

## 2015 Hieftje Group Presentations

### PROFESSIONAL MEETINGS, COLLOQUIA, AND SEMINARS

#### Invited papers or talks

1. *“Better Living Through Better Chemical Instrumentation”*, Department of Chemistry, Indiana University, Bloomington, IN, January 23, 2015. **(Invited Lecture (C107) presented by G.M. Hieftje)**
2. *“Presentations Seminar* Department of Chemistry, Indiana University, Bloomington, IN, January 23, 2015. **(Invited Lecture (A800) presented by G.M. Hieftje)**
3. *“Advances in and Alternatives to the ICP for Atomic Emission Spectrometry”*, Gary M. Hieftje, George Chan, Steven J. Ray, Yan Cheung and Andrew J. Schwartz. **2015 European Winter Conference on Plasma Spectrochemistry**, February 22-26, 2015, Münster, Germany. **(Invited lecture presented by G.M. Hieftje)**
4. *“Distance-of-Flight Mass Spectrometry for Atomic Analysis: Latest Results”*, Steven J. Ray, Elise A. Dennis, Gary M. Hieftje, Christie G. Enke, David W. Koppenaal and Charles J. Barinaga. **2015 European Winter Conference on Plasma Spectrochemistry**, February 22-26, 2015, Münster, Germany. **(Invited lecture presented by S.J. Ray)**
5. *“The Expanding Role of Glow Discharges in Analytical Science”*, Gary M. Hieftje. **2015 Pittsburgh Conference and Exposition**, March 8-12, New Orleans, LA. **(Invited lecture presented by G.M. Hieftje - Hieftje Symposium)**
6. *“Plasma Spectrometry—Not Just for Atoms Anymore”*, Gary M. Hieftje, Gerardo Gamez, Kevin P. Pfeuffer, Steven J. Ray, Andrew J. Schwartz, Jacob T. Shelley, and Andrew P. Storey. **2015 Pittsburgh Conference and Exposition**, March 8-12, New Orleans, LA. **(Invited lecture presented by G.M. Hieftje - Shelley Symposium)**
7. *“Spatial Discrimination to Improve Analytical Performance of Atmospheric-Pressure Solution-Cathode Glow Discharge”*, Andrew J. Schwartz, José A.C. Broekaert, Steven J. Ray and Gary M. Hieftje. **2015 Pittsburgh Conference and Exposition**, March 8-12, New Orleans, LA. **(Invited lecture presented by A.J. Schwartz – S.J. Ray Symposium)**
8. *“Distance of Flight Mass Spectrometry for ICP-MS”*, Steven J. Ray, Elise A. Dennis, Christie G. Enke, David W. Koppenaal, Charles J. Barinaga, and Gary M. Hieftje. **2015 Pittsburgh Conference and Exposition**, March 8-12, New Orleans, LA **(Invited lecture presented by S.J. Ray-Hieftje Symposium)**

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9. ***“Add a New Dimension to ICP–AES Analysis: An Automated Diagnostic Tool for Flagging Matrix Interferences”***, George Chan, Yan Cheung and Gary M. Hieftje. **2015 Pittsburgh Conference and Exposition**, March 8-12, New Orleans, LA. **(Invited lecture presented by G. Chan, Lawrence Berkeley National Laboratory, Berkley, CA - Omenetto Symposium)**
10. ***“Models, Measurements, Methods, and Machines”***, Gary M. Hieftje. **Rose-Hulman Institute of Technology**, April 1, Terre Haute, IN. **(Invited lecture presented by G.M. Hieftje)**
11. ***“New Tools for Chemical Measurement and Characterization”***, Gary M. Hieftje. **University of Washington**, April 27, Seattle, WA. **(Invited lecture presented by G.M. Hieftje)**
12. ***“Is ICP-Atomic Emission Spectrometry as Good as It Can Be?”***, Gary M. Hieftje, Steven J. Ray, Andrew J. Schwartz, George Chan, and Yan Cheung. **6th Asia-Pacific Winter Conference on Plasma Spectrochemistry**, May 19-22, Xiamen, China. **(Plenary lecture presented by G.M. Hieftje)**
13. ***“Distance-of-Flight Mass Spectrometry with an Inductively-Coupled Plasma Ionization Source”***, Steven J. Ray. **6th Asia-Pacific Winter Conference on Plasma Spectrochemistry**, May 19-22, Xiamen, China. **(Invited lecture presented by S.J. Ray)**
14. ***“The Distance-of-Flight Mass Spectrometer”***, Steven J. Ray, Elise A. Dennis, Christie G. Enke, Charles J. Barinaga, David W. Koppenaal and Gary M. Hieftje. **Wuhan University**, Wuhan, Hubei, China, May 22, 2015. **(Invited lecture presented by S.J. Ray)**
15. ***“New Methods and Instrumentation for Simultaneous, High-Speed Mass Spectrometry”***, Gary M. Hieftje, Steven J. Ray, Elise A. Dennis, Alexander W. Gundlach-Graham and Christie G. Enke. **Colloquium Spectroscopicum Internationale XXXIX**, August 30-September 3, 2015, Figueira da Foz, Coimbra, Portugal. **(Invited lecture presented by G.M. Hieftje)**
16. ***“New Machines and Methods for Metallomics”***, Gary M. Hieftje, Steven J. Ray, Andrew J. Schwartz, Elise A. Dennis, Yan Cheung, Christie G. Enke, Charles J. Barinaga and David W. Koppenaal. **5th International Symposium on Metallomics**, Sept 9-12, Beijing, China. **(Plenary lecture presented by G.M. Hieftje)**
17. ***“Distance-of-Flight Mass Spectrometry: A New Tool For Metallomics”***, Steven J. Ray, Elise A. Dennis, Christie Enke, Lane Baker, Elizabeth Yuill, Anumita Saha-Shah, Anna Weber, Charles Barinaga, David Koppenaal, and Gary M. Hieftje. **5th International Symposium on Metallomics**, Sept 9-12, Beijing, China. **(Invited lecture presented by S.J. Ray)**

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18. ***“Methods to Identify and Conquer Matrix and Spectral Interferences in ICP Emission Spectrometry”***, Gary M. Hieftje, George Chan, Yan Cheung, and Andrew J. Schwartz. **9<sup>th</sup> International Conference on Instrumental Methods and Modern Trends and Applications**, September 20-24, 2015, Kalamata, Greece. (Invited lecture presented by G.M. Hieftje)
19. ***“Expanding Analytical Frontiers of the Solution-Cathode Glow Discharge”***, Andrew J. Schwartz, Kelsey Williams, Jacob T. Shelley, Steven J. Ray and Gary M. Hieftje. **SciX 2015**, Sept 27-Oct 2, 2015, Providence, RI. (Invited lecture presented by A.J. Schwartz)
20. ***“Pushing the Boundaries in Glow-Discharge Spectrometry – a Tribute to Edward Steers”***, Gary M. Hieftje, Andrew P. Storey, Jacob T. Shelley and Steven J. Ray. **SciX 2015**, Sept 27-Oct 2, 2015, Providence, RI. (Invited lecture presented by G.M. Hieftje)
21. ***“Ken Marcus and the Glow on the Horizon”***, Gary M. Hieftje, Andrew J. Schwartz, and Steven J. Ray. **SciX 2015**, Sept 27-Oct 2, 2015, Providence, RI. (Invited lecture presented by G.M. Hieftje)
22. ***“Ken Marcus, Champion of the Glow Discharge or Glow Discharge and Distance-of-Flight Mass Spectrometry: A Match Made in Heaven”***, Steven J. Ray, Elise A. Dennis, Gary Hieftje, Christie G. Enke. **SciX 2015**, Sept 27-Oct 2, 2015, Providence, RI. (Invited lecture presented by S.J. Ray )
23. ***“To be Frank and Bright – What more could one hope for in a scientific colleague and friend?”***, Gary M. Hieftje, Elise A. Dennis Alexander Gundlach-Graham, and Steven J. Ray. **SciX 2015**, Sept 27-Oct 2, 2015, Providence, RI. (Invited lecture presented by G.M. Hieftje)
24. ***“Distance of Flight Mass Spectrometry: The Joy of Collaborating with Chris Enke”***, Gary M. Hieftje, Christie G. Enke, Steven J. Ray, Alexander Gundlach-Graham, Elise A. Dennis, David W. Koppenaal, Charles J. Barinaga. **Eastern Analytical Symposium and Exposition**, November 16-18, 2015, Somerset, NJ. (Invited lecture presented by G.M. Hieftje)
25. ***“Is There No Better Emission Source Than the ICP?”***, Gary M. Hieftje, Steven J. Ray, Andrew J. Schwartz, George Chan and Yan Cheung. **The International Chemical Congress of Pacific Basin Societies**, Dec 15-20, 2015, Honolulu, HI. (Invited lecture presented by G.M. Hieftje)
26. ***“Instruments of Change in Atomic Mass Spectrometry: Progress, Predictions, and Science Applications”***, David W. Koppenaal, Steven J. Ray, Gary M. Hieftje and R. Kenneth Marcus. **The International Chemical Congress of Pacific Basin Societies**, Dec 15-20, 2015, Honolulu, HI. (Invited lecture presented by D.W. Koppenaal, Pacific Northwest National Laboratories, Richland, WA)

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27. *“Distance of Flight Mass Spectrometry: New Capabilities for Atomic Mass Spectrometry”*, Steven J. Ray, Elise A. Dennis, Gary M. Hieftje, G. Christie Enke, Charles Barinaga and David W. Koppenaal. **The International Chemical Congress of Pacific Basin Societies**, Dec 15-20, 2015, Honolulu, HI. (Invited lecture presented by S.J. Ray of SUNY-Buffalo)

### Contributed or competitive papers/posters

1. *“A New Microwave Inductively Coupled Plasma for Spectrochemical Analysis: First Experiences”*, Steven J. Ray, Elise A. Dennis, Gary M. Hieftje, Christie G. Enke, David W. Koppenaal, and Charles J. Barinaga. **2015 European Winter Conference on Plasma Spectrochemistry**, February 22-26, 2015, Münster, Germany. (Contributed poster presented by S.J. Ray)
2. *“Use of Gradient Dilution to Detect and Correct for Matrix Interferences in Inductively Coupled Plasma–Mass Spectrometry”*, Yan Cheung, Andrew J. Schwartz, Steven J. Ray and Gary M. Hieftje. **2015 Pittsburgh Conference and Exposition**, March 8-12, New Orleans, LA. (Contributed paper presented by Y. Cheung)
3. *“Reducing Helium Use in Flowing Atmospheric-Pressure Afterglow-Mass Spectrometry”*, Andrew P. Storey, Steven J. Ray, Offer M. Zeiri, Kevin P. Pfeuffer, and Gary M. Hieftje. **2015 Pittsburgh Conference and Exposition**, March 8-12, New Orleans, LA. (Contributed paper presented by A.P. Storey)
4. *“Characterization of Nanopipettes as ESI-MS Emitters”*, Elizabeth M. Yuill, Lane A. Baker, Steven J. Ray and Gary M. Hieftje. **2015 Pittsburgh Conference and Exposition**, March 8-12, New Orleans, LA. (Contributed paper presented by E.M. Yuill)
5. *“Nanopipettes for Nanoscale Analysis by MALDI-MS”*, Anumita Saha-Shah, Lane A. Baker, Steven J. Ray, Jonathan A. Karty and Gary M. Hieftje. **2015 Pittsburgh Conference and Exposition**, March 8-12, New Orleans, LA. (Contributed paper presented by A. Saha-Shah)
6. *“Inductively Coupled Plasma Distance-of-Flight Mass Spectrometry with an ionCCD Camera Detector”*, Elise Dennis, Steven J. Ray, Christie G. Enke, Charles J. Barinaga, David W. Koppenaal and Gary M. Hieftje. **2015 American Society for Mass Spectrometry Annual Meeting**, May 31-June 4, 2015, St. Louis, MO. (Contributed paper presented by E.A. Dennis)

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7. ***“Matrix-Assisted Laser Desorption Ionization Distance-of-Flight Mass Spectrometry”***, Steven J. Ray, Elise A. Dennis, Christie G. Enke, David W. Koppenaal, Charles Barinaga, and Gary M. Hieftje. **2015 American Society for Mass Spectrometry Annual Meeting**, May 31-June 4, 2015, St. Louis, MO. (Contributed poster presented by S.J. Ray)
8. ***“A New ICP: The Microwave-Sustained, Inductively Coupled, Atmospheric-Pressure Plasma (MICAP)”***, Andrew J. Schwartz, Yan Cheung, Steven J. Ray, Jovan Jevtic, Ashok Menon, Velibor Pikelja and Gary M. Hieftje. **Colloquium Spectroscopicum Internationale XXXIX**, August 30-September 3, 2015, Figueira da Foz, Coimbra, Portugal. (Contributed paper presented by A.J. Schwartz)
9. ***“Use of Gradient Dilution to Detect the Presence of Matrix Interferences in Inductively Coupled Plasma-Time-of-Flight Mass Spectrometry”***, Yan Cheung, Steven J. Ray, Andrew J. Schwartz and Gary M. Hieftje. **Colloquium Spectroscopicum Internationale XXXIX**, August 30-September 3, 2015, Figueira da Foz, Coimbra, Portugal. (Contributed paper presented by Y. Cheung)
10. ***“Consequences of Heterogeneous Surface Composition in Depth-Resolved Glow Discharge Spectrometry”***, Andrew P. Storey, Steven J. Ray, Maxim Voronov, Volker Hoffman, Wolfgang Buscher, Carsten Engelhard and Gary M. Hieftje. **SciX 2015**, Sept 27-Oct 2, 2015, Providence, RI. (Contributed paper presented by A.P. Storey)
11. ***“Analysis of Vapor Samples with Interrupted Helium Flow for the Flowing Atmospheric-Pressure Afterglow Mass Spectrometry”***, Andrew P. Storey, Offer Zeiri, Steven J. Ray, Allen R. White and Gary M. Hieftje. **SciX 2015**, Sept 27-Oct 2, 2015, Providence, RI. (Contributed paper presented by A.P. Storey)