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Educational and Professional Background

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

Scientific Publications (*Total Citations: 2,682; H-index: 17*)

- (25) Chen, L.; Dulaney, H. A.; Farmer, S.; Zhang, Y.; Fronczek, F. R.; **Jurss, J. W.** First-Row Metal Complexes of a Constrained Tetradentate Polyaromatic Ligand: Synthesis, Structure, and Properties. *Manuscript in preparation.*
- (24) Chen, L.; Su, X.-J.; **Jurss, J. W.** Selective C-H bond functionalization catalyzed by a robust molecular iron complex with high yields for oxidizing cyclohexane and adamantane. *Manuscript in preparation.*
- (23) Su, X.; McCardle, K. M.; Panetier, J. A.; **Jurss, J. W.** Electrocatalytic CO₂ Reduction with Nickel Complexes Supported by Tunable Bipyridyl-NHC Ligands. *Submitted.*
- (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. An Air-Stable Mononuclear Tungsten Photocatalyst for H₂ Production. *Submitted.*
- (21) Yang, W.; Sinha Roy, S.; Pitts, W.; Nelson, R.; Fronczek, F. R.; **Jurss, J. W.** Electrocatalytic CO₂ Reduction with *cis* and *trans* Conformers of a Rigid Dinuclear Rhenium Complex: Comparing the Isolated Monometallic and Cooperative Bimetallic Pathways. *Under revision.*
- (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.
- (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.
- (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.
- (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.

- (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.
- (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.
- (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}(OH₂)(bpy)₂](ClO₄)₄. The Blue Dimer. *Inorg. Chem.* **2012**, *51*, 1345–1358.
- (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. Nat. Acad. Sci. USA* **2011**, *108*, E1461–E1469.
- (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.
- (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)₂((4,4'-PO₃H₂)₂bpy)]²⁺ Sensitized TiO₂ in a Dye Sensitized Photoelectrosynthesis Cell. Factors Influencing Efficiency and Dynamics. *J. Phys. Chem. C* **2011**, *115*, 7081–7091.
- (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)₂((4,4'-PO₃H₂)₂bpy)]²⁺ in TiO₂ Nanoparticle Films in Aqueous Environments. *ChemSusChem* **2011**, *4*, 216–227.
- (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.
- (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.
- (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.
- (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.
- (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.
- (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.
- (3) Concepcion, J. J.; **Jurss, J. W.**; Templeton, J. L.; Meyer, T. J. One Site is Enough. Catalytic Water Oxidation by [Ru(tpy)(bpm)(OH₂)]²⁺ and [Ru(tpy)(bpz)(OH₂)]²⁺. *J. Am. Chem. Soc.* **2008**, *130*, 16462–16463.
- (2) Concepcion, J. J.; **Jurss, J. W.**; Templeton, J. L.; Meyer, T. J. Mediator-assisted water oxidation by the ruthenium “blue dimer” *cis,cis*-[(bpy)₂(H₂O)RuORu(OH₂)(bpy)₂]⁴⁺. *Proc. Nat. Acad. Sci. USA* **2008**, *105*, 17632–17635.
- (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.

Patents and Patent Applications

Concepcion, J. J.; Jurss, J. W.; Hoertz, P.; Meyer, T. J. Nanoparticle electrodes and methods of preparation. *PCT Int. Appl.* **2011**, WO 2011142848 A2 20111117.

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. Pat. Appl. Publ.* **2011**, US 20110042227 A1 20110224.

Teaching Experience

Professor	<i>University of Mississippi</i>
Fall 2015, Fall 2016	Chem 105: General Chemistry I
Spring 2016, Spring 2017	Chem 106: General Chemistry II
Fall 2017	Chem 401: Inorganic Chemistry
Fall 2014, Fall 2017	Chem 701: Advanced Inorganic Chemistry I
Spring 2017	Chem 702: Advanced Inorganic Chemistry II (Organometallics)
Spring 2015	Chem 741: Electr. Structure/Electron Transfer in Inorganic Energy Catalysis

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

Research Advisor

Graduate Students:

			<u>Current</u>
Lizhu Chen	01/2015 –	Ph.D. Candidate	
Anthony Devdass	08/2017 –	Ph.D. Candidate	
Hunter Dulaney	08/2014 – 08/2016	M.S. Chemistry	Medical School at UMMC
Joseph Lee	06/2016 –	Ph.D. Candidate	
Kayla Milano	08/2015 –	M.S. Candidate	
Shatamanna Sahil	08/2017 –	Ph.D. Candidate	
Sayontani Sinha Roy	08/2015 –	Ph.D. Candidate	
Kallol Talukdar	08/2015 –	Ph.D. Candidate	
Weiwei Yang	08/2015 –	Ph.D. Candidate	

Postdocs:

Xiao-Jun Su	08/2016 –	Tsinghua University (Ph.D. Chemistry)
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Undergraduates:

Emily Ables	08/2016 – 05/2017	Allison Hunter	01/2017 – 12/2017
Eva Amatya	08/2017 –	Asala Issa	05/2017 –
Nicole Bay	01/2018 –	Amir Khadivi	09/2014 – 01/2016
Logan Bell	09/2014 – 05/2015	Shannon Kirkland	01/2017 –
Dawson Buettner	01/2018 –	Madeline Mixon	05/2017 – 07/2017
Sarah Farmer	06/2015 – 12/2015	Rebekah Nelson	01/2016 – 05/2017
Allie Funderbunk	01/2015 – 05/2015	Winston Pitts	08/2015 – 05/2017
Katrina Gateley	01/2018 –	Ankita Purohit	01/2015 – 05/2015
Jacqueline Gledhill	09/2014 – 05/2015	Manpreet Singh	09/2014 – 05/2016
Ryan Harvey	09/2014 – 12/2014	Natalie Taylor	01/2018 –
Ryan Higgins	09/2014 – 10/2016	Joseph Vaughan	09/2017 –
Michael Holland	08/2015 – 12/2015		

REU Students:

Jordan Spell	June/July 2016	Western Carolina University
Colleen Chernowsky	June/July 2017	Ohio Wesleyan University

High School Students:

Ting Li	July 2015	Robert Simmons	July 2015
Mayukh Datta	July 2016	Quristan Wilson	July 2016
Yingjie Cheng	June 2017	Vivienne Tenev	June 2017

Research Mentor

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)

Fellowships and Awards

<i>Chair of Ole Miss Local Section of the ACS</i>	University of Mississippi, 2017
<i>Graduate Assistance in Areas of National Need Fellowship</i>	University of North Carolina at Chapel Hill, 2008–2009
<i>Future Faculty Fellowship</i>	University of North Carolina at Chapel Hill, 2008
<i>Graduate Assistance in Areas of National Need Fellowship</i>	University of North Carolina at Chapel Hill, 2007–2008
<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

Service

To the Department

02/21/2017, 10/24/2017	Helped plan ACS Program-in-a-Box events for SMACS undergraduate organization
March 2015 – present	Faculty Liaison/Advisor to Young Chemists Committee of Ole Miss ACS Chapter
March 2015 – present	Departmental Outside Speakers Seminar Coordinator
Spring 2015	Developed new graduate-level course, <i>Electronic Structure and Electron Transfer in Inorganic Energy Catalysis</i> , under Chem 741: Selected Topics in Inorganic Chemistry
July 2014 – present	Departmental Graduate Student Recruiting Committee
Ongoing	Inorganic Cumulative Exams – 4/24/2015, 11/13/2015, 4/22/2016, 9/30/2016, 4/25/2017, 11/03/2017

Graduate Thesis Committee Member:

Shakeyia Davis
Adithya Peddapurum
Kimberly Poland
Milan Rambukwella
Roberta Rodrigues

Honors Thesis Committee Member:

Eva Amatya
Dawson Buettner
Katrina D. Gateley
Emily A. Sharpe
Manpreet Singh
Ross Straughan
Joseph Vaughan

To the Profession

March 23, 2017	Judge at 2017 Mississippi Region VII Science Fair
January 2017	Proposal reviewer for ACS Petroleum Research Fund
August 12, 2016	Research talk and tour of Departmental research facilities for AP Chemistry class from Lafayette High School (10 students)
July 2015 – present	Science columnist for <i>The Oxford Eagle</i> newspaper of Oxford, Mississippi
April 5, 2016	Judge at 2016 State of Mississippi Science Fair (Grades 7 – 12)
2016 – present	Proposal reviewer for National Science Foundation
2015 – present	<i>Journal of the Electrochemical Society</i> , journal referee
September 23, 2015	Hosted 40 Mississippi high students from Lafayette High School in Chem 105 lecture, gave tour of Departmental research facilities
July 29, 2015	Served as a proposal reviewer through ORAU Peer Review
July 2015 – 2017	Lectures on <i>Energy Catalysis</i> to Ole Miss Physical Chemistry REU Program
Summer 2015 (and annually thereafter)	Founded the “Ole Miss Research in Catalysis Summer Research Program” for undergraduates in the Jurss Lab
Summer 2015 (and annually thereafter)	Founded the “Artificial Photosynthesis Research Experience for High School Students” summer research program in the Jurss Lab
April 10, 2015	Judge at 2015 Mississippi Region VII Science Fair
November 7, 2014	Academic Panelist at Career Paths in the Physical Sciences Conference, SELU

Other Activities

Jan – March 2017	Faculty Search Committee for UM Department of BioMolecular Sciences
Fall 2015 – present	<i>RebelWell</i> Wellness Champion for Department of Chemistry and Biochemistry
2015 – present	Charter Member of Run Oxford
July 2014 – present	Active in Ole Miss Local Section of the American Chemical Society
July 31 – Aug 2, 2014	Cottrell Scholars Collaborative New Faculty Workshop
2008 – present	Member of the American Chemical Society

Invited Seminars

<i>Scheduled: 03/21/2018</i>	ACS National Meeting, PCET Symposium	New Orleans, Louisiana
November 3, 2017	Mississippi State University	Starkville, Mississippi
September 1, 2017	University of Tennessee, Chattanooga	Chattanooga, Tennessee
March 13, 2017	Tulane University	New Orleans, Louisiana
November 16, 2016	Advanced Materials for Transformative Changes	Mississippi Research Consortium
October 26, 2016	SERMACS, Electrocatalysis Symposium	Columbia, South Carolina
August 24, 2016	ACS National Meeting, TJ Meyer Symposium	Philadelphia, Pennsylvania
April 29, 2016	University of Mississippi (Chem. Engineering)	Oxford, Mississippi
April 15, 2016	Western Carolina University	Cullowhee, North Carolina
May 1, 2015	Union University	Jackson, Tennessee
March 13, 2015	Southeastern Louisiana University	Hammond, Louisiana
February 6, 2015	Jackson State University	Jackson, Mississippi
November 6, 2014	Louisiana State University	Baton Rouge, Louisiana
September 18, 2014	University of Mississippi (Chemistry)	Oxford, Mississippi