.; Templeton, J. L.; Meyer, T. J. Anion Involvement in Water Oxidation by the Blue Dimer, *cis,cis*-[(bpy)₂(H₂O)Ru^{III}ORu^{III}(OH₂)(bpy)₂]⁴⁺. *In revision*.

39. Sahil, S. T.; McCardle, K. M.; Le Magueres, P.; Panetier, J. A.; **Jurss, J. W.** Investigations of a Copper(II) Bipyridyl-*N*-Heterocyclic Carbene Macrocyclic for CO₂ Reduction: Identification of an Imidazolium Carboxylate Intermediate Leading to Demetalation. *In revision*.

38. Nugegoda, D.; Hunt, L. A.; Devdass, A.; Cheema, H.; **Jurss, J. W.**; Hammer, N. I.; Delcamp, J. H. Lewis Acid-Lewis Base Interactions Promote Fast Interfacial Electron Transfers with a Pyridine-Based Donor Dye in Dye-Sensitized Solar Cells. *ACS Appl. Energy Mater.* **2022**, *5*, 1516–1527. <https://doi.org/10.1021/acsaem.1c02912>

37. Mitra, S.; Talukdar, K.; Prasad, P.; Misra, S. K.; Khan, S.; Sharp, J. S.; **Jurss, J. W.**; Chakraborty, S. A Rationally Designed Cu Chelator that Mitigates Cu-Induced ROS Production by Amyloid Beta. *ChemBioChem* **2022**, *23*, e202100485. <https://doi.org/10.1002/cbic.202100485>
36. Devdass, A.;[†] Talukdar, K.;[†] Zeller, M.; Fortenberry, R. C.; **Jurss, J. W.** Exploring Different Equatorial Donors in a Series of Five-Coordinate Cu(II) Complexes Supported by Rigid Tetradentate Ligands. *Polyhedron* **2022**, *212*, 115558. <https://doi.org/10.1016/j.poly.2021.115558> ([†] co-first authors)
35. Curiac, C.; Rodrigues, R. R.; Watson, J.; Hunt, L. A.; Devdass, A.; **Jurss, J. W.**; Hammer, N. I.; Fortenberry, R. C.; Delcamp, J. H. Iron Redox Shuttles with Wide Optical Gap Dyes for High Voltage Dye-Sensitized Solar Cells. *ChemSusChem* **2021**, *14*, 3084–3096. <https://doi.org/10.1002/cssc.202100884>
34. Saha, S.; Sahil, S. T.; Mazumder, M. M. R.; Stephens, A. M.; Cronin, B.; Duin, E. C.; **Jurss, J. W.**; Farnum, B. H. Synthesis, Characterization, and Electrocatalytic Activity of Bis(pyridylimino)Isoindoline Cu(II) and Ni(II) Complexes. *Dalton Trans.* **2021**, *50*, 926–935. <https://doi.org/10.1039/D0DT03030A>
33. Sinha Roy, S.;[†] Talukdar, K.;[†] **Jurss, J. W.** Electro- and Photochemical Reduction of CO₂ by Molecular Manganese Catalysts: Exploring the Positional Effect of Second Sphere Hydrogen-Bond Donors. *ChemSusChem* **2021**, *14*, 662–670. <https://doi.org/10.1002/cssc.202001940> ([†] co-first authors)
32. Morstein, J.; Höfler, D.; Ueno, K.; **Jurss, J. W.**; Walvoord, R. R.; Bruemmer, K. J.; Rezgui, S. P.; Brewer, T. F.; Saitoe, M.; Michel, B. W.; Chang, C. J. A Ligand-Directed Approach to Activity-Based Sensing: Developing Palladacycle Fluorescent Probes that Enable Endogenous Carbon Monoxide Detection. *J. Am. Chem. Soc.* **2020**, *142*, 15917–15930. <https://doi.org/10.1021/jacs.0c06405> (Preprint available at *ChemRxiv*, **2020**, <https://doi.org/10.26434/chemrxiv.12547850.v1>)
31. Talukdar, K.;[†] Sinha Roy, S.;[†] **Amatya, E.**; **Sleeper, E. A.**; Le Magueres, P.; **Jurss, J. W.** Enhanced Electrochemical CO₂ Reduction by a Series of Molecular Rhenium Catalysts Decorated with Second Sphere Hydrogen-Bond Donors. *Inorg. Chem.* **2020**, *59*, 6087–6099. <https://doi.org/10.1021/acs.inorgchem.0c00154> ([†] co-first authors)
30. Rodrigues, R. R.; Lee, J. M.; **Taylor, N. S.**; Cheema, H.; Chen, L.; Fortenberry, R. C.; Delcamp, J. H.; **Jurss, J. W.** Copper-Based Redox Shuttles Supported by Preorganized Tetradentate Ligands for Dye-Sensitized Solar Cells. *Dalton Trans.* **2020**, *49*, 343–355. <https://doi.org/10.1039/C9DT04030G>
29. Su, X.; McCardle, K. M.; Chen, L.; Panetier, J. A.; **Jurss, J. W.** Robust and Selective Cobalt Catalysts Bearing Redox-Active Bipyridyl-*N*-Heterocyclic Frameworks for Electrochemical CO₂ Reduction in Aqueous Solutions. *ACS Catal.* **2019**, *9*, 7398–7408. <https://doi.org/10.1021/acscatal.9b00708>
28. Talukdar, K.; **Issa, A.**; **Jurss, J. W.** Synthesis of a Redox-Active NNP-type Pincer Ligand and its Application to Electrocatalytic CO₂ Reduction with First-Row Transition Metal Complexes. *Front. Chem.* **2019**, *7*, 330. <https://doi.org/10.3389/fchem.2019.00330>
27. Shirley, H.; Su, X.; **Sanjanwala, H.**; Talukdar, K.; **Jurss, J. W.**; Delcamp, J. H. Durable Solar Powered Systems with Ni-Catalysts for Conversion of CO₂ or CO to CH₄. *J. Am. Chem. Soc.* **2019**, *141*, 6617–6622. <https://doi.org/10.1021/jacs.9b00937>
26. Liyanage, N. P.; Yang, W.; **Carpenter, C. A.**; Guertin, S.; Sinha Roy, S.; Schmehl, R. H.; Delcamp, J. H.; **Jurss, J. W.** Photochemical CO₂ Reduction with Mononuclear and Dinuclear Rhenium Catalysts Bearing a Pendant Anthracene Chromophore. *Chem. Commun.* **2019**, *55*, 993–996. <https://doi.org/10.1039/C8CC09155B>
25. Chen, L.; Su, X.; **Jurss, J. W.** Selective Alkane C-H Bond Oxidation Catalyzed by a Non-heme Iron Complex Featuring a Robust Tetradentate Ligand. *Organometallics* **2018**, *37*, 4535–4539. <https://doi.org/10.1021/acs.organomet.8b00611>

24. Chen, L.; Dulaney, H. A.; Wilkins, B. O.; Farmer, S.; Zhang, Y.; Fronczek, F. R.; Jurss, J. W. High-Spin Enforcement in First-Row Metal Complexes of a Constrained Polyaromatic Ligand: Synthesis, Structure, and Properties. *New J. Chem.* **2018**, *42*, 18667–18677. <https://doi.org/10.1039/C8NJ02072H>
23. Yang, W.;[†] Sinha Roy, S.;[†] Pitts, W. C.; Nelson, R.; Fronczek, F. R.; Jurss, J. W. Electrocatalytic CO₂ Reduction with *Cis* and *Trans* Conformers of a Rigid Dinuclear Rhenium Complex: Comparing the Monometallic and Cooperative Bimetallic Pathways. *Inorg. Chem.* **2018**, *57*, 9564–9575. <https://doi.org/10.1021/acs.inorgchem.8b01775> ([†] co-first authors)
22. Huckaba, A. J.; Shirley, H.; Lamb, R.; Guertin, S.; Autry, S.; Cheema, H.; Talukdar, K.; Jones, T.; Jurss, J. W.; Dass, A.; Hammer, N. I.; Schmehl, R. H.; Webster, C. E.; Delcamp, J. H. A Mononuclear Tungsten Photocatalyst for H₂ Production. *ACS Catal.* **2018**, *8*, 4838–4847. <https://doi.org/10.1021/acscatal.7b04242>
21. Su, X.; McCardle, K. M.; Panetier, J. A.; Jurss, J. W. Electrocatalytic CO₂ Reduction with Nickel Complexes Supported by Tunable Bipyridyl-*N*-Heterocyclic Carbene Donors: Understanding Redox-Active Macrocycles. *Chem. Commun.* **2018**, *54*, 3351–3354. <https://doi.org/10.1039/C8CC00266E>
20. Chen, L.; Khadivi, A.; Singh, M.; Jurss, J. W. Synthesis of a Pentadentate Polypyrazine Ligand and its Application in Cobalt-Catalyzed Hydrogen Production. *Inorg. Chem. Front.* **2017**, *4*, 1649–1653. <https://doi.org/10.1039/C7QI00362E>
19. Liyanage, N. P.; Dulaney, H. A.; Huckaba, A. J.; Jurss, J. W.; Delcamp, J. H. Electrocatalytic Reduction of CO₂ to CO with Re-Pyridyl-NHCs: Proton Source Influence on Rates and Product Selectivities. *Inorg. Chem.* **2016**, *55*, 6085–6094. <https://doi.org/10.1021/acs.inorgchem.6b00626>
18. Wilson, J.; Williams, J. S. D.; Petkovsek, C.; Reves, P.; Jurss, J. W.; Hammer, N. I.; Tschumper, G.; Watkins, D. L. Synergistic Effects of Halogen Bond and π - π Interactions in Thiophene-based Building Blocks. *RSC Adv.* **2015**, *5*, 82544–82548. <https://doi.org/10.1039/C5RA16680B>
17. Jurss, J. W.; Khnayzer, R. S.; Panetier, J. A.; El Roz, K. A.; Nichols, E. M.; Head-Gordon, M.; Long, J. R.; Castellano, F. N.; Chang, C. J. Bioinspired Design of Redox-Active Ligands for Multielectron Catalysis: Effects of Positioning Pyrazine Reservoirs on Cobalt for Electro- and Photocatalytic Generation of Hydrogen from Water. *Chem. Sci.* **2015**, *6*, 4954–4972. <https://doi.org/10.1039/C5SC01414J>
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- Prior to the University of Mississippi*
16. Khnayzer, R. S.; Thoi, V. S.; Nippe, M.; King, A. E.; Jurss, J. W.; El Roz, K. A.; Long, J. R.; Chang, C. J.; Castellano, F. N. Towards a Comprehensive Understanding of Visible-Light Photogeneration of Hydrogen from Water Using Cobalt(II) Polypyridyl Catalysts. *Energy Environ. Sci.* **2014**, *7*, 1477–1488. <https://doi.org/10.1039/C3EE43982H>
15. Moonshiram, D.; Jurss, J. W.; Concepcion, J. J.; Zakharova, T.; Alperovich, I.; Meyer, T. J.; Pushkar, Y. Structure and Electronic Configurations of the Intermediates of Water Oxidation in Blue Ruthenium Dimer Catalysis. *J. Am. Chem. Soc.* **2012**, *134*, 4625–4636. <https://doi.org/10.1021/ja208636f>
14. Jurss, J. W.; Concepcion, J. J.; Butler, J. M.; Omberg, K. M.; Baraldo, L. M.; Thompson, D. G.; Lebeau, E. L.; Hornstein, B.; Schoonover, J. R.; Jude, H.; Thompson, J. D.; Dattelbaum, D. M.; Rocha, R. C.; Templeton, J. L.; Meyer, T. J. Electronic Structure of the Water Oxidation Catalyst, *cis,cis*-[(bpy)₂(H₂O)Ru^{III}O-Ru^{III}(OH)₂(bpy)₂](ClO₄)₄. The Blue Dimer. *Inorg. Chem.* **2012**, *51*, 1345–1358. <https://doi.org/10.1021/ic201521w>
13. Chen, Z.; Vannucci, A. K.; Concepcion, J. J.; Jurss, J. W.; Meyer, T. J. Proton Coupled Electron Transfer at Modified Electrodes by Multiple Pathways. *Proc. Natl. Acad. Sci. USA* **2011**, *108*, E1461–E1469. <https://doi.org/10.1073/pnas.1115769108>

12. Alperovich, I.; Smolentsev, G.; Moonshiram, D.; **Jurss, J. W.**; Concepcion, J. J.; Meyer, T. J.; Soldatov, A.; Pushkar, Y. Understanding the Electronic Structure of 4d Metal Complexes: From Molecular Spinors to L-Edge Spectra of a di-Ru Catalyst. *J. Am. Chem. Soc.* **2011**, *133*, 15786–15794. <https://doi.org/10.1021/ja207409q>
11. Song, W.; Brennaman, M. K.; Concepcion, J. J.; **Jurss, J. W.**; Hoertz, P. G.; Luo, H.; Chen, C.; Hanson, K. G.; Meyer, T. J. Interfacial Electron Transfer Dynamics for $[\text{Ru}(\text{bpy})_2((4,4'\text{-PO}_3\text{H}_2)_2\text{bpy})]^{2+}$ Sensitized TiO_2 in a Dye Sensitized Photoelectrosynthesis Cell. Factors Influencing Efficiency and Dynamics. *J. Phys. Chem. C* **2011**, *115*, 7081–7091. <https://doi.org/10.1021/jp200124k>
10. Brennaman, M. K.; Patrocinio, A. O. T.; Song, W.; **Jurss, J. W.**; Concepcion, J. J.; Hoertz, P. G.; Traub, M. C.; Iha, N. Y. M.; Meyer, T. J. Interfacial Electron Transfer Dynamics Following Laser Flash Photolysis of $[\text{Ru}(\text{bpy})_2((4,4'\text{-PO}_3\text{H}_2)_2\text{bpy})]^{2+}$ in TiO_2 Nanoparticle Films in Aqueous Environments. *ChemSusChem* **2011**, *4*, 216–227. <https://doi.org/10.1002/cssc.201000356>
9. Gagliardi, C. J.; **Jurss, J. W.**; Thorp, H. H.; Meyer, T. J. Surface Activation of Electrocatalysis at Oxide Electrodes. Concerted Electron-Proton Transfer. *Inorg. Chem.* **2011**, *50*, 2076–2078. <https://doi.org/10.1021/ic102524f>
8. **Jurss, J. W.**; Concepcion, J. J.; Norris, M. R.; Templeton, J. L.; Meyer, T. J. Surface Catalysis of Water Oxidation by the Blue Ruthenium Dimer. *Inorg. Chem.* **2010**, *49*, 3980–3982. <https://doi.org/10.1021/ic100469x>
7. Concepcion, J. J.; **Jurss, J. W.**; Norris, M. R.; Chen, Z.; Templeton, J. L.; Meyer, T. J. Catalytic Water Oxidation by Single-Site Ruthenium Catalysts. *Inorg. Chem.* **2010**, *49*, 1277–1279. <https://doi.org/10.1021/ic901437e>
6. Chen, Z.; Concepcion, J. J.; **Jurss, J. W.**; Meyer, T. J. Single-Site, Catalytic Water Oxidation on Oxide Surfaces. *J. Am. Chem. Soc.* **2009**, *131*, 15580–15581. <https://doi.org/10.1021/ja906391w>
5. Concepcion, J. J.; **Jurss, J. W.**; Hoertz, P. G.; Meyer, T. J. Catalytic and Surface-Electrocatalytic Water Oxidation by Redox Mediator-Catalyst Assemblies. *Angew. Chem. Int. Ed.* **2009**, *48*, 9473–9476. <https://doi.org/10.1002/anie.200901279>
4. Concepcion, J. J.; **Jurss, J. W.**; Brennaman, M. K.; Hoertz, P. G.; Patrocinio, A. O. T.; Iha, N. Y. M.; Templeton, J. L.; Meyer, T. J. Making Oxygen with Ruthenium Complexes. *Acc. Chem. Res.* **2009**, *42*, 1954–1965. <https://doi.org/10.1021/ar9001526>
3. Concepcion, J. J.; **Jurss, J. W.**; Templeton, J. L.; Meyer, T. J. One Site is Enough. Catalytic Water Oxidation by $[\text{Ru}(\text{tpy})(\text{bpm})(\text{OH}_2)]^{2+}$ and $[\text{Ru}(\text{tpy})(\text{bpz})(\text{OH}_2)]^{2+}$. *J. Am. Chem. Soc.* **2008**, *130*, 16462–16463. <https://doi.org/10.1021/ja8059649>
2. Concepcion, J. J.; **Jurss, J. W.**; Templeton, J. L.; Meyer, T. J. Mediator-assisted water oxidation by the ruthenium “blue dimer” *cis,cis*- $[(\text{bpy})_2(\text{H}_2\text{O})\text{RuORu}(\text{OH}_2)(\text{bpy})_2]^{4+}$. *Proc. Natl. Acad. Sci. USA* **2008**, *105*, 17632–17635. <https://doi.org/10.1073/pnas.0807153105>
1. Liu, F.; Concepcion, J. J.; **Jurss, J. W.**; Cardolaccia, T.; Templeton, J. L.; Meyer, T. J. Mechanisms of Water Oxidation from the Blue Dimer to Photosystem II. *Inorg. Chem.* **2008**, *47*, 1727–1752. <https://doi.org/10.1021/ic701249s>

PATENTS AND PATENT APPLICATIONS

Concepcion, J. J.; Chen, Z.; Jurss, J. W.; Templeton, J. L.; Hoertz, P.; Meyer, T. J. Ruthenium or osmium complexes and their uses as catalysts for water oxidation. *U.S. Patent* #: 8,871,078 (2014), #: 9,359,680 (2016).

Concepcion, J. J.; Jurss, J. W.; Hoertz, P.; Meyer, T. J. Nanoparticle electrodes and methods of preparation. *PCT Int. Appl.* **2011**, WO 2011/142848 A2.

FUNDING

NSF CAREER Award CHE-1848478 (2019–2024), Principal Investigator, “CAREER: Precise Structural Control in Transformative Catalysts for Efficient Multielectron Carbon Dioxide Reduction”, \$563,972.

NSF OIA-1757220 (2018–2023), Collaborative, “RII Track-1: Center for Emergent Molecular Optoelectronics (CEMOs)”, \$20,000,000 (\$634,577 to Jurss).

NSF REU CHE-1757888 (2018–2021), Senior Personnel, “REU Site: Ole Miss Physical Chemistry Summer Research Program”, \$299,000.

ACS Petroleum Research Fund Doctoral New Investigator 58707-DNI3 (2018–2020), Principal Investigator, “Developing Durable and Highly Reactive Iron-Oxo Catalysts for Hydrocarbon Functionalization”, \$110,000.

NSF OIA-1539035 (2016–2019), Senior Personnel, “Feeding and Powering the World – Capturing Sunlight to Split Water and Generate Fertilizer and Fuels”, \$37,500.

NSF REU CHE-1156713 (2015–2017), Senior Personnel, “REU Site: Ole Miss Physical Chemistry Summer Research Program”, \$326,697.

NSF MRI CHE-1532079 (2015–2017), Senior Personnel, “MRI: Acquisition of a Raman Spectrometer for Research and Training at the University of Mississippi”, \$231,429.

UM CLA Summer Research Grant (2015–2016), Principal Investigator, “Cooperative Catalysis with Dinuclear Metal Complexes for Carbon Dioxide Reduction”, \$15,000.

Sally McDonnell Barksdale Honors College (2014–2019), Principal Investigator, “Efficient Carbon Dioxide Conversion to Renewable Fuels”, \$4,000.

INVITED SEMINARS / TALKS

Feb 22, 2022	University of Southern California	Los Angeles, CA
Nov 12, 2021	Southeastern Regional Meeting of the ACS (SERMACS) -Multidentate Ligand Systems in Inorganic Chemistry Symp.	Birmingham, AL
Nov 11, 2021	SERMACS - Clean Energy Harvesting, Conversion & Storage Symp.	Birmingham, AL
Nov 11, 2021	SERMACS - Inorganic ET Reactions for Energy Storage Symp.	Birmingham, AL
Nov 5, 2021	East Tennessee State University	Virtual
Nov 2, 2021	Southwest Regional Meeting of the ACS (SWRM) -Bioinorganic Chemistry Symposium	Austin, TX
Oct 19, 2021	Louisiana State University	Virtual
Jan 29, 2021	University of Richmond	Virtual
Aug 20, 2020	Indian Institute of Technology, Guwahati	Virtual
Feb 28, 2020	Samford University	Birmingham, AL
Feb 6, 2020	University of Tennessee, Knoxville	Knoxville, TN
Nov 18, 2019	Millsaps College	Jackson, MS
Nov 7, 2019	North Carolina State University	Raleigh, NC
Oct 20, 2019	SERMACS - Catalysis in Aqueous & Alternative Media Symp.	Savannah, GA
Oct 8, 2019	University of North Carolina at Chapel Hill	Chapel Hill, NC
Sept 17, 2019	Johns Hopkins University	Baltimore, MD
June 11, 2019	ACS 23 rd Green Chemistry & Engineering Conference -Catalysis for CO ₂ Conversion Symposium	Reston, VA
Apr 17, 2019	University of South Carolina	Columbia, SC
Apr 3, 2019	ACS National Meeting - Small Molecule Activation Symp.	Orlando, FL
Mar 8, 2019	SUNY Binghamton University	Binghamton, NY
Feb 28, 2019	University of Alabama	Tuscaloosa, AL
Feb 21, 2019	Auburn University	Auburn, AL
Feb 15, 2019	University of Memphis	Memphis, TN
Nov 13, 2018	Rhodes College	Memphis, TN

Nov 2, 2018	SERMACS - Electrochem / Energy Conversion Symposium	Augusta, GA
Sept 21, 2018	Southern Methodist University	Dallas, TX
Sept 19, 2018	Texas Tech University	Lubbock, TX
Mar 21, 2018	ACS National Meeting - PCET Photocatalysis Symposium	New Orleans, LA
Nov 3, 2017	Mississippi State University	Starkville, MS
Sept 1, 2017	University of Tennessee, Chattanooga	Chattanooga, TN
Mar 13, 2017	Tulane University	New Orleans, LA
Nov 16, 2016	Advanced Materials for Transformative Changes Conference -Mississippi Research Consortium	Oxford, MS
Oct 26, 2016	SERMACS - Electrocatalysis Symposium	Columbia, SC
Aug 24, 2016	ACS National Meeting - Thomas J. Meyer Symposium	Philadelphia, PA
Apr 29, 2016	University of Mississippi (Chemical Engineering)	Oxford, MS
Apr 15, 2016	Western Carolina University	Cullowhee, NC
May 1, 2015	Union University	Jackson, TN
Mar 13, 2015	Southeastern Louisiana University	Hammond, LA
Feb 6, 2015	Jackson State University	Jackson, MS
Nov 6, 2014	Louisiana State University	Baton Rouge, LA
Sept 18, 2014	University of Mississippi (Chemistry and Biochemistry)	Oxford, MS

TEACHING EXPERIENCE

Professor	<i>University of Mississippi</i>
Fall 2015, 2016	Chem 105: General Chemistry I
Spring 2016, 2017	Chem 106: General Chemistry II
Spring 2020	Chem 393: Advanced Special Topics in Chemistry
Fall 2017–2021	Chem 401: Inorganic Chemistry
Spring 2022	Chem 544: Chemical Applications of Group Theory
Fall 2014, 2017–2021	Chem 701: Advanced Inorganic Chemistry I
Spring 2018, 2020	Chem 702: Organometallic Chemistry of the Transition Metals
Spring 2015, 2019, 2021	Chem 741: Electronic Structure and Electron Transfer in Catalysis

Graduate Teaching Assistant	<i>University of North Carolina at Chapel Hill</i>
Fall 2007, Spring 2009	TA / guest lecturer of 2 graduate-level courses (Chem 465, Chem 752)
Fall 2005, Spring/Fall 2006	3 laboratory sections (Chem 101L, Chem 550L)

SERVICE AND SYNERGISTIC ACTIVITIES

To the Department

- Department Outside Speakers Seminar Coordinator (2015 – present)
 - Scheduled / coordinated visits and reimbursements for >80 invited speakers
- Ole Miss Research in Catalysis Summer Research Program for undergraduates (2015 – present)
- Artificial Photosynthesis Research Experience for High School Students summer program (2015 – present)
- Developed new graduate-level course – *Chem 741: Electronic Structure and Electron Transfer in Catalysis*
- Active in Ole Miss Local Section of the American Chemical Society (2014 – present)
 - Chair-Elect of the Local Section in 2016
 - Chair of the Local Section in 2017
- Cottrell Scholars Collaborative New Faculty Workshop – Selected Attendee 2014
- Member of Graduate Student Admissions Committee (2018 – present)
- Member of Department Instrumentation Committee (2018 – present)
- Member of Graduate Student Support Committee (2017 – present)
- Member of Graduate Student Recruiting Committee (2014 – present)
- Member of Diversity, Equity, and Inclusion Committee (2020 – present)
- Helped plan ACS Program-in-a-Box events for SMACS student organization (02/21/2017, 10/24/2017)
- Faculty Liaison/Advisor to Young Chemists Committee of Ole Miss ACS Chapter (2015 – present)
- Undergraduate Degree Advisor for 15 students (2015 – 2018)

15. Served on a Faculty Search Committee for new Assistant Professor of Chemistry and Biochemistry (2019)
16. Wrote and graded 11 Inorganic Cumulative Exams – 04/24/2015, 11/13/2015, 04/22/2016, 09/30/2016, 04/25/2017, 11/03/2017, 11/02/2018, 05/03/2019, 12/06/2019, 02/05/2021, 10/08/2021

To the Profession

17. Chair/Presider of Inorganic Catalysts Session at ACS National Meeting in Orlando, FL (04/03/2019)
18. Proposal reviewer for National Science Foundation (2017 – present)
19. Proposal reviewer for ACS Petroleum Research Fund (2017 – present)
20. Journal Referee for: *Nature Catalysis*, *Nature Communications*, *Journal of the American Chemical Society*, *ACS Catalysis*, *Chemical Science*, *Chemical Communications*, *ACS Applied Energy Materials*, *Inorganic Chemistry*, *Dalton Transactions*, *Organometallics*, *Inorganic Chemistry Frontiers*, *ChemPhotoChem*, *ChemElectroChem*, *European Journal of Inorganic Chemistry*, *Journal of the Electrochemical Society*, *Electrochimica Acta*, *Materials Advances*, *Polyhedron*, *Inorganica Chimica Acta*, *Journal of Organometallic Chemistry*, *Journal of Molecular Structure*, *Trends in Chemistry*
21. Senior Personnel in the Ole Miss Physical Chemistry REU Program (2015 – present)
 - Mentor one external undergraduate student each summer in original research and give lectures on renewable energy catalysis to all REU participants.
22. Judge at 2019 Mississippi Region VII Science Fair (03/21/2019)
23. Science columnist for *The Oxford Eagle* newspaper of Oxford, Mississippi (×2)
24. Judge at 2017 Mississippi Region VII Science Fair (03/23/2017)
25. Research talk and tour of Departmental research facilities for AP Chemistry class from Lafayette High School (08/12/2016)
26. Judge at 2016 State of Mississippi Science Fair (04/05/2016)
27. Hosted 40 Mississippi high students from Lafayette High School in Chem 105 lecture, gave tour of Departmental research facilities (09/23/2015)
28. Served as a proposal reviewer through ORAU Peer Review (07/2015)
29. Served as a proposal reviewer for the Marsden Fund (07/2019)
30. Judge at 2015 Mississippi Region VII Science Fair (04/10/2015)
31. Academic Panelist at Career Paths in the Physical Sciences Conference at Southeastern Louisiana University in Hammond, LA (11/07/2014)
32. Member of the American Chemical Society (2008 – present)

To the University

33. Served on a Faculty Search Committee for UM Department of BioMolecular Sciences (2017)
34. Served on the Committee on Members in Course (COMIC) for selection of new inductees into the Phi Beta Kappa Honors Society (2021, 2022)

Other Activities

35. Board Member of Oxford-Lafayette County Habitat for Humanity (2018 – present)
36. *RebelWell* Wellness Champion for Department of Chemistry and Biochemistry (2015 – 2019)
37. Charter Member of Run Oxford (2015 – present)
38. Elected Vice-President of Run Oxford (2022)

GRADUATE STUDENT COMMITTEE MEMBER (year finished) *Ph.D. awarded, ^M.S. awarded

1. Christine Curiac	2. Seth Darlington	3. Shakeyia Davis (2018)^
4. Austin Dorris	5. Mostafa Elhendawy	6. Dilan Karunathilaka
7. Suchitra Mitra (2021)*	8. Dinesh Nugegoda	9. Sreya Malayam Parambath
10. Adithya Peddapuram (2019)*	11. Divyansh Prakash	12. Pallavi Prasad (2022)*
13. Milan Rambukwella (2018)*	14. Tharindu Ranathunge	15. Roberta Rodrigues (2019)*
16. Dhanashree Selvan	17. Hunter Shirley (2021)*	18. Weerachai Silprakob (UA)
19. Nicholas Sparks	20. Kalpani Hirunika Wijesinghe	

HONORS THESIS COMMITTEE MEMBER (year, non-Jurss Lab members)

- | | | |
|--------------------------|------------------------------|-------------------------|
| 1. Kayla Foell (2019) | 2. Stanton Heydinger (2019) | 3. Andrew Ladner (2020) |
| 4. Henry Nguyen (2019) | 5. Harshin Sanjanwala (2019) | 6. Emily Sharpe (2016) |
| 7. Ross Straughan (2015) | | |