Jonah W. Jurss, Ph.D.

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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:* 2,268; *H-index:* 17)

(21) Chen, L.; Dulaney, H. A.; Farmer, S.; Zhang, Y.; Fronczek, F. R.; **Jurss, J. W.** Robust Iron Complexes with *cis*-Labile Coordination Sites for Water Oxidation Catalysis. *Manuscript in preparation.*

(20) **Jurss, J. W.**; Khadivi, A.; Chen, L.; Singh, M. Synthesis of a Pentadentate Polypyrazine Ligand and its Application in Cobalt-Catalyzed Hydrogen Production. ***Submitted.***

(19) Liyanage, N. P.; Dulaney, H. A.; Huckaba, A. J.; **Jurss, J. W.**; Delcamp, J. H. Electrocatalytic Reduction of CO_2 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*-$[(bpy)_2(H_2O)Ru^{III}O\text{-}Ru^{III}(OH_2)(bpy)_2](ClO_4)_4$. 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 $[Ru(bpy)_2((4,4'\text{-}PO_3H_2)_2bpy)]^{2+}$ Sensitized TiO_2 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 $[Ru(bpy)_2((4,4'\text{-}PO_3H_2)_2bpy)]^{2+}$ in TiO_2 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 $[Ru(tpy)(bpm)(OH_2)]^{2+}$ and $[Ru(tpy)(bpz)(OH_2)]^{2+}$. *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*-$[(bpy)_2(H_2O)RuORu(OH_2)(bpy)_2]^{4+}$. *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	*University of Mississippi*
Fall 2015, Fall 2016	Chem 105: General Chemistry I
Spring 2016	Chem 106: General Chemistry II
Spring 2015	Chem 741: Electr. Structure/Electron Transfer in Inorganic Energy Catalysis
Fall 2014	Chem 701: Advanced Inorganic Chemistry I

Graduate Teaching Assistant	*University of North Carolina at Chapel Hill*
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:

			Current
Lizhu Chen	01/2015 –	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 –	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)

Undergraduates:

Emily Ables	08/2016 –	Michael Holland	08/2015 – 12/2015
Logan Bell	09/2014 – 05/2015	Amir Khadivi	09/2014 – 01/2016
Sarah Farmer	06/2015 – 12/2015	Rebekha Nelson	01/2016 –
Allie Funderbunk	01/2015 – 05/2015	Winston Pitts	08/2015 –
Jacqueline Gledhill	09/2014 – 05/2015	Ankita Purohit	01/2015 – 05/2015
Ryan Harvey	09/2014 – 12/2014	Manpreet Singh	09/2014 – 05/2016
Ryan Higgins	09/2014 –		

REU Students:

Jordan Spell	June/July 2016	Western Carolina University

High School Students:

Ting Li	July 2015	Robert Simmons	July 2015
Mayukh Datta	July 2016	Quristan Wilson	July 2016

Research Mentor

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

Fellowships and Awards

Chair-Elect of Ole Miss Local Section of the ACS	University of Mississippi, 2016
Graduate Assistance in Areas of National Need Fellowship	University of North Carolina at Chapel Hill, 2007–2009
Future Faculty Fellowship	University of North Carolina at Chapel Hill, 2008
ACS Analytical Chemistry Award	North Carolina State University, 2005
Undergraduate Research Fellowship	North Carolina State University, 2004–2005
Phi Beta Kappa Honor Society Inductee	North Carolina State University

Service

To the Department

Fall 2015 – present	*RebelWell* Wellness Champion for Department
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, *Electronic Structure and Electron Transfer in Inorganic Energy Catalysis*, under Chem 741: Selected Topics in Inorganic Chem.
July 2014 – present	Departmental Graduate Student Recruiting Committee
Ongoing	Inorganic Cumulative Exams – 04/24/2015, 11/13/2015, 04/22/2016, 09/30/2016

Graduate Thesis Committee Member:
Adithya Peddapurum
Kimberly Poland
Milan Rambukwella
Roberta Rodrigues

Honors Thesis Committee Member:
Manpreet Singh
Emily A. Sharpe
Ross Straughan

To the Profession

August 12, 2016	Gave research talk and tour of Departmental research facilities for AP Chemistry class from Lafayette High School (10 students)
July 2015 – present	Science columnist for *The Oxford Eagle* 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	*Journal of the Electrochemical Society*, 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, 2016	Lectures on *Energy Catalysis* 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

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

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