

7th Annual Ohio Inorganic Weekend

November 17th and 18th, 2006

Meeting Program



Friday, November 17th

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 Sriphothongnak, 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 Gulgass, 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. Peeples, 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

Shadrick 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)₂(dms)₂]

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 18th

- 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⁻)**
Luciana Hannibal, Nicola E. Brasch (Kent State University)
- 11:10 - 11:30** **Synthetic studies of site-differentiation on Fe₄S₄ and MoFe₃S₄ 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**

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

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

The Ohio University Inn

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