

Gerard Rowe

417 University Parkway, Dept. of Chemistry and Physics, USC Aiken, Aiken, SC 29801

email: gerardr@usca.edu

phone: (803) 641-3429

Appointments

Department Chair	2018-present
Department of Chemistry and Physics University of South Carolina Aiken	
Associate Professor of Chemistry	2016-present
University of South Carolina Aiken	
Assistant Professor of Chemistry	2010-2016
University of South Carolina Aiken	

Education

Postdoctoral Fellowship, Brandeis University	2008-2010
Ph.D., Chemistry, Boston University,	2008
<i>Concentrations:</i> Inorganic and Bioinorganic Chemistry	
<i>Dissertation:</i> Kinetic and Mechanistic Studies of the Reactions of a Binuclear Non-Heme Iron Monooxygenase Model Compound With Oxygen-Atom Donors and Peroxides	
<i>Honors:</i> Dean's Fellowship	
B.S., Chemistry, SUNY Stony Brook,	2002
<i>Honors:</i> Graduated <i>Summa Cum Laude</i> , Awarded IBEW Scholarship	

Research Interests

Synthetic Inorganic Chemistry	Computational Modeling
Bioinorganic Model Chemistry	Kinetics and Catalysis

Courses Taught

General Chemistry I/II
Introductory Inorganic Chemistry and Lab
Advanced Inorganic Chemistry and Lab
Organic Chemistry and Lab

Organizations

American Chemical Society	2007-present
ACS Younger Chemists' Committee	2002-2015

Presentations and Seminars

Augusta University, STEMinar,	2015	ACS Meeting, Denver	2015
USC, Physical Chemistry Seminar,	2012	ACS Meeting, New Orleans	2013
C. of C., Chemistry Seminar,	2011		

**Peer-Reviewed
Publications**

- Roberts, K. M.; Connor, G. C.; Cave, H.; Rowe, G. T.; Page, C. A. "The metal- and substrate-dependences of 2,4'-dihydroxyacetophenone dioxygenase" *Archives of Biochemistry and Biophysics*, **2020**, *691*, 108441.
- Schneider, J. D.; Smith, B. A.; Williams, G. A.; Powell, D. R.; Perez, F.; Rowe, G. T.; Yang, L. "Synthesis and Characterization of Cu(II) and Mixed-Valence Cu(I)Cu(II) Clusters Supported by Pyridylamide Ligands" *Inorganic Chemistry*, **2020**, *59*, 5433-5446.
- Marshall, N.; James, W.; Fulmer, J.; Crittenden, S.; Thompson, A. B.; Ward, P. A.; Rowe, G. T. "Polythiophene Doping of the Cu-Based Metal-Organic Framework (MOF) HKUST-1 Using Innate MOF-Initiated Oxidative Polymerization" *Inorganic Chemistry*, **2019**, *58*, 5561-5575.
- McMoran, E. P.; Powell, D. R.; Perez, F.; Rowe, G. T.; Yang, L. "Synthesis and Characterization of Copper Complexes with Cu^ICu^I, Cu^{I.5}Cu^{1.5}, and Cu^{II}Cu^{II} Core Structures Supported by a Flexible Dipyridylamide Ligand" *Inorganic Chemistry*, **2016**, *55*, 11462-11472.
- McMoran, E. P.; Dominguez, M. N.; Erwin, E. M.; Powell, D. R.; Rowe, G. T.; Yang, L. "Structural diversity, spectral characterization and computational studies of Cu(I) complexes with pyridylamide ligands." *Inorganica Chimica Acta*, **2016**, *446*, 150-160.
- Choony, N.; Rowe, G. T.; Choony, C. D.; Earhart, L. S.; Fulmer, J. M.; Johnson, D.; Loveless, T. M. "The Use and Thermodynamic Origin of the Trityl Buttress Effect in Intramolecular Diels-Alder Cycloaddition Reactions." *Current Organic Synthesis*, **2016**, *13*(4), 617-622.
- Pauly, M. A.; Erwin, E. M.; Powell, D. R.; Rowe, G. T.; Yang, L. "A Synthetic, Spectroscopic and Computational Study of Divalent Metal Complexes Supported by Pyridylamide Ligands" *Polyhedron*. **2015**, *102*, 722-734.
- Gregor, L. C.; Rowe, G. T.; Rybak-Akimova, E.; Caradonna, J. P. "Mechanistic investigation of cyclohexane oxidation by a non-heme iron complex: evidence of product inhibition by UV/vis stopped-flow studies." *Dalton Transactions*. **2012**, *41*(3), 777-782.
- Thomas, C. M.; Napoline, J. W.; Rowe, G. T.; Foxman, B. M. "Oxidative Addition Across Zr/Co Multiple Bonds in Early/Late Heterobimetallic Complexes." *Chemical Communications*. **2010**, *46*, 5790-5792.
- Greenwood, B. P.; Rowe, G. T.; Chen, C.-H.; Foxman, B. M.; Thomas, C. M. "Metal-Metal Multiple Bonds in Early/Late Heterobimetallics Support Unusual Trigonal Monopyramidal Geometries at both Zr and Co." *Journal of the American Chemical Society*. **2010**, *132*(1), 44-45.
- Greenwood, B. P.; Forman, S. I.; Rowe, G. T.; Chen, C.-H.; Foxman, B. M.; Thomas, C. M. "Multielectron Redox Activity Facilitated by Metal-Metal Interactions in Early/Late Heterobimetallics: Co/Zr Complexes Supported by Phosphinoamide Ligands." *Inorganic Chemistry*. **2009**, *48*(13), 6251-6260.
- Rowe, G. T.; Rybak-Akimova, E. V.; Caradonna, J. P. "Heterolytic Cleavage of Peroxide by a Diferrous Compound Generates Metal-Based Intermediates Identical to Those Observed with Reactions Utilizing Oxygen Atom Donor Molecules." *Chemistry – A European Journal*. **2008**, *14*(27), 8308-8311.

Rowe, G. T.; Rybak-Akimova, E. V.; Caradonna, J. P. "Unraveling the Reactive Species of a Functional Non-Heme Iron Monooxygenase Model Using Stopped-Flow UV-Vis Spectroscopy." *Inorganic Chemistry*. **2007**, 46(25), 10594-10606.