

## **Boston Regional Inorganic Chemistry Association Meetings**

### #1 June 8, 2004 Boston College, host: Bill Armstrong

- Elena Rybak-Akimova “Research Group Interests”
- Oleg Ozerov “Research Group Interests”
- Cathy Drennan “Research Group Interests”
- Peter Caravan “Research Group Interests”
- Sean Elliott “Research Group Interests”
- Bill Armstrong: “Research Group Interests”

### #2 July 29, 2004 Boston College, host: Bill Armstrong

- Kit Cummins (*MIT*) “Triple Bond Interchange with N and P Atoms”
- Sumitra Mukhopadhyay (*MIT*, Lippard Group) “Synthesis of Platinum(IV)-Peptide Conjugates for Targeting Angiogenic Tumor Vasculature”
- Bruce Foxman (*Brandeis*) “Stereospecific Reactions in Crystals”
- Chris Dubé (*Draper Labs*) “High-Throughput Methods for Catalytic Materials Discovery”

### #3 September 23, 2004 Boston College, host: Bill Armstrong

- John Fourkas "Making Things with Light"
- John Caradonna "Catalytic Nonheme Fe(II) Dependent Alkane Hydroxylation Reactions via Heterolytic Cleavage of Alkyl Peroxides"
- Pam Mabrouk "Novel Green Approaches to the Synthesis of Conducting Polymers"
- Sumit Bhaduri (Holm Group) "Initial Foray into Synthetic Analogues Relevant to the A Cluster of Carbon Monoxide Dehydrogenase Acetyl Coenzyme-A Synthase"

### #4 November 20, 2004 Brandeis University host: Oleg Ozerov

- Thomas C. Pochapsky “Old and New Metalloenzymes”
- Mark Schofield “Chiral Platinum(II) Oxazoline Complexes: Synthesis, and Small Molecule Studies of Potential Anti-Cancer Drugs”
- Richard R. Schrock “Catalytic Reduction of Dinitrogen at Molybdenum in a Relatively Well-Defined Manner”
- Dhandapani Venkataraman “Copper-Catalysts for Cross-Coupling Reactions”

### #5 February 19, 2005 Tufts University host: Elena Rybak-Akimova

- Evgeny Dikarev (*SUNY, Albany*) “Heterobimetallic Carboxylates and beta-Diketonates Incorporating Bismuth”
- Daniel Nocera (*MIT*) “Powering the Planet. The Challenge for Chemistry in the 21st Century”
- Michael Clarke (*Boston College*) “Toward Ruthenium Metallopharmaceuticals”
- Emily Carson (*MIT, Lippard Group*) “Oxidation of Substrates Tethered to Pyridine Ligands in Non-Heme Diiron Enzyme Model Complexes”

#6 June 23, 2005 Harvard University host: Curtis Berlinguette (Holm Postdoc)

- Thomas D. Tullius (*Boston University*) “The Genome in Three Dimensions: Using Metals to Map DNA Structure”
- Joel Rosenthal, (*MIT, Nocera group*) “Photoinitiated Oxidation of Organic Substrates Catalyzed by Pacman Bisirion (III)  $\mu$ -oxo Porphyrin Architectures and Molecular Oxygen”
- Richard H. Holm (*Harvard University*) “Metal Clusters in Biology: An Ongoing Challenge to Inorganic Synthesis”
- Hongkun Park (*Harvard University*) “Metal Oxide and Chalcogenide Nanostructures”

#7 September 23, 2005 Boston University host: Sean Elliot

- Prof. Michael A. Maroney (*UMass Amherst*) “Nickel trafficking: Structural Parameters Involved in Metal Specificity”
- Lei Fan (*Brandeis University, Ozerov Group*) “C-H Activation or C-Halide Activation? The Story of Ir(I) and Halobenzene”
- Prof. Joseph P. Sadighi (*MIT*) “New Small Molecule Transformations Catalyzed by Low-Coordinate Copper Complexes”

#8 January 21, 2006 MIT, host: Joseph Sadighi

- Dr. Curtis Berlinguette, (*Harvard, Holm Group*) Harvard University “Edge-Bridged Double Cubane Clusters  $[(Tp)_2Mo_2Fe_6S_8L_4]^{z-}$  Synthesis, Structures and Electron Transfer Series”
- Dr. Antony Wright (*Strem Chemicals*) “Review of the Liquid Phase Synthesis of Metal Nanoparticles from Inorganic Compounds”
- Prof. Marina Petrukhina (*SUNY Albany*) “Open Geodesic Polyarenes: a Controlled Switch of Metal Coordination”
- Prof. Russell P. Hughes (*Dartmouth College*) “Carbon-Fluorine Bond Activation by Transition Metal Centers”

#9 April 29, 2006 Boston College, host: Bill Armstrong

- Prof. Alan Packard (*Harvard Children's Hospital*) "Copper-Based PET Radiopharmaceuticals"
- Ivan V. Korendovych (*Tufts*, Rybak-Akimova Group) "Macrocyclic Amides as Platforms for Oxygen Activation and Anion Recognition."
- Prof. Steven L. Suib (*University of Connecticut*) "Self Assembly, Molecular Design, & Application of Porous Transition Metal Oxides."
- Prof. Robert H. Crabtree (*Yale University*) "Applications of Carbene Ligands and of Molecular Recognition in Homogeneous Catalysis."

#10 July 22, 2006 UMass, Amherst, host: Mike Knapp

- Dr. Vincent Jacques (*EPIX Pharmaceuticals*) "Inorganic Chemistry in Industry: the Design and Development of New MRI Contrast Agents."
- Prof. Pat Holland (*Rochester University*) "New Reactions at Low-Coordinate Iron Inspired by Nitrogenase."
- Prof. Mike Clarke (*Program Director for IBO at NSF*) "What's New at NSF Chemistry."
- Prof. Jim McCusker (*Michigan State University*) "Ultrafast Dynamics and Chromophore Design in Dye-Sensitized TiO<sub>2</sub>-based Solar Cells."

#11 October 14, 2006 UMass, Dartmouth, hosts: Golen and Guo:

- Prof. Dwight Sweigart (*Brown University*) "Pi-Bonded Quinonoid Complexes in Supramolecular Self-Assembly and Multifunctional Catalysis"
- Ms. Katherine Lovejoy (*MIT*, Lippard Group) "Transport of Oxaliplatin by Organic Cation Transporters and Rational Design of Platinum(II)- and Platinum(IV)-Based Transporter Substrates"
- Prof. Klaus Theopold (*University of Delaware*) title TBA - organometallic chemist
- Prof. Zhifeng Ren (*Boston College*) title TBA – materials chemist/physicist

#12 February 3, 2007 Tufts, host: Elena Rybak-Akimova

- Prof. William Reiff (*Northeastern University*) "On the Possibility of Virtual Free-Ion Magnetism in Real Molecular Solids"
- Prof. Stephen Lippard (*MIT*) "Nitric Oxide and Mobile Zinc(II) Signaling in the Brain"
- Prof. Roy Planalp (*University of New Hampshire*) "Chelating First-Row Transition Elements: Novel Ligands, Fluorescent Probes, Chemopreventive Agents and Biological Effects"

- Prof. Ann Valentine (*Yale University*) "Bioinorganic Chemistry of Titanium in Medicine and the Environment"

#13 May 5, 2007 UNH, host: Roy Planalp

- Prof. [Dean Wilcox](#) (*Dartmouth College*) "Thermodynamics of Bioinorganic Coordination Chemistry"
- Prof. [Rachel Austin](#) (*Bates College*) "Bioinorganic Perspectives on Environmental Alkane Oxidation"
- Prof. [Howard Patterson](#) (*University of Maine*) "Tunable Luminescence of  $d^{10}$  Metal-Metal Bonded Nanocluster Exciplexes with Energy Transfer and Photocatalytic Applications"
- Prof. [Rory Waterman](#) (*University of Vermont*) "Zirconium-Catalyzed Phosphorus Element Bond-Forming Reactions"

#14 July 28, 2007 UConn, host: Shawn Burdette

- Prof. [Brian Gibney](#) (*Columbia*) "Assessing the Biological Roles of Hemes a, b, c, d using Protein Design"
- Prof. [Joshua Farrell](#) (*Holy Cross*) "Synthesis of transition metal containing conducting polymers"
- Prof. [Christopher Landry](#) (*University of Vermont*) "Metal-Doped Mesoporous Silica: Characterization and Catalytic Activity of Metal Oxides Immobilized on a Highly Porous Solid"
- Dr. [Rhonda Willigan](#) (*United Technologies*) "Advanced Water Gas Shift Catalysts for Fuel-Flexible Fuel Processing Systems"

#15 October 27, 2007 Boston College, host: Bill Armstrong

- Prof. [Maolin Guo](#) (*University of Massachusetts, Dartmouth*) "Attenuation of the Fenton Reaction by Natural and Synthetic Compounds"
- Prof. [Roy Gordon](#) (*Harvard University*) "Synthesis and Characterization of Precursors for Vapor Deposition of Inorganic Materials."
- Dr. [Xiao-An Zhang](#) (*M.I.T.*, Lippard Group) "Chemical Approaches to Understanding the Roles of Zinc in the Brain."
- Prof. [Jonas Peters](#) (*M.I.T.*) "Multi-Electron Redox Events at Low Coordinate Late First Row Ions."

#16 May 29, 2008 Boston College, host: Bill Armstrong

- [John Curley](#) (*M.I.T.*, Cummins Group) "Nitrogen Fixation Chemistry of a Molybdenum Trisanilide System"

- Prof. [Mike Knapp](#) (UMass, Amherst) “Nanoparticles as Proxies for Protein Redox Reactions”
- Prof. [Anne-Francis Miller](#) (University of Kentucky) “Re-tuning the Reduction Midpoint Potential of a Non-Heme Fe Site over almost 1 V, in a Conserved Structural Environment”

#17 September 27, 2008 Boston University, host: Linda Doerrer

- Prof. [Ted Betley](#) (Harvard) “New Strategies for Driving Multi-Electron Redox Chemistry”
- Dr. [Shanta Dhar](#) (Lippard Group, MIT) “Targeted Delivery of Pt(IV) Prodrugs by Nanocarriers”
- Dr. [Susan Doctrow](#) (Proteome Systems, Inc., Therapeutics Research) “Synthetic SOD/catalase Mimetics Protective in Models for Diseases Involving Oxidative Stress”
- Prof. [Oleg Ozerov](#) (Brandeis University) “C–F Activation Using Main Group Electrophiles”

#18 January 24, 2009 Tufts, host: Elena Rybak-Akimova and Rory Waterman

- Prof. Bing Xu (Brandeis University) “Multifunctional Magnetic Nanoparticles”
- Prof. Deitmar Seyfurth (MIT) “How Organometallic Chemistry Started: Edward Frankland and His Contemporaries”
- Prof. Lee Park (Williams College) “Surface Chemistry as a Means of Guiding Phase Separation in Polymer Films with Applications to Organic Photovoltaics”
- Prof. Gary Brudvig (Yale University) “Water Oxidation Chemistry of Photosystem II and Artificial Systems”

#19 May 2, 2009 UMass Amherst, host: Mike Knapp

- Dr. Yogesh Surendranath (Nocera Group, MIT) “Mechanistic Insights Into Co-Based Thin Film Water Oxidation Catalysts”
- Prof. Elena Rybak-Akimova (Tufts University) “Oxygen and peroxide activation at non-heme iron: insights from rapid kinetic studies”
- Prof. Elizabeth Jamieson (Smith College) “Investigation of Cr-Induced DNA Damage: Progress Toward Understanding Cr(VI) Carcinogenesis”
- Prof. Sean Elliot (Boston University) “The Ins and Outs of Bacterial Cytochrome *c* Peroxidases”

#20 October 3, 2009 UNH, host: Roy Planalp

- Prof. Ed Wong (UNH) “Armed and Primed- Cross-bridged Tetraamine Macrocycles and their Metal Complexes”
- Prof. Cynthia McGowan (Merrimack College) “Microwave-Assisted Synthesis in the Undergraduate Laboratory: A Sustainable Chemistry Approach”
- Prof. Shawn Burdette (UConn) “Sensors and Caged Complexes for Iron”

#21 February 24, 2010 Harvard, host: Ted Betley

- Prof. Linda Doerrer (Boston University) “Late Transition Metal Complexes of Fluorinated Alkoxide Ligands: The Power of Fluorine”
- Dr. Adam Hock (Gordon Group, Harvard University) “The Rational Development of Vapor Deposition Precursors for Earth Abundant, Inexpensive Photovoltaics”
- Dr. Andrew Greytak (Nocera Group, MIT) “An alternate layer addition approach to CdSe/CdS core/shell quantum dots with near-unity quantum yields”
- Prof. Christine Thomas (Brandeis University) “Multi-Electron Redox Activity and Metal-Metal Interactions in Early/Late Heterobimetallic Complexes”
- Prof. Sabyasachi Sarkar (Indian Institute of Technology Kanpur) “Monodithiolene Oxomolybdenum(IV) Hydrosulfido or Thiolato Complexes Related to the Reduced Form of Molybdoenzymes”