

## Eric James Watson, SJ

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### CURRENT POSITION

2009 – 2015      Assistant Professor of Chemistry. Seattle University, Seattle, Washington  
2016 - Present    Associate Professor of Chemistry. Seattle University, Seattle, Washington

### EDUCATION

2009              M.Div. Regis College, University of Toronto, Toronto, Ontario  
  
2001              Ph.D., Organometallic Chemistry. Brown University, Providence, Rhode Island.  
Advisor: Professor Dwight A. Sweigart. Title of dissertation: "The Synthesis and  
Reactivity of Bimetallic and Metallacyclic Manganese Complexes."  
  
1996              B.S., *Magna cum laude*, Chemistry. The Oregon State University, Corvallis, Oregon.

### RESEARCH AND PROFESSIONAL EXPERIENCE

2015              Visiting Professor, The Racah Institute of Physics, The Hebrew University of  
Jerusalem, Jerusalem. Host: Professor Rolfe H. Herber  
  
2004 - 2005      Post-doctoral Research Associate, University of Washington. Advisor: Professor  
James M. Mayer. Selective Oxidation of Alkanes by Osmium Complexes.  
  
2003              Post-doctoral Research Associate, Eidgenössische Technische Hochschule, Zürich  
(ETHZ). Advisor: Professor Paul S. Pregosin. Mechanism Elucidation for Ruthenium-  
Catalyzed Allylic Alkylation.  
  
1996 - 2000      Graduate Research Assistant, Brown University. Advisor: Professor Dwight A.  
Sweigart. Models for Hydrodesulfurization (HDS) and Hydrodenitrogenation (HDN)  
and the Synthesis and Reactivity of Novel Transition Metal Complexes.  
  
1995 - 1996      Undergraduate Research Assistant, The Oregon State University. Advisor: Professor  
Kevin P. Gable. Synthetic and Mechanistic Study of Substituted Indenyl Rhenium  
Tricarbonyl Complexes.  
  
1991-1993      Analytical Chemist, The Alaska Pulp Corporation, Sitka, Alaska. Supervisor: Mr. Cle  
Wade. Quantitative Analysis for Pulp and Paper Production Facility.

## TEACHING EXPERIENCE

- 2009 - Present Assistant and Associate Professor, Seattle University. Teach General Chemistry I, II, and III and associated General Chemistry Laboratory courses. Fundamental Inorganic Chemistry, Advanced Inorganic Chemistry and Senior Synthesis.
- 2005 - 2006 Visiting Professor, Seattle University. Taught Advanced Inorganic Chemistry, Introductory Chemistry and General Chemistry Laboratory.
- 2002 - 2004 Laboratory Instructor, Loyola University Chicago. While in Philosophy Studies, supervised Laboratory Sections of 20-25 students in General Chemistry, prepared and graded exams, presented laboratory lectures, tutored students.
- 1999 Teaching Assistant, Brown University. Supervised Advanced Inorganic Chemistry Laboratory sections of approximately 15 students, developed and prepared new experiments, presented recitations, graded laboratory reports and tutored students.

## AWARDS

- 2009 - Present Sigma Nu, National Jesuit Honor Society, Regis College, Toronto, ON
- 1999 - 2000 Manning Research Fellowship for Graduate Research at Brown University
- 1997 - 1999 GAANN Fellowship for Graduate Research, US Department of Education
- 1996 - 1997 University Fellowship for Graduate Study at Brown University

## AFFILIATIONS

- 2009 - Present Member, Alpha Sigma Nu, National Jesuit Honor Society
- 1997 - Present Member, The American Chemical Society
- 1996 - 2000 Member, Center for the Advancement of College Teaching, Brown University

## SEATTLE UNIVERSITY UNDERGRADUATE RESEARCH STUDENTS

Maria R.Q. Ilagan	B.S. 2021	Erin N. Fagnan	B.S. 2014
Michael A. DeSimone	B.S. 2020	Alex W. Watson	B.S. 2014
Joseph J. McBride	B.S. 2019	Elizabeth M. Ochoa	B.S. 2013
Emina E. Cheung	B.S. 2019	Ernst A. Henle	B.S. 2012
Timothy J. Casad	B.S. 2019	Sonam K. Ghag	B.S. 2012
Andrew Schwartz	B.S. 2015	Michael L. Tarlton	B.S. 2011

## RESEARCH GRANTS AWARDED

- 2017-2020 Murdock College Research Program for Natural Sciences Award (\$75,000)
- 2012-2015 Research Corporation for Science Advancement Single-investigator Cottrell College Science Award. (\$45,000)
- 2010 -2014 Annual Murdock College Science Research Program: Undergraduate Research Summer Stipend, Faculty Summer Stipend and Supplies Fund. (\$12,000 per year)

## RESEARCH PRESENTATIONS (SEATTLE UNIVERSITY STUDENT PRESENTER IN BOLD)

- 2018            **J.J. McBride, T.J. Casad, E.E. Cheung**, E.J. Watson, “Syntheses and Structures of Triple-decker complexes of Ruthenium” Murdock Charitable Trust 27<sup>nd</sup> Murdock College Science Research Conference, Vancouver, WA. Poster Presentation.
- 2018            **T.J. Casad, J.J. McBride, E.E. Cheung**, E.J. Watson, “Syntheses and Structures of Triple-decker complexes of Ruthenium” Linus Pauling Award Symposium, Bothell, WA. Poster Presentation.
- 2014            **E.N. Fagnan, A.W. Watson**, E.J. Watson, “Synthesis and Reactivity of Novel Bimetallic Triple-layer complexes”, Seattle University Undergraduate Research Association, Seattle, WA. Oral Presentation.
- 2013            **E.N. Fagnan, A.W. Watson**, E.J. Watson, “The Synthesis of Novel Bimetallic Triple-layer Complexes: Models for Molecular Wires” Murdock Charitable Trust 22<sup>nd</sup> Regional Conference on Undergraduate Research, Lewis and Clark College, Vancouver, WA. Poster Presentation.
- 2013            **E. M. Ochoa, A. W. Watson**, E.J. Watson, “Synthesis and Reactivity of Novel Bimetallic Triple-decker Complexes”, American Chemical Society National Meeting, New Orleans, LA. Poster Presentation.
- 2012            **E.M. Ochoa, A.W. Watson**, E.J. Watson, “The Synthesis of Novel Bimetallic Triple-layer Complexes: Models for Molecular Wires” Murdock Charitable Trust 21<sup>st</sup> Regional Conference on Undergraduate Research, Whitman College, Walla Walla, WA. Poster Presentation.
- 2012            **S.K. Ghag, E.A. Henle**, E.J. Watson, “The Synthesis and Reactivity of Novel Bimetallic Triple-layer Complexes” National Conference on Undergraduate Research, Ogden, UT. Poster Presentation.
- 2012            **S.K. Ghag, E.A. Henle**, E. J. Watson, “New Triple-decker complexes of iron and ruthenium with bridging tetramethylcyclopentadienyl ligands” American Chemical Society National Meeting, Philadelphia, PA. Poster Presentation.
- 2012            E.J. Watson, “New Triple-decker complexes of iron and ruthenium with bridging tetramethylcyclopentadienyl ligands” Symposium on Organometallic Chemistry, Brown University, Providence, RI. Oral Presentation.
- 2011            **S.K. Ghag, E.A. Henle, M.L. Tarlton**, E.J. Watson, “The Synthesis and Reactivity of Novel Bimetallic Triple-layer Complexes: Models for Molecular Wires” Murdock Charitable Trust 20<sup>th</sup> Regional Conference on Undergraduate Research, Seattle University, Seattle, WA. Poster Presentation.
- 2010            **S.K. Ghag, M.L. Tarlton**, E.J. Watson, “The Synthesis of Novel Bimetallic Triple-layer Complexes: Models for Molecular Electronics” Murdock Charitable Trust 19<sup>th</sup> Regional Conference on Undergraduate Research, Linfield College, McMinnville, OR. Poster Presentation.

## PEER REVIEWED PUBLICATIONS (SEATTLE UNIVERSITY STUDENT IN BOLD)

1. **J.J. McBride, T.J. Casad, E.E. Cheung**, R.D. Pike, E.J. Watson, “Syntheses and Structures of Triple-Decker Complexes Incorporating Octamethylruthenocene and Nonamethylruthenocene”, *Organometallics*, 2019, 38, 2573.
2. **A.J. Schwartz**, R. D. Pike, R.H. Herber, E. J. Watson, “Synthesis, Structures and Mossbauer Effect Spectroscopy of Triple-Decker Complexes Incorporating Nonamethylferrocene”, *Organometallics*, 2016, 35, 62.
3. **E.N. Fagnan**, E.J. Watson, I. Nowik, R.H. Herber, “Metal-Ligand Bonding and Metal Atom Dynamics in Fe-Fe and Ru-Fe Triple-Decker Sandwich Complexes” *Journal of Organometallic Chemistry*, 2014, 767, 35.
4. **E.M. Ochoa, A.W. Watson, E.N. Fagnan**, R.D. Pike, E.J. Watson, “Syntheses and Structures of Octamethylmetallocenes of Osmium” *Journal of Inorganic and Organometallic Polymers and Materials*, 2014, 24, 95.
5. **S.K. Ghag, M.L. Tarlton, E.A. Henle, E.M. Ochoa, A.W. Watson**, L.N. Zakharov, E.J. Watson, “Synthesis and Structures of Triple-Decker Complexes with a Bridging Tetramethylcyclopentadienyl Ligand” *Organometallics*, 2013, 32, 1851.
6. T. Osako, E.J. Watson, A. Dehestani, B.C. Bales, J.M. Mayer, “Methane Oxidation by Aqueous Osmium Tetroxide and Sodium Periodate: Inhibition of Methanol Oxidation by Methane”, *Angewandte Chemie, International Edition*, 2006, 45, 7433.
7. J.M. Mayer, E.A. Mader, J.P. Roth, J.R. Bryant, T. Matsuo, A. Dehestani, B.C. Bales, E.J. Watson, T. Osako, K. Valliant-Saunders, W.H. Lam, D.A. Hrovat, W.T. Borden, E.R. Davidson, “Stoichiometric oxidations of sigma bonds: Radical and possible non-radical pathways”, *Journal of Molecular Catalysis A: Chemical*, 2006, 24.
8. R. Hermatschweiler, I. Fernandez, P.S. Pregosin, E.J. Watson, A. Albinati, S. Rizzato, L.F. Veiros, M.J. Calhorda, “X-ray, <sup>13</sup>C NMR and DFT Studies on a Ruthenium(IV) Allyl Complex. Explanation for the Observed Control of Regioselectivity in Allylic Alkylation Chemistry”, *Organometallics*, 2005, 24, 1809.
9. M. Oh, H. Li, K. Yu, E.J. Watson, G.B. Carpenter, D.A. Sweigart, “The Remote Activation of Chemical Bonds via Metal Coordination”, *Advanced Synthesis and Catalysis*, 2003, 345, 1053.
10. H. Li, K. Yu, E.J. Watson, K.L. Virkaitis, J.S. D’Acchioli, G.B. Carpenter, D.A. Sweigart, P.T. Czech, K.R. Overly, F. Coughlin, “Models for Deep Hydrodesulfurization of Alkylated Benzothiophenes. Reductive Cleavage of Bonds Mediated by Precoordination of Manganese Tricarbonyl to the Carbocyclic Ring”, *Organometallics*, 2002, 21, 1262.
11. K. Yu, H. Li, E.J. Watson, K.L. Virkaitis, G.B. Carpenter, D.A. Sweigart, “Models for Deep Hydrodesulfurization (HDS). Remote Activation of C-S Bonds in Alkylated Benzothiophenes and Dibenzothiophenes by Metal Coordination to a Carbocyclic Ring”, *Organometallics*, 2001, 16, 3550.

12. E.J. Watson, K.L. Virkaitis, H. Li, A.J. Nowak, J.S. D'Acchioli, K. Yu, G.B. Carpenter, Y.K. Chung, D.A. Sweigart, "The Synthesis of Bimetallic Manganese tricarbonyl-capped Metallocenes", *Chemical Communications*, **2001**, 457.
13. X. Zhang, E.J. Watson, C.A. Dullaghan, S.M. Gorun, D.A. Sweigart, "Activation of a Carbon-Oxygen Bond in Benzofuran by Precoordination of Manganese to the Carbocyclic Ring. A Model for Hydrodeoxygenation (HDO)", *Angewandte Chemie, International Edition*, **1999**, *15*, 2206.
14. X. Zhang, C.A. Dullaghan, E.J. Watson, G.B. Carpenter, D.A. Sweigart, "Models for the Homogeneous Hydrodesulfurization of Benzothiophenes. Carbon-Sulfur Bond Cleavage, Hydrogenolysis and Desulfurization Reactions Mediated by Coordination of the Carbocyclic Ring to Manganese and Ruthenium", *Organometallics*, **1998**, *17*, 2067.