

2011 Hieftje Group Presentations

Name Lectureships:

“New Techniques, Tools, and Tricks in Optical and Mass Spectrometry”, Gary M. Hieftje. **2011 Robert Boyle Award Lecture**, Birmingham, England, March 29-31, 2011. (Lectures presented by Gary M. Hieftje)

“Teaching and Research: Symbiosis or Conflict”, Gary M. Hieftje. **2011 Ott Lecture Series**, Grand Valley State University, Allendale, Michigan, November 10, 2011. (Lecture presented by Gary M. Hieftje)

“New Tools, Toys, and Tricks for Chemical Measurements”, Gary M. Hieftje. **2011 Ott Lecture Series**, Grand Valley State University, Allendale, Michigan, November 11, 2011. (Lecture presented by Gary M. Hieftje)

“Teaching and Research: Symbiosis or Conflict”, Gary M. Hieftje. **2011 Dasgupta Lecture Series**, Texas Tech University, Lubbock, Texas, December 1, 2011. (Lecture presented by Gary M. Hieftje)

“Models, Methods, and Machines for Chemical Measurements”, Gary M. Hieftje. **2011 Dasgupta Lecture Series**, Texas Tech University, Lubbock, Texas, December 2, 2011. (Lecture presented by Gary M. Hieftje)

Invited papers or talks:

“New Instruments for Plasma Spectrochemistry”, Gary M. Hieftje, Steven J. Ray, Carsten Englehard, Jacob Shelley, Christie G. Enke, Jeremy A. Felton, Alexander W. Graham, Elise Dennis, David W. Koppenaal, Charles J. Barinaga. **2011 European Winter Conference on Plasma Spectrochemistry**, Zaragoza, Spain, Jan 30-Feb 3, 2011. (Invited lecture presented by Gary M. Hieftje)

“New Powerful Tools for Metallomics and Metallomic Analysis”, Gary M. Hieftje, Carsten Englehard, Gerardo Gamez, Alexander W. Graham, Steven J. Ray, Duane A. Rogers, Jacob T. Shelley, Christie G. Enke, David W. Koppenaal, Charles J. Barinaga, Volker Hoffman, and Wolfgang Buscher. **2011 Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy**, Atlanta Georgia, March 13-18, 2011. (Invited lecture presented by Gary M. Hieftje)

“Ambient Mass Spectrometry Ionization Sources based on Electrical Discharges”, Steven J. Ray, Jacob T. Shelley, Kevin P. Pfeuffer, Ana I Gonzalez, George Chan, and Gary M. Hieftje. **2011 Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy**, Atlanta Georgia, March 13-18, 2011. (Invited lecture presented by Steven J. Ray)

“Distance-of-flight Mass Spectrometry”, Gary M. Hieftje, Steven J. Ray, Alexander W. Graham, Christie G. Enke, David W. Koppenaal, and Charles J. Barinaga. **International Congress on Analytical Sciences 2011**, Koyto, Japan, May 22-16, 2011. (Keynote lecture presented by Gary M. Hieftje)

“Towards an Expert System for Inductively Coupled Plasma-Atomic Emission Spectrometry – an Automated Diagnostic Tool for Flagging Matrix Interferences”, George Chan and Gary M. Hieftje. **International Congress on Analytical Sciences 2011**, Koyto, Japan, May 22-16, 2011. (Invited lecture presented by George Chan)

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"New, Powerful Tools for Metallomics and Metallomic Analysis", Gary M. Hieftje, Carsten Engelhard, Gerardo Gamez, Alexander W. Graham, Steven J. Ray, Duane A. Rogers, Jacob T. Shelley, Christie G. Enke, David W. Koppenaal, Charles J. Barinaga, Anthony Carado, Volker Hoffman, Maxim Voronov, and Wolfgang Buscher. **3rd International Symposium on Metallomics**, Münster, Germany, June 15-18, 2011. **(Plenary lecture presented by Gary M. Hieftje)**

"Räumlich und zeitlich aufgelöste Messungen mit einem neuen abbildenden akusto-optischen Spektrometer in Kombination mit Glimmentladungsquellen", V. Hoffman, M. Voronov, T. Wallendorf, S. Marke, G. Hieftje, S. Ray, C. Engelhard, and W. Buscher. **Festkörperanalytik**, Wien, Austria, July 2-4, 2011. **(Invited talk presented by Volker Hoffman)**

"New Tools and Techniques for Chemical Measurement and Characterization", Gary M. Hieftje, Steven J. Ray, Jacob T. Shelley, Alexander W.G. Graham, Elise A. Dennis, Andrew J. Schwartz, Christie G. Enke, David W. Koppenaal, and Charles J. Barinaga. **Congress of the Spanish Royal Society of Chemistry**, Valencia, Spain, July 24-28, 2011. **(Plenary lecture presented by Gary M. Hieftje)**

"New Tools and Techniques for Chemical Measurement and Characterization", Gary M. Hieftje, Steven J. Ray, Jacob T. Shelley, Alexander W.G. Graham, Elise A. Dennis, Andrew J. Schwartz, Christie G. Enke, David W. Koppenaal, and Charles J. Barinaga. **University of Oviedo**, Oviedo, Spain, July 22, 2011. **(Invited lecture presented by Gary M. Hieftje)**

"New Tools and Techniques for Spectrochemistry", Gary M. Hieftje, Gerardo Gamez, Alexander W.G. Graham, Steven J. Ray, Jacob T. Shelley, Andrew J. Schwartz, Christie G. Enke, David W. Koppenaal, and Charles J. Barinaga. **Colloquium Spectroscopicum Internationale (CSI) XXXVII**, Buzios, Brazil, August 28-September 2, 2011. **(Invited lecture presented by Gary M. Hieftje)**

"New Tools for the Analytical Laboratory", Gary M. Hieftje, Gerardo Gamez, Alexander W.G. Graham, Steven J. Ray, Jacob T. Shelley, Andrew J. Schwartz, Christie G. Enke, David W. Koppenaal, and Charles J. Barinaga. **EUROanalysis 2011**, Belgrade, Serbia, September 11-15, 2011. **(Invited lecture presented by Gary M. Hieftje)**

"New Instruments for Mass Spectrometry", Gary M. Hieftje, Carsten Engelhard, Steven J. Ray, Jacob T. Shelley, Christie G. Enke, David W. Koppenaal, and Charles J. Barinaga. **IMA 2011**, Chania, Crete, September 18-22, 2011. **(Invited lecture presented by Gary M. Hieftje)**

"The Distance of Flight Mass Spectrometer", Steven Ray, Chris Enke, Alexander Graham, Elise Dennis, Anthony Carado, Charles Barinaga, David Koppenaal, and Gary M. Hieftje. **JAIMA 2011**, Chiba City, Tokyo, Japan, September 4-10, 2011. **(Invited Lecture presented by Steven Ray)**

"Plasma Spectrochemistry: Not just for Atoms Anymore", Gary M. Hieftje, Steven J. Ray, Jacob T. Shelley, Alexander W.G. Graham, Kevin Pfeuffer, Carsten Engelhard, Christie G. Enke, David W. Koppenaal, and Charles J. Barinaga. **FACSS 2011**, Reno, Nevada, October 2-7, 2011. **(Invited lecture presented by Gary M. Hieftje)**

"Mechanisms of Reagent-ion and Afterglow Formation in the Low-temperature Plasma Probe Ambient Mass Spectrometry Source", George Chan, Jacob Shelley, Joshua Wiley, Carsten Engelhard, Ayanna Jackson, Graham Cooks, and Gary M. Hieftje. **FACSS 2011**, Reno, Nevada, October 2-7, 2011. **(Invited lecture presented by George Chan)**

"Plasma-analyte Interactions in the Analytical Inductively Coupled Plasma", George Chan and Gary M. Hieftje. **FACSS 2011**, Reno, Nevada, October 2-7, 2011. **(Invited lecture presented by George Chan)**

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“Flowing Atmospheric-Pressure Afterglow for Ultrasensitive, Direct Detection of Weaponized Chemicals in Complex Matrices”, Jacob T. Shelley, Steven J. Ray, and Gary M. Hieftje. **FACSS 2011**, Reno, Nevada, October 2-7, 2011. **(Invited lecture presented by Jacob T. Shelley)**

“The Solution-Cathode Glow Discharge: A Low-Power Microplasma Discharge for the Direct Analysis of Liquid Solutions by Atomic Emission Spectroscopy”, Steven Ray, Andrew Schwartz, Zhenli Zhu, and Gary M. Hieftje. **FACSS 2011**, Reno, Nevada, October 2-7, 2011. **(Invited lecture presented by Steven Ray)**

“Distance-of-Flight Mass Spectrometry”, Steven Ray, Chris Enke, Alexander Graham, Elise Dennis, Anthony Carado, Charles Barinaga, David Koppelaar, and Gary M. Hieftje. **Midwest Universities Analytical Chemistry Conference (MUACC) 2012**, St. Louis University, St. Louis, MO, November 10-12, 2011 **(Lecture presented by Steven Ray)**

“Plasma-based Sources for Ambient, Molecular Mass Spectrometry”, Jacob T. Shelley, Joshua S. Wiley, George Chan, Kevin P. Pfeuffer, J. Niklas Schaper, Steven J. Ray, R. Graham Cooks, and Gary M. Hieftje. **IV BrMass Conference 2011**, Campinas, Brazil, December 10-13, 2011. **(Invited lecture presented by Jacob T. Shelley)**

Contributed or competitive papers:

“The Solution-Cathode Glow Discharge: Atomic Emission Spectroscopy with a Plasma Sustained Directly on a Liquid Surface”, Steven J. Ray, George Chan, Kevin Pfeuffer, Eyal Elish, Arnon Rubinshtein, Gary M. Hieftje. **2011 European Winter Conference on Plasma Spectrochemistry**, Zaragoza, Spain, Jan 30-Feb 3, 2011. **(Presented by Steven J. Ray)**

“Spatial- and time-resolved measurements by means of a new acousto-optical imaging spectrometer in combination with glow discharge sources”, V. Hoffmann, M. Voronov, T. Wallendorf, S. Marke, G. Hieftje, S. Ray, C. Englehard, and W. Buscher. **2011 European Winter Conference on Plasma Spectrochemistry**, Zaragoza, Spain, Jan 30-Feb 3, 2011. **(Presented by Volker Hoffman)**

“Pressure waves generated in a Grimm-type pulsed glow discharge source and their influence on discharge parameters”, M. Voronov, V. Hoffmann, W. Buscher, C. Engelhard, S.J. Ray, and G.M. Hieftje. **2011 European Winter Conference on Plasma Spectrochemistry**, Zaragoza, Spain, Jan 30-Feb 3, 2011. **(Presented by Volker Hoffman)**

“Diagnostics and Features of a Low-Temperature Plasma (LTP) useful for Ambient Desorption/Ionization Mass Spectrometry”, Carsten Englehard and Gary M. Hieftje. **2011 European Winter Conference on Plasma Spectrochemistry**, Zaragoza, Spain, Jan 30-Feb 3, 2011. **(Poster presented by Carsten Englehard)**

“Visualization of Cooling Gas Streams in a Low-Flow ICP by Schlieren Imaging”, Carsten Englehard, Eyal Elish, Steven Ray, Wolfgang Buscher, and Gary M. Hieftje. **2011 European Winter Conference on Plasma Spectrochemistry**, Zaragoza, Spain, Jan 30-Feb 3, 2011. **(Poster presented by Carsten Englehard)**

“Analyte and Ion Transport with Plasma-based Ambient Desorption/Ionization Mass Spectrometry Sources”, Kevin Pfeuffer, Jacob T. Shelley, Eyal Elish, Steven J. Ray, and Gary M. Hieftje. **2011 Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy**, Atlanta Georgia, March 13-18, 2011. **(Presented by Kevin Pfeuffer)**

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“Development and Characterization of a Distance-of-flight Mass Spectrometer for Elemental Mass Spectrometry”, Alexander W. Graham, Steven J. Ray, Elise A. Dennis, Christie G. Enke, Anthony J. Carado, Charles J. Barinaga, David W. Koppenaal, and Gary M. Hieftje. **2011 Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy**, Atlanta Georgia, March 13-18, 2011. **(Presented by Alexander W. Graham)**

“Array Detectors for Truly Simultaneous Mass Analysis”, Gary M. Hieftje, Jeremy A. Felton, Steven J. Ray, Alexander W. Graham, Gregory D. Schilling, David W. Koppenaal, Charles J. Barinaga, Medona B. Denton, and Roger P. Sperline. **2011 Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy**, Atlanta Georgia, March 13-18, 2011. **(Presented by Gary M. Hieftje)**

“Distance-of-flight Mass Analysis: A New Tool for Atomic Spectrometry”, Christie G. Enke, Steven J. Ray, Alexander W. Graham, Elise A. Dennis, Gary M. Hieftje, David W. Koppenaal, Charles J. Barinaga, and Anthony J. Carado. **2011 Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy**, Atlanta Georgia, March 13-18, 2011. **(Presented by Christie G. Enke)**

“A Truly Handheld, Portable, Ambient Ionization Source for Mass Spectrometry Based on a Low-Temperature Plasma (LTP)”, Joshua S. Wiley, Jacob T. Shelley, Robert J. Noll, Gary M. Hieftje, and R. Graham Cooks. **59th ASMS Conference on Mass Spectrometry**, Denver, Colorado, June 5-9, 2011. **(Poster presented by Joshua S. Wiley)**

“Advanced Instrumental Techniques and Approaches for Metallomics Characterization”, DW Koppenaal, A Carado, CJ Barinaga, ML Alexander, CD Quarles, RK Marcus, SJ Ray, and GM Hieftje. **3rd International Symposium on Metallomics**, Münster, Germany, June 15-18, 2011. **(Presented by David W. Koppenaal)**

“Droplet-on-Demand Sample Introduction System for the Analysis of Solutions by the Flowing Atmospheric Pressure Afterglow”, Kevin P Pfeuffer, J. Niklas Schaper, Jacob T. Shelley, Nicolas H. Bings and Gary M. Hieftje. **Turkey Run Analytical Chemistry Conference**, Marshall, IN, Sept 30 – Oct 1, 2011. **(Presented by K.P. Pfeuffer)**

“Visual Observations of an Atmospheric-Pressure Solution-Cathode Glow Discharge”, Andrew J. Schwartz, Steven J. Ray, Eyal Elish, Andrew P. Storey, Arnon A. Rubinshtein, George C.Y. Chan, Kevin P. Pfeuffer and Gary M. Hieftje. **Turkey Run Analytical Chemistry Conference**, Marshall, IN, Sept 30-Oct 1, 2011. **(Presented by A.J. Schwartz)**

“Advances in Distance-of-Flight Mass Spectrometry: Coupling Solid-State Array Detection with Velocity-Based Mass Separation”, Alexander Graham, Steven Ray, Chris Enke, Anthony Carado, Charles Barinaga, David Koppenaal, and Gary M. Hieftje. **FACSS 2011**, Reno, Nevada, October 2-7, 2011. **(Presented by Alexander Graham)**