

# **7<sup>th</sup> Annual Ohio Inorganic Weekend**

**November 17<sup>th</sup> and 18<sup>th</sup>, 2006**

## **Meeting Program**



**Friday, November 17<sup>th</sup>**

**Poster session, beverages and snacks, Walter Hall Rotunda**

**7:00 - 9:00 pm**

**Synthesis and characterization of an indium NHC complex**

Zin-Min Tun, Claire A. Tessier (University of Akron)

**Hexakis(imidazolyl)cyclotriphosphazenes**

Sarah Walton, Claire A. Tessier (University of Akron)

**Improvements in the synthesis of NHC silver acetate complexes**

Brian Wright, Wiley J. Youngs (University of Akron)

**In-vitro anticancer activity of copper and rhodium thioether complexes**

Nikki Robishaw, Wiley J. Youngs (University of Akron)

**Bis(2-ethylpyridyl)amines as ligands for transition metals**

Chris Belock, Anil Cetin, Christopher J. Ziegler (University of Akron)

**The synthesis of  $[\text{Re}(\text{CO})_3]^+$  complexes as models for technetium radiopharmaceuticals**

Anne DeGreve, Anil Cetin, Richard Herrick, Christopher J. Ziegler (University of Akron)

**The metal complexes of the carbahemiporphyrines**

Saovalak Sripathongnak, Anil Cetin, Christopher J. Ziegler (University of Akron)

***meta*-Terphenyl protected phosphalkenes as photoactive and NLO active materials**

Vittal Babu Gudimetla, Liqing Ma, John D. Protasiewicz (Case Western Reserve University)

**Materials incorporating low-coordinate phosphorus**

Marlena P. Washington, Vittal B. Gudimetla, Rhett C. Smith, Robert A. Woloszynek, John D. Protasiewicz (Case Western Reserve University)

**Tuning the electronic structures of two-electron transfer reagents of Group 10**

Sayandev Chatterjee, Levi J. Grove, Lauren Chessey, Tyler W. Green, Jeanette A. Kraus, William B. Connick (University of Cincinnati)

**Modeling the anion response of Eu(III) macrocyclic systems**

C. George Gulgas, Theresa M. Reineke (University of Cincinnati)

**Structure-property study of glycopolymer-Gd(III) chelates as MRI contrast agents**

Robie L. Lucas, Theresa M. Reineke (University of Cincinnati)

**Electrocatalytic reduction of oxygen at electrodes coated with a bimetallic Co(II)/Pt(II) porphyrin**

Kalyan Gadamsetti, Shawn Swavey (University of Dayton)

**Synthesis and characterization of bimetallic Ru(II) porphyrins**

Sandya Rani Beeram, Shawn Swavey (University of Dayton)

**Structural and luminescent properties of monometallic, bimetallic, and polymeric lanthanide complexes**

Daniel Collins, Deepika D'Cunha, Albert Fratini, Shawn Swavey (University of Dayton)

**Synthesis and characterization of a series of novel lanthanide guanidinate complexes**

Jeffrey A. Bertke, Scott D. Bunge (Kent State University)

**The structural characterization of a family of hetero-ligated lanthanide guanidinate compounds.**

Travis L. Cleland, Jeffrey A. Bertke, Scott D. Bunge (Kent State University)

**Synthesis and characterization of a series of novel Mn, Fe, and Co metalloenzyme model complexes**

Justin B. W. Peebles, Scott D. Bunge (Kent State University)

**Synthesis and characterization of one- and two-dimensional octacyano-metalate(V) networks:  $\{[trans-M^{II}(DMF)_4][cis-M^{II}(DMF)_4]_2[M^V(CN)_8]_2\}_n$  ( $M^{II} = Mn, Fe, Ni$ ;  $M^V = Mo, W$ )**

J. R. Withers, D. Li, J. Triplet, C. Ruschman, S. Parkin, G. Wang, G. T. Lee, S. M. Holmes (University of Kentucky)

**Engineering octanuclear cyanide-bridged  $S = 6$  complexes for molecule-based electronics applications**

D. Li, P. Tyagi, B. J. Hinds, R. Clérac, S. M. Holmes (University of Kentucky)

**The role of structural anisotropy in tricyanometalate-based single-molecule magnets**

D. Li, S. Parkin, B. J. Hinds, R. Clérac, G. Wang, G. T. Yee, S. M. Holmes (University of Kentucky)

**Synthesis, characterization, and reactivity of hydrido-iridium(III) dithiolate complexes**

Ryan Ketchum, Sean Parkin, Folami Ladipo (University of Kentucky)

**Mechanochemical reactions of carbon nano-onions**John D. Craddock, John P. Selegue (University of Kentucky)**Ferrocene- and cyclopentadiene-terminated acenes**John P. Selegue and Minh Truong (University of Kentucky)**Synthesis of phenoxy bisindolyl ligands and complexes**Audrey Eisenberg, Yutan Getzler (Kenyon College)**Synthesis and characterization of a magnesium MOF with the (10,3)-a topology**Michael W. Ambrogio, Shengqian Ma, and Hong-Cai Zhou (Miami University)**Single-walled carbon nanotube dispersion and assembly with metal nanoparticles**Dan Wang, Liwei Chen (Ohio University)**Environmentally responsive single-walled carbon nanotube dispersion**Dan Wang, Liwei Chen (Ohio University)**Use of transition metal diimine complexes as cyclopropanation catalysts**Shadrack I. M. Paris, Oksana Pavlyuk, Jeffrey L. Petersen, Mark C. McMills, Michael P. Jensen (Ohio University)**Tetrahedral Ni(II) monothiolate complexes**Swarup K. Chattopadhyay, Tapash Deb, Huaibo Ma, Michael P. Jensen (Ohio University)**Towards trigonal prismatic multi-metallic scaffolds: a framework for investigating electron transfer in supramolecular structures.**Beth Anne McClure, Jeffrey J. Rack (Ohio University)**Photonic molecular switches**Nicholas Mockus, Jeffrey J. Rack (Ohio University)**Picosecond isomerization in photochromic ruthenium-dimethylsulfoxide complexes**Aaron A. Rachford, Jeffrey J. Rack (Ohio University)**Phototriggered sulfoxide isomerization in [Ru(pic)<sub>2</sub>(dmsu)<sub>2</sub>]**Aaron A. Rachford, Jeffrey J. Rack (Ohio University)**Moving window correlation analysis of photoluminescence images of biotinylated CdTe-streptavidin Au bioconjugates**Alyssa C. Thomas and Hugh H. Richardson (Ohio University)

**Effect of the polymer matrix on the photoinduced phenomena of CdSe quantum dots**

Mahmoud M. Emara, P. Greg Van Patten (Ohio University)

**Using long-range electronic energy transfer by assembled nanocomposites towards lowering the optical-gain threshold of quantum dots**

Mahmoud M. Emara, P. Greg Van Patten (Ohio University)

**Coordination complexes of the later first row transition elements with a tris-pyrazolylborate ligands having ether appendages**

Joanna Brenneman, Malcolm H. Chisholm (Ohio State University)

**Coupling MM quadruply bonded units to other redox active metal centers**

Namrata Singh, Malcolm H. Chisholm (Ohio State University)

**Synthesis, reactivity, and single crystal X-ray structures of monomeric alkali, alkaline earth metal and thallium(I) complexes with hemilabile tris-[3-(2-methoxy-1,1-dimethylethyl)pyrazolyl]hydroborate ligand**

Gulsah Yaman, Malcolm H. Chisholm (Ohio State University)

**Photoinduced catalytic C-H functionalization and cyclopropanation by  $[\text{Rh}_2(\text{OAc})_2(\text{CH}_3\text{CN})_6]^{2+}$**

Lauren Joyce, Claudia Turro (Ohio State University)

**Molecular factors important for efficient light-switch behavior**

Yujie Sun, Claudia Turro (Ohio State University)

**Spectroscopic and photophysical properties of molybdenum chloride clusters**

Dean H. Johnston, Kellie M. Chenault, Michelle L. Mohler (Otterbein College)

**Development of a Web-based symmetry tutorial**

Dean H. Johnston (Otterbein College).

**Diindolylmethane complexes of aluminum and gallium**

Anirban Das, Kristin Kirschbaum, Mark R. Mason (University of Toledo)

**The reactivity of isocyanides with compounds of the Group 13 elements**

Nick Kingsley, Kristin Kirschbaum, Joe Teprovich, Robert Flowers, Mark R. Mason (University of Toledo)

**Development of new Group IV and V catalysts based on orthometallated acetophenone phenyl imine derivatives**

Tamam Baiz, Cheryl Seambos, Joseph Schmidt (University of Toledo)

***NOTE: Posters may remain in the Rotunda for informal viewing on Saturday***

Saturday, November 18<sup>th</sup>

- 8:00 - 8:30 am**      **Coffee and snacks, Walter Hall Rotunda**
- 8:30 - 5:15 pm**      **Oral presentations, Walter Hall Room 245**
- 8:30 - 8:35**            **Opening remarks**
- 8:35 - 8:55**            **Cooperative two-electron transfer reagents of Group 10**  
Sayandev Chatterjee, Levi J. Grove, Lauren Chessey, Tyler W. Green, Jeanette A. Krause, William B. Connick  
 (University of Cincinnati)
- 9:00 - 9:20**            **Studies of ground state and photoexcited state complexes having MM quadruple bonds linked by thienyl dicarboxylate ligands**  
Yagna Ghosh, Malcolm H. Chisholm (Ohio State University)
- 9:25 - 9:45**            **Metal-metal bonding in novel heterobimetallic paddlewheel complexes**  
David J. Collins, Hong-Cai Zhou (Miami University)
- 9:50 - 10:10**          **Structural and spectroscopic characterization of V(III)/carboxylate clusters in aqueous solution**  
Riya Mukherjee, Nicola E. Brasch (Kent State University)
- 10:15 - 10:45**        **Break, coffee and snacks, Walter Hall Rotunda**
- 10:45 - 11:05**        **Synthesis and X-ray structural characterization of nitrosylcobalamin: evidence of a direct reaction between aquacobalamin and nitroxyl (HNO/NO<sup>-</sup>)**  
Luciana Hannibal, Nicola E. Brasch (Kent State University)
- 11:10 - 11:30**        **Synthetic studies of site-differentiation on Fe<sub>4</sub>S<sub>4</sub> and MoFe<sub>3</sub>S<sub>4</sub> clusters**  
Betty A. Ooro, Hong-Cai Zhou (Miami University)
- 11:35 - 11:55**        **Synthesis, stability, and antimicrobial activity of electronically tuned NHC silver acetate complexes**  
Khadijah Hindi, Wiley J. Youngs (University of Akron)
- 12:00 - 12:20 pm**    **In-vitro anticancer activity of transition metal complexes**  
Doug Medvetz, Wiley J. Youngs (University of Akron)
- 12:25 - 2:00 pm**    **Lunch break**

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|--------------------|---|
| <b>2:00 - 2:20</b> | <b>Ethylene polymerization catalysts based on titanium heteroscorpionate complexes</b><br><u>Richard Eaves</u> , Alexey Zazybin, Sean Parkin, Folami T. Lapido<br>(University of Kentucky)          |
| <b>2:25 - 2:45</b> | <b>C-H activation with stannylenes</b><br><u>Ajdin Kavara</u> , Mark M. Banaszak Holl (University of Michigan)  |
| <b>2:50 - 3:10</b> | <b>Synthesis and reactivity of 3-iminophosphine ligands with Group X metals</b><br><u>Andrew Shaffer</u> , Joseph Schmidt (University of Toledo)  |
| <b>3:15 - 3:35</b> | <b>Thiation of 1,2-diacylcyclopentadienyl metal complexes: unexpected formation of quinoidal thiapentalenes</b><br><u>Nathan C. Tice</u> , John P. Selegue, Sean Parkin<br>(University of Kentucky) |
| <b>3:40 - 4:00</b> | <b>Break</b>  |
| <b>4:00 - 4:20</b> | <b>Construction of supramolecular metal-alkyne coordination complexes</b><br><u>Paul Custer</u> , Wiley J. Youngs (University of Akron)   |
| <b>4:25 - 4:45</b> | <b>Catenation isomerism in MOFs and its impact on hydrogen uptake</b><br><u>Shengqian Ma</u> , Hong-Cai Zhou (Miami University)   |
| <b>4:50 - 5:10</b> | <b>Metal-organic frameworks incorporating a novel tetrazolate-based ligand</b><br><u>Christina S. Urig</u> , Hong-Cai Zhou (Miami University )  |
| <b>5:15 pm</b>     | <b>Meeting close</b>  |

The organizing committee of the 7<sup>th</sup> Ohio Inorganic Weekend wishes to acknowledge the generous support and effort on our behalf from:

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