

G.B. FROST MEMORIAL LECTURE

The Grenville Frost Visiting Lectureship in Chemistry was established in 1966 by a bequest from the estate of the Honourable Leslie M. Frost, Premier of Ontario, in memory of his brother, Grenville. This fund is used to invite a Visiting Lecturer to Queen's.

Grenville Frost completed his education at the University of Toronto and, after graduating, went on to the University of California where he worked under the famous G.N. Lewis. Dr. Frost was appointed Lecturer at Queen's in 1924 and Full Professor in 1944. He became Head of the Department of Chemistry in 1956 and served in this post until retirement in 1961.

Dr. Frost was also the Supervisor to H.G. McAdie, who was the first Ph.D. Graduate in the Department of Chemistry

SELECTED RECENT PUBLICATIONS

- Schwartz, A.J., Shelley, J.T., Walton, C.L., Williams, K.L., and Hieftje, G.M. Atmospheric-Pressure Ionization and Fragmentation of Peptides by Solution-Cathode Glow Discharge. *Chem. Sci.*, 7, 6440-6449, (2016).
- Cheung, Y., Ray, S.J., and Hieftje, G.M., Detection and Correction of Matrix Interference in Inductively Coupled Plasma – Time of Flight Mass Spectrometry by Means of Aerosol Dispersion. *J. Anal. At. Spec.*, 31, 1542-1548, (2016).
- Schwartz, A.J., Cheung, Y., Jevtic, J., Pikelja, V., Menon, A., Ray, S.J., and Hieftje, G.M., New Inductively Coupled Plasma for Atomic Spectrometry: The Microwave-Sustained, Inductively Coupled, Atmospheric-Pressure Plasma (MICAP). *J. Anal. At. Spectrom.*, 31, 440-449, (2016).
- Dennis, E.A., Ray, S.J., Enke, C.G., Gundlach-Graham, A.W., Barinaga, C.J., Koppelaar, D.W., and Hieftje, G.M., Distance-of-Flight Mass Spectrometry with IonCCD Detection and an Inductively Coupled Plasma Source. *J. Am. Soc. for Mass Spectrom.*, 27, 371-379, (2016).
- Dennis, E.A., Ray, S.J., Enke, C.G., and Hieftje, G.M., Inductively Coupled Plasma Zoom-Time-of-Flight Mass Spectrometry. *J. Am. Soc. for Mass Spectrom.*, 27, 380-387, (2016).
- Storey, A.P., Zeiri, O.M., Ray, S.J., and Hieftje, G.M., Helium Conservation by Discontinuous Introduction in the Flowing Atmospheric-Pressure Afterglow Source for Ambient Desorption-Ionization Mass Spectrometry. *J. Anal. At. Spectrom.*, 30, 2017-2023 (2015).
- Pfeuffer, K.P., Caldwell, J., Shelley, J.T., Ray, S.J., and Hieftje, G.M., Detection of Counterfeit Electronic Components Through Ambient Mass Spectrometry and Chemometrics. *Analyst*, 139(18), 4505-4511 (2014).



**Department of Chemistry
Queen's University**

is honoured to host the
2016 Frost Lecturer:

**Dr. Gary Hieftje
Indiana University**



**"New Sources and Spectrometers
for Analytical and Bioanalytical
Measurement"**

**Friday, October 21, 2016
11:30 AM
Room 117, Chernoff Hall**

DR. GARY HIEFTJE



Gary Hieftje

Department of Chemistry
Indiana University
Bloomington, IN

Gary M. Hieftje is Distinguished Professor and Mann Chair of Chemistry at Indiana University in Bloomington, Indiana. He also has been appointed as an Adjunct Professor of both Environmental Science and Informatics at Indiana University. His research interests include the investigation of basic mechanisms in atomic emission, absorption, fluorescence and mass spectrometric analysis, and the development of instrumentation and techniques for atomic and molecular methods of analysis. He is interested also in the on-line computer control of chemical instrumentation and experiments, the use of time-resolved luminescence processes for analysis, the application of information theory to analytical chemistry, analytical mass spectrometry, near-infrared reflectance analysis, metallomics, and the use of stochastic processes to extract basic and kinetic chemical information. He was Co-Chair of the 1979 Analytical Summer Symposium on Lasers in Analytical Chemistry, Chair of the 1982 Gordon Research Conference on Analytical Chemistry, and General Chair of the 1987 Analytical Summer Symposium on Biotechnology.

Hieftje has served on the instrumentation advisory panel and editorial board of Analytical Chemistry and on the editorial boards of *Analytica Chimica Acta*, the *Journal of Analytical Atomic Spectrometry*, *Metallomics*, the *Journal of Mass Spectrometry*, *Spectrochimica Acta, Part B*, *Advances in Inorganic Mass Spectrometry*, the Analytical Chemistry Bench Top Series from Springer Verlag, *Analytical Sciences*, and *Spectroscopy and Spectral Analysis*. He has been the President of the Society for Applied Spectroscopy and Chair of the ACS Division of Analytical Chemistry.

He is the author of over 600 publications, 10 books, and 21 patents. More than 70 students have received doctorates under his direction; many others have received M.S. degrees, and scores of undergraduates and visiting scientists have performed research in his laboratories.

SELECTED HONOURS & AWARDS

Hieftje has received a number of awards for both research and teaching, including an IR-100 Award and two R&D 100 Awards, the Monie A. Ferst Award of Sigma Xi, the Anachem Award, two Lester Strock medals from the Society for Applied Spectroscopy, and two Meggers Awards, also from the SAS. His recognitions from the American Chemical Society include the ACS Award in Analytical Chemistry, the ACS Chemical Instrumentation Award, the Award in Spectrochemical Analysis, the ACS-Analytical Division Award for Excellence in Teaching and the ACS-Analytical Division Distinguished Service Award. He received from the Royal Society of Chemistry the Theophilus Redwood Award and the Robert Boyle medal. Hieftje was only the third person to have won the three major awards from the Pittsburgh Conference and Exposition: the Pittsburgh Analytical Chemistry Award, the Pittsburgh Spectroscopy Award, and the Maurice Hasler Award. He has received the Eastern Analytical Symposium Award for Outstanding Achievements in the Fields of Analytical Chemistry and a Research Award for Senior U.S. Scientists from the German Humboldt Foundation. Hieftje is an Honorary Member of the Society for Applied Spectroscopy and the Golden Key National Honor Society, and is a Fellow of the American Chemical Society, the Royal Society of Chemistry, the American Association for the Advancement of Science, and the Indiana Academy of Science.