M. L. PARR, Ph.D.
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EDUCATION

- **Yale University** New Haven, Connecticut: Ph.D. in Inorganic Chemistry, *1995*
  Thesis Advisor: Professor Robert H. Crabtree
  Dissertation: Structure and Reactivity of Transition Metal Polyhydrides

- **Trinity College** Hartford, Connecticut: Bachelor of Science with Honors in Chemistry, *1990*

RESEARCH EXPERIENCE

- **Associate Professor of Chemistry**, Trinity College, *2005-present*; Assistant Professor, *1999-2005*: Synthesis and characterization of transition metal-oxo, carbonyl and hydride complexes with various supporting ligands. Utility of metal-oxo and hydride complexes in synthesis and catalysis. Characterization of archaeological materials (ceramics and metals) by scanning electron microscopy equipped with energy dispersive X-ray spectroscopy.

- **Post-Doctoral Research Associate**, Loughborough University and BP Chemicals, United Kingdom, *1995-1999*: Investigation of the mode of action of a preservative added to cosmetic formulations at Loughborough University, in collaboration with Knoll Microcheck. Development of heteropolydentate ligands for the preparation of chiral and chiral-at-metal transition metal complexes for homogeneous catalysis. Research on the reductive carbonylation of oxygenates using Group VIIIB metal complexes at BP Chemicals.

TEACHING EXPERIENCE (*new courses developed for Trinity students)

- **Principles of Inorganic Chemistry**, CHEM 313
- **Descriptive Inorganic Chemistry**, CHEM 314L
- **Organometallic Chemistry***, (course designed for majors), CHEM 415
- **Biological Chemistry***, (course designed for majors; bioinorganic chemistry), CHEM 404
- **Student Research in the Laboratory**, CHEM 425L
- **Honors Introductory Chemistry**, CHEM 111L
- **Introductory Chemistry I**, CHEM 111L
- **Introductory Chemistry II**, CHEM 112L
- **Archaeological Chemistry*** (course designed for non-majors), CHEM 155
- **An Introduction to Archaeological Science*** (Individualized Degree Program Seminar), IDPS 113
- **Bones, Pigments & Native Metals: A Scientist's Guide to Art and Archaeology*** (First Year Seminar), FYSM 161

GRANTS

- NSF Major Research Instrumentation Program, CHE-0959526, $132526, *2010-2012*, co-PI with Christoph Geiss (PI), Jonathan Gourley (co-PI) and Ralph Moyer (co-PI).

RECENT PUBLICATIONS (undergraduate co-authors underlined)

- Parr, M. L.; Lehman, A. R.; Bellantoni, N. F. "The Application of Scanning Electron Microscopy and Energy Dispersive Spectroscopy in the Analysis of Archaeological Materials: An Examination of Morphological Characteristics and Elemental Composition of Artifacts Excavated in Connecticut", *Bulletin of the Archaeological Society of Connecticut*, **2013**, *75*, 5 [invited publication].
- Blakemore, J. D.; Mara, M. W.; Kushner-Lenhoff, M. N.; Schley, N. D.; Konezny, S. J.; Rivalta, I.; Negre, C. F. A.; Snoeberger, R. C.; Kokhan, O.; Huang, J.; Stickrath, A.; Tran, L. A.; Parr, M. L.; Chen, L. X.; Tiede, D. M.; Batista, V. S.; Crabtree, R. H.; Brudvig, G. W. "Characterization of an Amorphous Iridium Water-Oxidation Catalyst Electrodeposited from Organometallic Precursors", *Inorganic Chemistry*, **2013**, *52*, 1860.
- Antunes, N.; Chin, J. A.; Gifford, J. C.; Parr, M.L.; Perez-Acosta, C. "Rhenium(VII) Polyhydrides Supported by Chelating Bis-Phosphine Ligands: DPEphos, Xantphos and Biphep", *Journal of Coordination Chemistry*, **2009**, *62*, 1051.
- Hill, A.; Lehman, A.; Parr, M. L. "Using Scanning Electron Microscopy with Energy Dispersive X-ray Spectroscopy to Analyze Archaeological Materials: Introducing Scientific Concepts and Scientific Literacy to Students from All Disciplines", *Journal of Chemical Education*, **2007**, *84*, 810.
- Faller, J. W.; Perez-Acosta, C.; Parr, M. L. "Synthesis, Characterization and Structural Investigation of New Rhenium-Oxo Complexes Containing Bidentate Phosphine Ligands: An Exploration of Chirality and Conformation in Chelate Rings of Small and Large Bite Angle Ligands", *New Journal of Chemistry*, **2005**, *29*, 613.

RECENT PRESENTATIONS (undergraduate co-authors underlined)

- Mizgier, N.; Thibodeaux, A.; Cocco, A.; Tran, L. A.; Lu, M.; Parr, M. L. "*Synthesis and Characterization of New Rhenium-Oxo Complexes Supported by Bidentate Phosphine Ligands*". Paper presented at the 256th National Meeting of the American Chemical Society, Boston, *August 2018*.
- Parr, M. L. and Moyer, R. O. "*Inorganic Chemistry at Trinity College*". Paper presented at the 252nd National Meeting of the American Chemical Society, Philadelphia, *August 2016*.
- Bellantoni, N. F.; Lehman, A. R.; Parr, M. L. "SEM-EDS Microanalysis of Archaeological Materials: Laboratory Workshops and Research Opportunities for Undergraduate Students". Invited paper presented at the Gordon Research Conference on Scientific Methods in Cultural Heritage Research, Newry, Maine, *July 2014*.
- Tran, L. A.; Bellantoni, N. F.; Lehman, A. R.; Parr, M. L. "*Scanning Electron Microscopy Analysis of 19th Century Artifacts Excavated in New Haven County*". Paper presented at the 39th Northeast Regional Meeting of the American Chemical Society, New Haven, Connecticut, *October 2013*.
- Bloom, S. A.; Levine, D. H.; Parr, M. L. "*Synthesis and Characterization of Molybdenum Tetracarbonyl Complexes Supported by Wide-Bite-Angle Diphosphines*". Paper presented at the 244th National Meeting of the American Chemical Society, Philadelphia, *August 2012*.
- Tran, L. A.; Gauthier, S. A.; Lehman, A. R. ; Risser, M. K. ; Parr, M. L. "*An Interdisciplinary Project Based on the SEM-EDS Analysis of Ceramic Artifacts*". Paper presented at the American Chemical Society Connecticut Valley Section Undergraduate Research Symposium, Trinity College, *April 2011*.
- Bellantoni, N. F.; Gifford, J. C.; Lehman, A. R.; Parr, M. L.; Tran, L. A. "*An Interdisciplinary Project Based on the SEM-EDS Analysis of Iron, Copper and Brass Artifacts Excavated in Southern New England*". Paper presented at the 240th National Meeting of the American Chemical Society, Boston, *August 2010*.
- Bellantoni, N.; Lehman, A. R.; Parr, M. L. "*Laboratory Workshops Linking Chemistry and Archaeology Designed for Non-science Majors*". Presentation at the 36th Northeast Regional Meeting of the American Chemical Society, Hartford, Connecticut, *October 2009*.
- Bloom S. A. and Parr, M. L. "*Synthesis and Structural Characterization of Tetracarbonyl Diphosphine Molybdenum Complexes*". Paper Presented at the 236th National Meeting of the American Chemical Society, Philadelphia, *August 2008*.