

Matthew A. Johnston, Ph.D.

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Teaching Positions

Asst. Professor of Chemistry, Lewis-Clark State College, August 2000 – Present

Classes Taught: General Chemistry I and II (Chem 111/112); Introduction to the Natural Sciences (NS 150); Science and Ethics (NS 350); Advanced Inorganic Chemistry (Chem 463); Independent Research (Chem 498).

Research Projects Directed: Synthesis of Expanded Porphyrins for Use as Metal Complexing Agents (Mitsumasa Sakamoto) Fall 2000 – Present; The Thiocyanate Ligand in the Formation of Multi-Metallic Late Transition Metal Complexes (Sara Lorenz) Fall 2000 – Present; Development of a Inquiry-Based Pyrotechnic Laboratory (Bo Chadwick) Spring 2001 – Present; Examination of Lithium Compounds as Color Agents in Pyrotechnic Devices (Steve Kennedy) Fall 2001— present.

Education and Research

Doctor of Philosophy in Chemistry, University of California, Irvine, CA, June 2000. *Synthesis and Structure of New Bimetallic and Cationic Complexes of the Lanthanides*. Advisor: Dr. William J. Evans.

Bachelor of Science in Chemistry, Santa Clara University, Santa Clara, CA, 1996. *Synthesis of New Pendant Ligands for Late Transition Metals*. Advisor: Dr. Brian McNelis.

National Science Foundation Research Experience for Undergraduates, Dartmouth College, NH, Summer 1995. *Ruthenium Mediated Synthesis of Dendritic Polyaniline*. Advisor: Dr. David Glueck.

Awards and Honors

Outstanding Teaching Assistant in Chemistry, UC Irvine, 1997-1998.
Recipient of Department of Education GAAN Fellowship, 1996-1997.
University Honors Program, Santa Clara University 1992-1996
Member of ΦBK National Honor Society, ΣX Research Honor Society,
ΠΛΥ Chemistry Honor Society, ΘKA Religious Studies Honor Society,
HΣΦ Classics Honor Society, Santa Clara University.
Outstanding Student Referee, Santa Clara University, 1994-1996.

Professional Affiliations

American Chemical Society, 1993 – Present
Idaho Academy of Sciences, 2000 – Present
Phi Beta Kappa, 1996 – Present

Grants and Funding

Faculty Development Grant, Lewis-Clark State College, Fall 2000, \$2500

Title: Synthesis of New Metal-Based Complexes as Models for Magnetic Resonance Imaging (M.R.I.) Contrast Agents

Goal: Purchase synthetic equipment to allow for execution of proposed research.

Institutional Development Grant, Lewis-Clark State College, Spring 2001, \$305

Title: Regional American Chemical Society Meeting

Goal: To provide travel for three female chemistry majors to the Summer 2001 Regional ACS meeting in Seattle, WA.

Publications

Facile Formation of Luminescent Terbium (III) Aryloxo Complexes Directly from Terbium Metal Including the X-ray Crystal Structures of $\text{Tb}(\text{OC}_6\text{H}_3\text{Me}_2-2,6)_3(\text{THF})_3$ and $\text{Tb}(\text{OC}_6\text{H}_3\text{Pr}_2-2,6)_3(\text{THF})_2$, Evans, W. J.; Johnston, M. A.; Greci, M. A.; Ziller, J. W. *Polyhedron* **2001**, 277.

How Much Steric Crowding Is Possible in Tris(5-pentamethylcyclopentadienyl) Complexes? Synthesis and Structure of $(\text{C}_5\text{Me}_5)_3\text{UCl}$ and $(\text{C}_5\text{Me}_5)_3\text{UF}$, Evans, W. J.; Nyce, G. W.; Johnston, M. A.; Ziller, J. W. *J. Am. Chem. Soc.* **2000**, 122; 12019.

Utility of Electrospray Mass Spectroscopy for the Characterization of Air-Sensitive Organolanthanides and Related Species, Evans, W. J.; Johnston, M. A.; Fujimoto, C. H.; Greaves, J. *Organometallics* **2000**, 21, 4258.

Synthesis and Structure of a Divalent, Arene Soluble Lanthanide Cation, Evans, W. J.; Johnston, M. A.; Ziller, J. W. *Inorganic Chemistry* **2000**, 15, 3421.

Monomer / Dimer Preferences in Unsolvated Lanthanide Di-zirconium-nona-isopropoxide Dihalide Complexes, $\{[\text{Zr}_2(\text{O}^i\text{Pr})_9]\text{LnCl}_2\}_n$ with a Change Between Y and Er, Evans, W. J.; Greci, M. A.; Johnston, M. A.; Ansari, M. A.; Brady, J. C.; Ziller, J. W. *Inorganic Chemistry* **2000**, 39, 2125.

Variability of (Ring Centroid)-Ln-(Ring Centroid) Angles in Mixed Ligand $\text{C}_5\text{Me}_5/\text{C}_8\text{H}_8$ Complexes: Structural Data on $(\text{C}_5\text{Me}_5)\text{Ln}(\text{C}_8\text{H}_8)$ (Ln = Sm, Dy, Er, Yb) and $[(\text{C}_5\text{Me}_5)\text{Yb}(\text{THF})](\mu-\eta^8:\eta^8-\text{C}_8\text{H}_8)[\text{Yb}(\text{C}_5\text{Me}_5)]$, Evans, W. J.; Johnston, M. A.; Clark, R. D.; Ziller, J. W. *J. Chem. Soc., Dalton Trans* **2000**, 1609.

Synthesis, Structure and Reactivity of Organometallic Lanthanide Di-Zirconium-Nona-Isopropoxide Complexes, Evans, W. J.; Greci, M. A.; Johnston, M. A.; Ziller, J. W. *Chemistry, A European Journal* **1999**, 5, 3482.

Synthesis, Structure, and Reactivity of Unsolvated Triple-Decked Bent Metallocenes of Europium and Ytterbium, Evans, W. J.; Johnston, M. A.; Greci, M. A.; Ziller, J. W. *Organometallics* **1999**, 18, 1460.

Synthesis and Structure of Fully Solvated, Divalent Lanthanide Dications of Sm and Yb, Evans, W. J.; Johnston, M. A.; Ziller, J. W. Manuscript in preparation.

Synthesis of Divalent, Heteroleptic Complexes of the Lanthanides with Aromatic Ligands and Amides, Evans, W. J.; Johnston, M. A.; Clark, R. D.; Ziller, J. W. Manuscript in preparation.

Reactivity of $\text{Sm}(\text{C}_5\text{Me}_5)_3$ with Small Molecules: The Insertion of CO_2 into a Ln- C_5Me_5 Bond, Evans, W. J.; Clark, R. D.; Johnston, M. A.; Ziller, J. W. Manuscript in preparation.

Synthesis of Air Stable $\text{Ln}(\text{hfac})_3(\text{solvent})_x$ Complexes, Evans, W. J.; Giarikos, D.; Johnston, M. A.; Greci, M. A.; Ziller, J. W. Manuscript in preparation.

Coordination of Polar, Polymerizable Substrates to $(\text{C}_5\text{Me}_5)_2\text{YCl}$, Evans, W. J.; Fujimoto, C. H.; Johnston, M. A.; Ziller, J. W. Manuscript in preparation.

Presentations

Synthesis and Characterization of Divalent, Dicationic Complexes of the Lanthanides, Evans, W. J.; Johnston, M. A.; Ziller, J. W., 219th National Meeting of the American Chemical Society, San Francisco, CA; American Chemical Society, Washington, DC; 2000, INOR 224.

Synthesis of Luminescent Terbium Complexes Directly from the Metal, Johnston, M. A.; Evans, W. J.; Greci, M. A., 217th National Meeting of the American Chemical Society, Anaheim, CA; American Chemical Society, Washington, DC; 1999, INOR 108.

Synthesis of Bimetallic Complexes of the Divalent Lanthanides, Johnston, M. A.; Evans, W. J.; Ziller, J. W., 216th National Meeting of the American Chemical Society, Boston, MA; American Chemical Society, Washington, DC; 1998, INOR 124.