

PAST SEMINAR SPEAKERS OF THE DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY
NORTHERN ILLINOIS UNIVERSITY
FALL 2004 – FALL 2018

FALL 2018

- Prof. Zhiqun Lin, Department of Materials Science and Engineering, Georgia Institute of Technology. *Permanently Ligated Hairy Nanocrystals with Precisely Controlled Dimensions, Compositions, Surface Chemistry, and Architectures for Solar Cells, Photocatalysis, LEDs and Batteries*
- Prof. Parbagaran Narayanasamy, Department of Chemistry, University of Nebraska. *Evaluating MEP Pathway for Drug Discovery and Resistance Mechanism*
- Prof. Connie Liu, Department of Chemistry, University of Minnesota. *Bio-Inspired Bimetallic Complexes For Activating H₂ and CO₂*
- Prof. Scott Gronert, Department of Chemistry, University of Wisconsin – Milwaukee. *Mass Spectrometry Study of Organometallic-Ions Reactivity in the Gas-Phase*

SPRING 2018

- Prof. Evgueni Kovriguine, Department of Chemistry and Biochemistry, Marquette University. *Biophysical chemistry of proteins: Ras GTPase and NADPH–cytochrome P450 oxidoreductase*
- Prof. Yanfa Yan, Department of Physics and Astronomy, University of Toledo. *Efficient Pb-free and Less Pb Halide Perovskite Solar Cells*
- Prof. Xiaobo Chen, Department of Chemistry, University of Missouri–Kansas City. *Black TiO₂: Discovery and Properties*
- Dr. Richard Haack, Principal Scientist, Abbott Diagnostics Division. *Preparation and Uses of Acridinium and Rhodamine Constructs*

FALL 2017

- Prof. Chulsung Bae, Department of Chemistry and Chemical Biology, Rensselaer Polytechnic University. *Use of Engineered Polymers in Fuel Cell Designs*
- Prof. Benjamin Bythell, Department of Chemistry and Biochemistry, University of Missouri–St. Louis. *The Chemistry of Useful Destruction*
- Prof. Scott Hartley, Department of Chemistry and Biochemistry, Miami University (Recruitment Seminar) *Folding and Assembly of Ortho-Phenylenes*
- Dr. Philip McKittrick, RD&E Safety and Chemical Hygiene Manager, Ecolab Inc., Naperville, IL. *An Industrial Perspective: Safety Culture in Ecolab RD&E*
- Dr. Yuzi Liu, Center for Nanoscale Materials, Argonne National Laboratory. *Probing Materials transformation by A Reactor in Transmission Electron Microscope*

- Prof. Robin Rogers, University of Alabama. *What is an Appropriate Academic Business Model to Drive Commercialization of Sustainable Technology?*
- Dr. Richard D. Schaller, Center for Nanoscale Materials, Argonne National Laboratory. *Light-matter interaction and electronic structures of quantum confined semiconductor materials*
- Prof. Luyi Sun, Department of Chemical & Biomolecular Engineering, University of Connecticut. *Bio-inspired Multifunctional Stimuli-Responsive Materials*

SPRING 2017

- Prof. Ranjit T. Koodali, Department of Chemistry, University of South Dakota. *Semiconductor Nanoclusters Dispersed on Mesoporous Supports for Design of an Artificial Leaf*
- Prof. Terry Moore, Department of Medicinal Chemistry and Pharmacognosy, University of Illinois at Chicago. *Developing Chemical Probes for Targeting Transcription Factor Interactions*
- Bruce Stockmeier, Argonne National Laboratory. *Safety: The Transition from Academia to Workplace*

FALL 2016

- Dr. Rendi Kartika, Assistant Professor of Chemistry, Louisiana State University. *Utilization of Silyloxyallyl Cations in Synthesis*
- Dr. Song Jin, Professor, Department of Chemistry, University of Wisconsin-Madison. *Single-Crystal Lead Halide Perovskite Nanowires for High-Performance Lasers and Optoelectronic Devices*
- Dr. Paul Chiarelli, Professor, Department of Chemistry and Biochemistry, Loyola University. *Determination of Unknown Pollutants in Aquatic Environments: Identification of 3,5-Dichloro-4-hydroxybenzene sulfonic acid as an unknown persistent pollutant.*
- Dr. Eugenijus (Eugene) Urnezis, Associate Professor, Department of Chemistry, University of Portland. *Phosphoryl-appended hydroquinones and their complexes: the advantages of secondary coordination spheres.*
- Dr. Michael D. Hopkins, Professor, Department of Chemistry, University of Chicago. *Molecularly Patterned Surfaces for the 3D Organization of Functional Molecules and Materials*

SPRING 2016

- Dr. Mercouri G. Kanatzidis, Professor, Department of Chemistry, Northwestern University. *Recent advances in lead-free perovskite Chemistry and solar cells.*
- Dr. Courtney Aldrich, Associate Professor, College of Pharmacy, Department of Medicinal Chemistry, University of Minnesota. *Antibiotics for Tuberculosis that Block Siderophore Biosynthesis.*
- Dr. Andre R. Venter, Associate Professor of Chemistry, Department of Chemistry, Western Michigan University. *Protein Analysis by Desorption Electrospray Ionization Mass Spectrometry.*

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- Dr. Depth K. Weerasinghe, Principal, dP3 Consulting. *Manufacture of Black Tea—Enzymatic Oxidation or is it Fermentation.*
- Dr. Kai Zhu, Senior Scientist, Chemical and Materials Science Center, National Renewable Energy Laboratory. *Perovskite Solar Cells: Materials, Devices, and Future Opportunities.*

FALL 2015

- Dr. Thomas Clayton, Associate Professor and Chair of Chemistry, Knox College. *The Influence of Molecular Structure on Order in Fluid Materials: Metallomesogens Based on Copper Carboxylates.*
- Dr. Jeff Johnston, Professor, Department of Chemistry, Vanderbilt University. *On-Demand Synthesis of Small Molecule Therapeutics and Peptides.*
- Dr. Jeremy Kodanko, Associate Professor, Department of Chemistry, Wayne State University. *Light Activated Therapeutics and Chemical Tools.*
- Dr. Igor Slowing, Adjunct Assistant Professor, Department of Chemistry, Iowa State University. *Multitasking Nanostructures: customized nano-assembly lines for catalytic and biological applications.*
- Dr. Alexei V. Demchenko, Professor, Department of Chemistry and Biochemistry, University of Missouri—St. Louis. *From stereocontrolled glycosylation to expeditious oligosaccharide synthesis.*
- Dr. Tao Li, Assistant Scientist, Argonne National Laboratory. *Synchrotron X-ray and Electron Microscopy Studies of Nanoparticles Assemblies.*
- Dr. William A. Donaldson, Professor, Organic Chemistry, Marquette University. *Generation of Molecular Complexity from Cyclooctatetraene.*

SPRING 2015

- Dr. Norman (Liang-Szu) Lu, Professor, Institute of Organic and Polymeric Materials & Department of Molecular Science and Engineering, National Taipei University of Technology, Taiwan. *Application of New Fluorinated Materials to Catalysis, Solar Cell and Optoelectronics.*
- Prof. Thomas Spudich, Associate Professor of Chemistry and Forensic Science, Department of Science and Mathematics, Maryville University (St. Louis, Mo.) *The Development, Characterization and Eventual Production (?) of Micro-Vis Spectrometers with Wireless Communication for UV-Vis and Fluorescence Applications.*
- Prof. Daniel Becker, Associate Professor, Department of Chemistry and Biochemistry, Loyola University Chicago. *Molecular Intimacy: Design and Synthesis of Inhibitors of Bacterial Metalloenzymes and of Supramolecular Scaffolds.*
- Prof. Keith Pannell, Professor, Department of Chemistry, University of Texas at El Paso. *Silicon Chemistry Involving Main Group and Transition Metals.*

FALL 2014

- Dr. Yugang Sun, Nanophotics Group, Center for Nanoscale Materials, Argonne National Laboratory. *Influence of Interfaces on Surface Plasmon Resonances in 'Quantum-Sized' Nanoparticles.*
- Prof. Kevin Moeller, Professor, Department of Chemistry, Washington University in St. Louis. *Organic Electrochemistry: Solving Problems of Structure, Location, and Environment.*
- Prof. Ananda Chakrabarty, Distinguished University Professor, Department of Microbiology and Immunology, University of Illinois at Chicago. *Conquering Cancer: Law, Medicine, and Society.*
- Prof. Kyle Plunkett, Assistant Professor, Department of Chemistry and Biochemistry, Southern Illinois University Carbondale. *Synthesis of CP-PAH Based Electron Accepting Materials and Highly-Ordered Polymer Nanostructures.*
- Prof. Igor Alabugin, Professor, Department of Chemistry and Biochemistry, Florida State University. *New Tricks from an Old Functional Group: Reinventing Alkyne Chemistry for DNA-photocleavage, Click Chemistry, and Construction of Precisely Cut Graphene Ribbons.*

SPRING 2014

- Prof. Christopher M. Beaudry, Assistant Professor, Department of Chemistry, Oregon State University. *Synthesis of Natural Products with Conformational Chirality.*
- Prof. Sergiy Rosokha, Assistant Professor, Department of Biological, Chemical, and Physical Sciences, Roosevelt University. *Halogen Bonding: From Crystal Engineering to Electron Transfer.*
- Prof. Colleen Scott, Assistant Professor, Department of Chemistry and Biochemistry, Southern Illinois University Carbondale. *Developments in Silole-Containing Polymeric Materials.*
- Prof. Regan J. Thomson, Associate Professor, Department of Chemistry, Northwestern University. *Silicon-Based Cross-Coupling Reactions: Methodology, Total Synthesis, and Mechanistic Studies.*
- Robert Gronke (B.S., Biochemistry, NIU, 1982), Senior Principal Scientist, Biogen Idec, Inc. *Purification Development at Biogen Idec: Anticipating and Responding to the Future State of the Biotechnology Industry.*

FALL 2013

- Dr. Sam Thompson, Postdoctoral Research Associate, Department of Chemistry, University of Oxford. *Simulating Secondary Structure.*
- Prof. Chuanyi Wang, Xinjiang Technical Institute of Physics and Chemistry, Chinese Academy of Science. *Ti-O₂-based photoactive nanomaterials: controllable synthesis, structure modification, and surface chemistry.*
- Prof. Scott E. Denmark, Reynold C. Fuson Professor of Chemistry, Department of Chemistry, University of Illinois at Urbana-Champaign. *Silicon-Based Cross-Coupling Reactions: Methodology, Total Synthesis, and Mechanistic Studies.*
- Dr. Randall E. Winans, Group Leader and Senior Scientist, X-ray Science Division, Chemical and Materials Science, Argonne National Laboratory. *In Situ Catalysis Studies with Small Angle X-Ray Scattering.*
- Prof. Matthew F. Bush, Assistant Professor, Department of Chemistry, University of Washington. *Ion Mobility Mass Spectroscopy of Intact Protein Complexes.*

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SPRING 2013

- Prof. Luke Tolley, Associate Professor, Department of Chemistry and Biochemistry, Southern Illinois University Carbondale. *Instrumentation Development and Biochemical Applications.*
- Prof. Bhanu P.S. Chouhan, Professor and Chairperson, Department of Chemistry, William Patterson University. *New Silicon Materials with New Property Profile: Regio- and Stereoselective Tailoring via Nanoparticle Catalysis.*
- Dr. Tijana Rajh, Group Leader, Center for Nanoscale Materials, Argonne National Laboratory. *Study of Nano-Bio Interfaces.*

FALL 2012

- Dr. Alex Martinson, Materials Science Division, Argonne National Laboratory. *Better Solar Energy Conversion through Surface Chemistry.*
- Prof. Jim Cook, Distinguished Professor, Department of Chemistry, University of Wisconsin-Milwaukee. *General Approach to the Stereospecific Synthesis of Bisindole Alkaloids (+)-Dispegatrine, Accedinisine and N¹Demethylaccedinisine.*
- Prof. Frieder Jäkle, Professor, Department of Chemistry, Rutgers University. *Polyfunctional Organoboranes: From Lewis Acid Chemistry to Materials Applications.*
- Prof. Tom Driver, Assistant Professor, Department of Chemistry, University of Illinois at Chicago. *Harnessing the Reactivity of Aryl Azides with Transition Metal Catalysts: Mechanism-guided Reaction Development.*
- Prof. Laura Anderson, Assistant Professor, Department of Chemistry, University of Illinois at Chicago. *Rearrangements of O-Vinyl Oximes and Hydroxylamines: New Chemoselective and Disastereoselective Bond Formations.*
- Prof. Shawn Hitchcock, Professor, Department of Chemistry, Illinois State University. *Acyl succinimides as versatile tools for the synthesis of amides and amines. A one-pot synthesis of the calcimimetic agent Cinacalcet.*
- Dr. Jeffrey T. Miller, Group Leader of Heterogeneous Catalysts, Chemical Sciences & Engineering, Argonne National Laboratory. *X-Ray Spectroscopy in Catalysis Research: Application to Au Catalysts.*

SPRING 2012

- Prof. Wendell Griffith, Assistant Professor, Department of Chemistry, University of Toledo. *Mass Spectrometry in the Characterization of Posttranslational Modifications: New Tricks with an Old Tool.*
- Dr. Hui Xiong, Argonne National Laboratory. *Nanoscale Architectures for Energy Storage and Conversion.*
- Prof. Dimitri Vezenov, Assistant Professor, Department of Chemistry, Lehigh University. *How to Sequence Genomes By Pulling on DNA Molecules.*
- Prof. Mishtu Dey, Assistant Professor, Department of Chemistry, University of Iowa. *Structural and Biochemical Investigation of Metalloenzyme Mechanisms.*

FALL 2011

- Prof. Tao Xu, Assistant Professor, Department of Chemistry and Biochemistry, Northern Illinois University, *Fundamental Studies of Nanoarchitected Photoelectrochemical Solar Cells.*
- Prof. James Horn, Assistant Professor, Department of Chemistry and Biochemistry, Northern Illinois University, *A New Generation of Protein Affinity Reagents: Minimalist Scaffolds and Molecular Switches.*
- Dr. Michael Pellin, Argonne Distinguished Fellow, Argonne National Laboratory, *The Synthetic Control and Functionalization of Porosity – A Key Tool for the Development of Critical Materials for Energy Generation, Storage, and Use.*
- Prof. Alexander Arnold, Assistant Professor, Department of Chemistry and Biochemistry, University of Wisconsin at Milwaukee, *First Identification of Irreversible Inhibitors of the Vitamin D Receptor-Coregulator Interaction.*

- Dr. Chao Wang, Materials Science Division, Argonne National Laboratory, *Novel Electrocatalysts with Advanced Nanoscale Architectures for Energy Conversion Applications*.
- Dr. William Mickols, President of the North American Membrane Society and Principal Scientist in Sustainability at ConocoPhillips, *Advances in Reverse Osmosis Giving Pure Water to the World: X-Ray Microscopic Studies of Nano-Scale Heterogeneity in the Chemical Structure of the FT-30 Polymer*.
- Dr. Stephen A. Di Biase, Chief Scientific Officer, Elevance Renewable Sciences, *Innovation in the 21st Century*.
- Prof. Christian Bruckner, Associate Professor, Department of Chemistry, University of Connecticut, *The Breaking and Mending of Porphyrins: Synthesis of Porphyrinoids Containing Non-Pyrrolic Building Blocks*.
- Dr. Khalil Amine, Senior Material Scientist, Chemical Sciences and Engineering Division, Argonne National Laboratory, *Advanced High Power and High Energy Systems for Automotive Applications*.

SPRING 2011

- Organic Search Candidate, *Exploring Signal Transduction in Biology Using Metal Chelators that Exploit Organic Photoreactions*.
- Organic Search Candidate, *The Reaction of Isonitriles with Carboxylic Acids: Applications to the Synthesis of Biologically Relevant Molecules*.
- Organic Search Candidate, *Challenges in Organic Chemistry: Natural Product Synthesis, Drug Discovery, and Catalysis*.
- Organic Search Candidate, *Lewis Basic Organocatalysts for Asymmetric Silylation of Alcohols and W-Alkylidene Complexes for Novel Selectivities in Olefin Metathesis Reactions*.
- Prof. Richard B. Silverman, Department of Chemistry, Northwestern University, *Selective Nitric Oxide Synthase Inhibitors for the Treatment and Prevention of Neurodegenerative Diseases*.
- Prof. Thomas Hamann, Department of Chemistry, Michigan State University, *Recent Progress in Dye-Sensitized Solar Cells*.
- Prof. Thomas Thompson, Department of Molecular Genetics, Biochemistry & Microbiology, University of Cincinnati, *Structural Basis for Huge Muscles – How to Block Myostatin*.
- Dr. Thomas Penning, Research Fellow, Cancer Research, Global Pharmaceutical R & D, Abbott Laboratories, *PARP inhibitors for the treatment of cancer: Discovery of Veliparib*.
- Prof. Michael Van Stipdonk, Department of Chemistry, Wichita State University, *Taking a New Look at Ions Using Tandem Mass Spectrometry and IRMPD Spectroscopy*.

FALL 2010

- Dr. Alfred P. Sattelberger, Associate Laboratory Director, Energy Engineering and Systems Analysis, Argonne National Laboratory. *Prospecting the Chemistry of Element 43*.
- Prof. Christopher C. Mulligan, Department of Chemistry, Illinois State University. *Pushing the Limits of Mass Spectrometry: Miniaturized Instruments and Ambient Ionization*.
- Prof. Christopher C. Mulligan, Department of Chemistry, Illinois State University. *Pushing the Limits of Mass Spectrometry: Miniaturized Instruments and Ambient Ionization*.
- Prof. Paul S. Cremer, Chair, Department of Chemistry, Texas A&M University. *Using Supported Bi-layers for Sensors and Separations*.
- Prof. George R. Newkome, Vice President for Research and Dean of the Graduate School; Professor, Departments of Chemistry and Polymer Science, The University of Akron. *Supramolecular, Polymer, and Materials Chemistry*.

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- Mr. Raymond T. Marsili, Marsili Consulting Group. *Analytical Tools and Techniques for Resolving Off-Flavors and Malodors in Foods.*

SPRING 2010

- Dr. Robert Sobel, Director of Technology and Innovation, FONA International, Inc. *Optimization of Flavor Encapsulation using Polysaccharides.*
- Prof. Michael Rubin, Department of Chemistry, University of Kansas. *Diastereoconvergent Route toward Donor-Acceptor Cyclopropanes via Formal Substitution Reaction.*
- Organic Search Candidate, *Design and Synthesis of Phosphodiesterase 4D (PDE4D) Allosteric Modulators for Enhancing Cognition with Improved Safety.*
- Organic Search Candidate, *Total Synthesis of Platensimycin, Platencin and (-)-Dactylolide.*
- Organic Search Candidate, *Fragment-Based de Novo Design, Synthesis and Biological Evaluation of Selective Inhibitors for Neuronal Nitric Oxide Synthase.*
- Dr. Eric Conklin, Marine Science Advisor for the Hawai'i Marine Program, The Nature Conservancy. *Coral Reef Ecology: Why it Matters.*
- Dr. Plamen Demirev, Applied Physics Laboratory, Johns Hopkins University. *Mass Spectrometry in Biodefense.*
- Prof. Mary Wirth, Department of Chemistry, Purdue University. *Silica Nanoparticles in Bioanalytical Chemistry.*
- Prof. Bakul Dave, Department of Chemistry, Southern Illinois University Carbondale. *Materials Science and Engineering of Sol-Gel Derived Systems.*
- Prof. Catherine Murphy, University of Illinois at Urbana-Champaign. *Inorganic Nanoparticle Fabrication and Functionalization.*

FALL 2009

- Prof. Prashant V. Kamat, Department of Chemistry and Biochemistry, Radiation Laboratory; and Department of Chemical & Biomolecular Engineering, University of Notre Dame. *Nanoscale Materials for Solar Energy Conversion.*
- Prof. Raymond E. Schaak, Department of Chemistry, Penn State University. *Chemical Design Strategies for the Synthesis of Complex Inorganic Nanocrystals.*
- Dr. Di-Jia Liu, Hydrogen and Fuel Cell Materials Group, Division of Chemical Science and Engineering, Argonne National Laboratory. *Advanced Materials & Characterizations for Energy Storage & Fuel Cell Applications.*
- Prof. Venkatram R. Mereddy, Department of Pharmacy Practice and Pharmaceutical Sciences; and Department of Chemistry and Biochemistry, University of Minnesota. *Luminescence-Based MicroRNA Detection Technologies.*

SPRING 2009

- Dr. Christopher L. Marshall, Heterogeneous Catalysis Research, Chemical Sciences and Engineering Division, Argonne National Laboratory. *Oxidative dehydrogenation of paraffins and cycloparaffins by nanolith catalysts.*
- Dr. Thomas J. Colacot, Johnson Matthey, Catalysis & Chiral Technologies. *Highly active, air-stable Pdphosphine complexes for challenging cross-coupling reactions in pharmaceutical processes.*
- Prof. Thomas B. Rauchfuss, Department of Chemistry, University of Illinois at Urbana-Champaign. *Bioorganometallic chemistry: models for the [FeFe]-hydrogenase enzymes.*
- Prof. Sapna Deo, Department of Chemistry & Chemical Biology, Indiana University – Purdue University Indianapolis. *Luminescence-based microRNA detection technologies.*

- Prof. Kathleen V. Kilway, Department of Chemistry, University of Missouri-Kansas City. *Synthesis of aromatic systems containing acene and fluoranthene cores.*
- Prof. Douglass A. Klumpp, Department of Chemistry and Biochemistry, Northern Illinois University. *New Chemistry with Superelectrophiles.*
- Prof. Hilikka I. Kenttämä, Department of Chemistry, Purdue University. *Functional group selective gas-phase ion-molecule reactions on FT-ICR mass spectrometer.*

FALL 2008

- Dr. Yufeng Zhao, National Renewable Energy Laboratory, Center for Basic Sciences, Golden, CO. *Theory for Hydrogen Storage in Organometallic Nanostructures.*
 - Prof. Troy Van Voorhis, Department of Chemistry, Massachusetts Institute of Technology. *Exploring Electron Transfer: From Simple Photochemistry to Energy Conversion.*
 - Prof. Hiroyuki Nakamura, Department of Chemistry, Gakushuin University. *Allenes and Organoboranes in Pharmaceutical Drug Design.*
 - Prof. Charles C. Chusuei, Department of Chemistry, Missouri University of Science and Technology. *Structural Characterization of Nanoparticle-Nanotube Interfaces.*
 - Prof. Paul Keller, Department of Teaching and Learning (Joint Appointment in the Department of Chemistry and Biochemistry), Northern Illinois University. *Act Locally, Think Globally: Chemical Education at NIU and Beyond.*
 - Prof. Jeffery Youngblood, School of Materials Engineering, Purdue University. *Polymer Surface Science – The Study of Many Parts in a Superficial Way.*
- Prof. John F. Hartwig, Department of Chemistry, University of Illinois at Urbana-Champaign. *Catalytic Organometallic Carbon-Heteroatom Bond Formation.*

SPRING 2008

- Prof. Viktor N. Nemykin, Department of Chemistry and Biochemistry, University of Minnesota – Duluth. *Targeting of the Mixed-Valence States in the Polyferrocenyl-Containing Complexes: Experimental and Theoretical Approaches.*
- Dr. Xiao-Min Lin, Center for Nanoscale Materials, Argonne National Laboratory. *Synthesis and Assembly: Building Functional Nanocrystal Superlattices.*
- Prof. Qingfeng Ge, Department of Chemistry and Biochemistry, Southern Illinois University. *Interaction of Transitional Metal with Complex Metal Hydrides.*
- Prof. William Baker Tolman, Department of Chemistry and Center for Metals in Biocatalysis, University of Minnesota – Twin Cities. *Using Synthetic Chemistry to Understand Dioxygen Activation by Copper Proteins.*
- Prof. Joseph T. Hupp, Department of Chemistry and Materials Research Center, Northwestern University. *Nanostructured Architectures for Dye-Sensitized Solar Cells.*
- Prof. W. Andy Tao, Department of Biochemistry, Purdue University. *Functional Proteomics by Soluble Nanopolymers and Mass Spectrometry.*
- Prof. Gavin E. Reid, Department of Chemistry, Michigan State University. *Chemical Methods for Selective Proteome Analysis.*
- Prof. Luping Yu, Department of Chemistry, University of Chicago. *Conjugated Diblock Copolymers – From Self Assembly to Molecular Electronics.*
- Prof. Vladimir B. Birman, Department of Chemistry, Washington University in St. Louis. *Design, Development and Applications of a New Class of Enantioselective Acyl Transfer Catalysts.*

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FALL 2007

- Prof. Dr. Wolfgang Kaim, Universität Stuttgart, Institut für Anorganische Chemie. *Organometallic MixedValent and Radical Complexes.*
- Dr. Alex Snezhko, Materials Science Division, Argonne National Laboratory. *Externally Driven Magnetic Granular Layers: Self-Assembly and Magnetic Order.*
- Prof. Kenneth K. Laali, Department of Chemistry, Kent State University. *Newer Pursuits in Carbocation and Onium Ion Chemistry: from Stable Ion Studies to Green Synthesis.*
- Dr. Dieter M. Gruen, Materials Science Division, Argonne National Laboratory. *Preparation and Characterization of Nanocrystalline Diamond Films.*
- Prof. Jean M. Standard, Department of Chemistry, Illinois State University. *Computational Modeling of Sulfur-Based Air Pollution Chemistry.*
- Prof. Zheng Ouyang, Weldon School of Biomedical Engineering, Purdue University. *Miniature Mass Spectrometry.*
- Prof. Sanjeev Mukerjee, Department of Chemistry and Chemical Biology, Northeastern University. *Molecular Level Understanding of Interfacial Phenomenon for PEMFCs.*
- Prof. Xudong Yao, Department of Chemistry, University of Connecticut. *Analysis of Protein Modifications.*

SPRING 2007

- Prof. Joshua Coon, Department of Chemistry, University of Wisconsin – Madison. *Advancing Proteomics with Ion/Ion Chemistry.*

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Prof. Viktor V. Zhdankin, Department of Chemistry, University of Minnesota – Duluth. *Hypervalent Iodine Reagents in Organic Synthesis*.

Prof. Daniel P. Becker, Department of Chemistry, Loyola University. *Medicinal Chemistry to Supramolecular Chemistry*.

Prof. Diana S. Aga, Chemistry Department, University of Buffalo. *Biodegradation and Fate of Pharmaceutical Contaminants in the Environment*.

Prof. Christine S. Chow, Department of Chemistry, Wayne State University. *Synthesis, Structure, and Ligand Binding Studies of Modified Ribosomal RNAs*.

- Prof. Jay A. Siegel, Forensic and Investigative Sciences Program, IUPUI. *The Analysis and Dating of Ink Dyes of Forensic Interest*.
- Prof. Chuan He, Department of Chemistry, The University of Chicago. *Chemistry of Silver and Gold and Virulence and Antibiotic Resistance Regulation in Pathogens*.
- Prof. Michael A.J. Rodgers, Department of Chemistry, Bowling Green State University.
- Prof. David Berkowitz, Department of Chemistry, University of Nebraska. *Navigating at the Synthetic Organic/Enzymatic Interface: New Findings*.

FALL 2006

- Prof. Gary Lorigan, Department of Chemistry and Biochemistry, Miami University (Ohio). *Magnetic Resonance Studies of Membrane Proteins*.
- Dr. David M. Tede, Chemistry Division, Argonne National Laboratory. *X-Ray Fingerprinting of Biomolecular Structure and Dynamics in Solution*.
- Prof. Kenneth Suslick, Department of Chemistry, University of Illinois at Urbana-Champaign. *Colorimetric Sensor Arrays: An Adventure in Molecular Recognition*.
- Prof. Gary Small, Department of Chemistry, University of Iowa. *Noninvasive Glucose Sensing by Near-Infrared Spectroscopy*.
- Prof. Luke Hanley, Department of Chemistry, University of Illinois at Chicago. *Vacuum Ultraviolet Photoionization for Mass Spectrometry of Biomaterials and Bacterial Biofilms*.
- Prof. Joseph Thrasher, Department of Chemistry, University of Alabama at Tuscaloosa. *The Wonderful Universe of Fluorine Chemistry: From Super Greenhouse Gases for Terraforming Mars to Fluoropolymers for Fuel Cells*.
- Prof. David Benson, Department of Chemistry, Wayne State University. *Rational Design of Metalloprotein Function: Catalyst to Nanotechnology*.
- Carolyn Law & Diane Johns, Thesis Office, NIU Graduate School. *Don't Panic – Prepare*.

SPRING 2006

- Dr. Shengli Zou, Northwestern University. *Biological Sensing with Silver Nanoparticles and Nanoparticle Arrays: Theoretical Studies*.

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- Dr. David Schubert, U.S. Borax, Inc. *Boron Chemistry from an Individual Perspective.*
- Dr. Giselle Sandí, Argonne National Laboratory. *Synthesis and Characterization of Nanometals for Energy Applications.*
- Dr. Radu Semeniuc, University of South Carolina. *From Coordination Chemistry to Crystal Engineering: A Journey with Poly(pyrazolyl)methane Ligands.*
- Dr. Tao Xu, Argonne National Laboratory. *Molecule Diode and Hydrogen Detection at Nanoscale Metal/Organic Interfaces.*
Dr. Zhongfang Chen, University of Georgia. *Fullerenes and Nanotubes: Arena Not Only for Experimentalists, But Also Theoreticians.*
Dr. Eric Brown, University of Minnesota. *The Development of Copper-Sulfur Chemistry Relevant to Modeling the Active Site of Nitrous Oxide Reductase.*
Dr. Dmitry Kadnikov, University of California, San Francisco. *Small-Molecules Modulators of Gene Transcription: Development of Novel Non-Steroid Androgen Receptor Ligands.*
Dr. James Horn, University of Chicago. *Molecular Recognition in Protein-Protein Interactions: Mechanisms for Engineering Enhanced Binding Affinities.*
- Dr. Takhar Kasumov, Case Western Reserve University. *Protein Fatty Acid Oxidation with Stable Isotope-Based Dynamic Metabolomics.*
- Dr. Tímea Gérczei, Rosalind Franklin University of Medicine and Science. *Mechanistic Characterization of a Site-Specific RNA Chaperone Assembly that Plays an Essential Role During Ribosome Biogenesis.*
- Dr. Xiaobing Zuo, Argonne National Laboratory. *Exploring DNA Structure and Dynamics in Solution.*
- Dr. Jongyun Heo, University of North Carolina. *Redox Regulation of Ras and Rho GTPases.*
- Prof. Ayyalusamy Ramamoorthy, Department of Chemistry, University of Michigan. *NMR of Biological Solids.*
- Prof. Dr. Jürgen Köhler, Max Planck Institut für Festkörperforschung. *Lone Pairs and Clusters with Indium Oxides and Fluorides.*
- Prof. David Cedeño, Department of Chemistry, Illinois State University. *Rational Design of Photodynamic Therapy Photosensitizers.*
- Prof. Craig McLauchlan, Department of Chemistry, Illinois State University. *Versatile Vanadium: From Biology to Materials.*

FALL 2005

- Prof. Mark Gordon, Department of Chemistry, Iowa State University. *Computational Studies of Very Large Molecules.*
- Prof. Richard Holm, Department of Chemistry and Chemical Biology, Harvard University. *Coordination Chemistry of Transition Metals.*
- Prof. John Maguire, Southern Methodist University.

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- Prof. Scott McLuckey, Department of Chemistry, Purdue University.
- Prof. Thomas G. Gray, Department of Chemistry, Case Western Reserve University
- Prof. Paul Jelliss, Department of Chemistry, St. Louis University
- Dr. Steve Figard, Core R&D Prion Group, Abbott Laboratory. *Prions: How I Learned to Stop Worrying and Love the Cow.*
- Prof. Kenneth Nicholas, Department of Chemistry and Biochemistry, University of Oklahoma.
- Prof. Donald W. Jacobsen, Ph.D., F.A.H.A., Director, Laboratory for Homocysteine & B12 Research, Cleveland Clinic Foundation; and Professor of Molecular Medicine, Case Western Reserve University. *Molecular Targeting by Homocysteine: From Risk Factor to Mediator of Cardiovascular Disease.*
- Prof. Jacob Petrich, Department of Chemistry, Iowa State University. *Fundamental and Applied Uses of Light: From Antiviral Agents to Solvation Dynamics to Food Safety.*

SPRING 2005

- Dr. Aiwen Lei, Department of Chemistry, Stanford University. *Transition-Metal Catalyzed Alder-ene Type Cycloisomerization of Enzymes.*
Dr. John Montgomery, Department of Chemistry, Wayne State University. *Synthetic Advances and Mechanistic Insight in Nickel-Catalyzed Reactions.*
Dr. Liming Zhang, Department of Chemistry, University of Chicago. *Radical Deoxygenation of Alcohols and Acid-Catalyzed Reactions of Siloxy Alkynes.*
Ms. Susan Tomlinson, AMGEN Corporation, Cambridge, Mass. *How to be Successful in Securing and Retaining Positions in Biomedical and/or Pharmaceutical Industries.*
Dr. Stefan Vetter, Department of Molecular Biology, Scripps Research Institute. *Molecular Evolution of Protein-Based Oxidative Catalysts.*
- Dr. Kui Shen, Department of Pharmacology, Johns Hopkins University School of Medicine. *Chemical Probes of Reversible Protein Phosphorylation: From High-Throughput Chemistry to Protein Semi-Synthesis.*
- Dr. Roman Manetsch, Department of Chemistry, Scripps Research Institute. *Proteins: More than Their Natural Function-From Biocatalysis to Target-Guided Assembly of Femtomolar Inhibitors.*
- Dr. Agnes Ostafin, Department of Chemical Engineering, University of Notre Dame.
- Dr. Raymundo Cea-Olivares, Universidad Autónoma de Mexico, Instituto de Química. *Discrete Inorganic Rings with Alkaline-Earth Metal Cations.*
- Dr. Josef Michl, Department of Chemistry and Biochemistry, University of Colorado at Boulder. *New Vistas in Polyalkylated Icosahedral Carborane Anions, 'Yides,' and Radicals.*
- Dr. Jing Li, Department of Chemistry and Chemical Biology, Rutgers University. *Nanostructured Materials that are Independent of Particle Size: A Novel Class of Inorganic-Organic Hybrid II-VI Semiconductors.*
- Dr. Richard Anderson, Department of Chemistry, University of California at Berkeley.

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- Dr. Peter Gaspar, Department of Chemistry, Washington University in St. Louis. *The Distinctive Chemistry of Charged Carbene Analogs and Related Species*.
- Dr. John P. Fackler, Jr., Department of Chemistry, Texas A&M University. *Gold: An Old Element with New Chemistry*.
- Dr. Scott Goode, Department of Chemistry and Biochemistry, University of South Carolina.
- Dr. C.N.R. Rao, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India. *Chemical Design of Materials and Science in the Third World*.
- Dr. Christopher Welch, Merck & Co., Inc. *Chromatography and Absorption in Support of Pharmaceutical Process Research*.

FALL 2004

- Prof. Edward Young, Iowa State University. *Single Molecular Studies of Chromatographic Events*. □ Prof. Peter Belshaw, University of Wisconsin – Madison.
- Prof. Dr. Wolfgang Kaim, Universität Stuttgart. *From Electron Transfer to Chemistry: Analysis of Organometallic Reaction Centers and Their Interaction Across Molecular Bridges*.
- Dr. Peter Strasser, Symyx Technologies, Inc. *Combinatorial Materials Discovery – Research Between Science and Serendipity*.
- Prof. Andrew Howard, Illinois Institute of Technology. *Structural Genomics and Synchrotron Radiation*.
- Prof. Lena Ruiz-Ramírez, Departamento de Química Inorgánica y Nuclear UNAM, Mexico, D.F. *A Knight's Move on the Periodic Table: From Pt to Cu*.
- Prof. Martin Newcomb, University of Illinois at Chicago.
- Prof. Vladimir Bregadze, INEOS, Russian Academy of Sciences. *New Results on Synthesis of Substituted Carboranes and Metallocarboranes*.
- Prof. David Huffman, Western Michigan University.

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Prof. Alexander Benderskii, Wayne State University. *Laser Spectroscopy of Surfaces and Interfaces: Biological, Biomimetic, and Material Applications.*

Prof. Andrew Gewirth, University of Illinois at Urbana-Champaign.

- Prof. Douglas Stephan, University of Windsor, Ontario.