

## Jonah W. Jurss, Ph.D.

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### EDUCATIONAL AND PROFESSIONAL BACKGROUND

07/2020 – present	<b>University of Mississippi</b> <i>Associate Professor of Chemistry</i>
07/2014 – 06/2020	<b>University of Mississippi</b> <i>Assistant Professor of Chemistry</i>
02/2011 – 05/2014	<b>University of California, Berkeley</b> <i>Postdoctoral Research Associate</i> Advisor: Prof. Christopher J. Chang
08/2005 – 05/2011	<b>University of North Carolina at Chapel Hill</b> <i>Ph.D. Chemistry</i> Advisors: Profs. Thomas J. Meyer and Joseph L. Templeton
08/2001 – 05/2005	<b>North Carolina State University</b> <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. Sha Tamanna Sahil (2017)
3. Sayontani Sinha Roy (2015)
4. Zane Turner (2018)

#### Undergraduates \*Honors College

1. Allen Chatelain (2020)\*
2. Ansu Edwards (2019)\*
3. Caroline Hodge (2020)\*

#### Postdoc

Shrabanti Bhattacharya (05/2020)

### GRADUATE THESES / DISSERTATIONS COMPLETED (graduation year, degree)

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. Lizhu Chen (2019, M.S.)</li> <li>3. Joseph M. Lee (2019, M.S.)</li> <li>5. Kallol Talukdar (2020, Ph.D.)</li> </ol> | <ol style="list-style-type: none"> <li>2. Hunter A. Dulaney (2016, M.S.)</li> <li>4. Kayla A. Milano (2019, M.S.)</li> <li>6. Weiwei Yang (2019, Ph.D.)</li> </ol> |
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### PAST POSTDOCTORAL ASSOCIATES

1. Xiaojun Su	08/2016 – 01/2019	Tsinghua University (Ph.D. Chemistry)
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 UNDERGRADUATE ALUMNI (last year, semesters) \*Honors College, ^REU student, †Taylor Medal
 

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|----------------------------------|-----------------------------------|---------------------------------|
| 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. Sarah Farmer (2015, 2)         | 9. Allie Funderbunk (2015, 1)   |
| 10. Katrina Gateley (2015, 1)    | 11. Jacqueline Gledhill (2015, 2) | 12. Ryan Harvey (2014, 1)       |
| 13. Ryan Higgins (2016, 5)       | 14. Michael Holland (2015, 1)     | 15. Allison Hunter (2017, 2)    |
| 16. Asala Issa (2018, 2)         | 17. Amir Khadivi (2016, 4)        | 18. Shannon Kirkland (2017, 2)  |
| 19. Hannah Kline (2018, 1)^      | 20. Chase Lance (2020, 3)*^†      | 21. Madeline Mixon (2017, 1)    |
| 22. Skylar Nash (2019, 4)        | 23. Rebekah Nelson (2017, 3)      | 24. Winston Pitts (2017, 4)     |
| 25. Ankita Purohit (2015, 1)     | 26. Manpreet Singh (2016, 4)*     | 27. Elizabeth Sleeper (2019, 1) |
| 28. Jordan Spell (2016, 1)^      | 29. Natalie Taylor (2019, 3)      | 30. Cameron Trussell (2019, 1)^ |
| 31. Joseph Vaughan (2019, 4)*†   |                                   |                                 |

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

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|--------------------------------|-------------------------------------|-------------------------------|
| 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-Witrago (July 2019) |                               |

**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) |

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 PUBLICATIONS (*Citations: 3,625; H-index: 20*) \*Corresponding author; **undergraduate authors in red**


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35. **Jurss, J. W.\***; Concepcion, J. J.; Templeton, J. L.; Meyer, T. J. Anion Involvement in Water Oxidation by the Blue Dimer, *cis,cis*-[(bpy)<sub>2</sub>(H<sub>2</sub>O)Ru<sup>III</sup>ORu<sup>III</sup>(OH<sub>2</sub>)(bpy)<sub>2</sub>]<sup>4+</sup>. *In revision*.

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.* **2020**, Accepted. <https://doi.org/10.1039/D0DT03030A>

33. Sinha Roy, S.;† Talukdar, K.;† **Jurss, J. W.\*** Electro- and Photochemical Reduction of CO<sub>2</sub> by Molecular Manganese Catalysts: Exploring the Positional Effect of Second Sphere Hydrogen-Bond Donors. *ChemSusChem* **2020**, Accepted. <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 CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> or CO to CH<sub>4</sub>. *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 CO<sub>2</sub> 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.;<sup>†</sup> Sinha Roy, S.;<sup>†</sup> **Pitts, W. C.**; **Nelson, R.**; Fronczek, F. R.; **Jurss, J. W.\*** Electrocatalytic CO<sub>2</sub> 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 H<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> 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  $\pi$ - $\pi$  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>

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)<sub>2</sub>(H<sub>2</sub>O)Ru<sup>III</sup>O-Ru<sup>III</sup>(OH<sub>2</sub>)(bpy)<sub>2</sub>](ClO<sub>4</sub>)<sub>4</sub>. 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 [Ru(bpy)<sub>2</sub>((4,4'-PO<sub>3</sub>H<sub>2</sub>)<sub>2</sub>bpy)]<sup>2+</sup> Sensitized TiO<sub>2</sub> 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 [Ru(bpy)<sub>2</sub>((4,4'-PO<sub>3</sub>H<sub>2</sub>)<sub>2</sub>bpy)]<sup>2+</sup> in TiO<sub>2</sub> 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.

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

August 20, 2020	Indian Institute of Technology, Guwahati	Virtual
February 28, 2020	Samford University	Birmingham, AL
February 6, 2020	University of Tennessee, Knoxville	Knoxville, TN
November 18, 2019	Millsaps College	Jackson, MS
November 7, 2019	North Carolina State University	Raleigh, NC
October 20, 2019	Southeastern Regional Meeting of the ACS (SERMACS) - Catalysis in Aqueous and Alternative Media Symposium	Savannah, GA

October 8, 2019	University of North Carolina at Chapel Hill	Chapel Hill, NC
September 17, 2019	Johns Hopkins University	Baltimore, MD
June 11, 2019	ACS 23 <sup>rd</sup> Green Chemistry & Engineering Conference - Catalysis for CO <sub>2</sub> Conversion Symposium	Reston, VA
April 17, 2019	University of South Carolina	Columbia, SC
April 3, 2019	ACS National Meeting - Small Molecule Activation Symp.	Orlando, FL
March 8, 2019	SUNY Binghamton University	Binghamton, NY
February 28, 2019	University of Alabama	Tuscaloosa, AL
February 21, 2019	Auburn University	Auburn, AL
February 15, 2019	University of Memphis	Memphis, TN
November 13, 2018	Rhodes College	Memphis, TN
November 2, 2018	SERMACS - Electrochem / Energy Conversion Symposium	Augusta, GA
September 21, 2018	Southern Methodist University	Dallas, TX
September 19, 2018	Texas Tech University	Lubbock, TX
March 21, 2018	ACS National Meeting - PCET Photocatalysis Symposium	New Orleans, LA
November 3, 2017	Mississippi State University	Starkville, MS
September 1, 2017	University of Tennessee, Chattanooga	Chattanooga, TN
March 13, 2017	Tulane University	New Orleans, LA
November 16, 2016	Advanced Materials for Transformative Changes Conference - Mississippi Research Consortium	Oxford, MS
October 26, 2016	SERMACS - Electrocatalysis Symposium	Columbia, SC
August 24, 2016	ACS National Meeting - Thomas J. Meyer Symposium	Philadelphia, PA
April 29, 2016	University of Mississippi (Chemical Engineering)	Oxford, MS
April 15, 2016	Western Carolina University	Cullowhee, NC
May 1, 2015	Union University	Jackson, TN
March 13, 2015	Southeastern Louisiana University	Hammond, LA
February 6, 2015	Jackson State University	Jackson, MS
November 6, 2014	Louisiana State University	Baton Rouge, LA
September 18, 2014	University of Mississippi (Chemistry)	Oxford, MS

## TEACHING EXPERIENCE

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<b>Professor</b>	<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 2017–2020	Chem 401: Inorganic Chemistry
Fall 2014, 2017–2020	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

<b>Graduate Teaching Assistant</b>	<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

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### *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
- 6. Cottrell Scholars Collaborative New Faculty Workshop – Selected Attendee 2014
- 7. Member of Graduate Student Admissions Committee (2018 – present)
- 8. Member of Department Instrumentation Committee (2018 – present)
- 9. Member of Graduate Student Support Committee (2017 – present)
- 10. Member of Graduate Student Recruiting Committee (2014 – present)
- 11. Helped plan ACS Program-in-a-Box events for SMACS student organization (02/21/2017, 10/24/2017)
- 12. Faculty Liaison/Advisor to Young Chemists Committee of Ole Miss ACS Chapter (2015 – present)
- 13. Undergraduate Degree Advisor for 15 students (2015 – 2018)
- 14. Served on Faculty Search Committee for new Assistant Professor of Chemistry and Biochemistry (2019)
- 15. Wrote and graded nine 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

### ***To the Profession***

16. Chair/Presider of Inorganic Catalysts Session at ACS National Meeting in Orlando, FL (04/03/2019)
17. Proposal reviewer for National Science Foundation (2017 – present)
18. Proposal reviewer for ACS Petroleum Research Fund (2017 – present)
19. Journal Referee for: *Nature Catalysis*, *Nature Communications*, *Journal of the American Chemical Society*, *ACS Catalysis*, *Chemical Science*, *Chemical Communications*, *Inorganic Chemistry*, *Dalton Transactions*, *Organometallics*, *Inorganic Chemistry Frontiers*, *European Journal of Inorganic Chemistry*, *Journal of the Electrochemical Society*, *Electrochimica Acta*, *Polyhedron*, *Journal of Organometallic Chemistry*, *Journal of Molecular Structure*
20. 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.
21. Judge at 2019 Mississippi Region VII Science Fair (03/21/2019)
22. Science columnist for *The Oxford Eagle* newspaper of Oxford, Mississippi (X2)
23. Judge at 2017 Mississippi Region VII Science Fair (03/23/2017)
24. Research talk and tour of Departmental research facilities for AP Chemistry class from Lafayette High School (08/12/2016)
25. Judge at 2016 State of Mississippi Science Fair (04/05/2016)
26. Hosted 40 Mississippi high students from Lafayette High School in Chem 105 lecture, gave tour of Departmental research facilities (09/23/2015)
27. Served as a proposal reviewer through ORAU Peer Review (07/2015)
28. Served as a proposal reviewer for the Marsden Fund (07/2019)
29. Judge at 2015 Mississippi Region VII Science Fair (04/10/2015)
30. Academic Panelist at Career Paths in the Physical Sciences Conference at Southeastern Louisiana University in Hammond, LA (11/07/2014)
31. Member of the American Chemical Society (2008 – present)
32. Served on Faculty Search Committee for UM Department of BioMolecular Sciences (2017)

### ***Other Activities***

33. Board Member of Oxford-Lafayette County Habitat for Humanity (2018 – present)
34. *RebelWell* Wellness Champion for Department of Chemistry and Biochemistry (2015 – 2019)
35. Charter Member of Run Oxford (2015 – present)

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

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|-------------------------------|-------------------------------|------------------------------|
| 1. Christine Curiaic          | 2. Shakeyia Davis (2018)^     | 3. Austin Dorris             |
| 4. Mostafa Elhendawy          | 5. Dilan Karunathilaka        | 6. Suchitra Mitra            |
| 7. Dinesh Nugegoda            | 8. Adithya Peddapurum (2019)* | 9. Divyansh Prakash          |
| 10. Pallavi Prasad            | 11. Milan Rambukwella (2018)* | 12. Tharindu Ranathunge      |
| 13. Roberta Rodrigues (2019)* | 14. Hunter Shirley            | 15. Weerachai Silprakob (UA) |
| 16. Nicholas Sparks           |                               |                              |

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

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|--------------------------|------------------------------|-------------------------|
| 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) |                              |                         |