

The SAS Spectrum Newsletter

The Newsletter of the Society for Applied Spectroscopy



December 2011

NEW OFFICERS FOR SOCIETY FOR APPLIED SPECTROSCOPY

The Society for Applied Spectroscopy is proud to announce that **Katherine Bakeev** has been elected as President-elect and **Michelle Meighan** has been elected as Secretary.



Dr. Katherine A. Bakeev is currently the Chief Scientist and Product Manager for CAMO Software Inc., where she leads the scientific team, drives product management, and has responsibilities in supporting the North American market. She has many years of industrial experience in the electronics, chemical, and pharmaceutical industries. From 2005 to 2009 she worked in the process analytical technology and chemometrics group of GlaxoSmithKline in King of Prussia, Pennsylvania. Her work experience has included supporting customers in pharmaceutical and chemical industries as a product specialist for Foss NIRSystems and work in process analytical chemistry to enhance process understanding with specialty chemical manufacturer ISP.

Katherine earned her Ph.D. in Polymer Science and Engineering from the University of Massachusetts in Amherst and she has a Masters in Technology Management from Stevens Institute of Technology, in addition to her B.S. from Case Western University. She has written articles and given numerous presentations on the use of near-infrared spectroscopy (NIR) and on PAT. She is the editor of the book *Process Analytical Technology: Spectroscopic Tools and Implementation Strategies for the Chemical and Pharmaceutical Industries*, now in its second edition. She is the recipient of the 2007 Craver Award in Applied Vibrational Spectroscopy for her efforts in, and promotion of, near-infrared (NIR) spectroscopy and chemometrics. She has been a member of the Society of Applied Spectroscopy (SAS) since 1993 and is the current national secretary of the organization. She has served on the publication and nominating committees and serves on the Editorial Board of the journal *Applied Spectroscopy*. She is the past president of the Council for Near Infrared Spectroscopy (CNIRS), a member of the Chairman's Advisory Committee for the International Council for Near-Infrared Spectroscopy (ICNIRS), and a member of the ASTM committees E13 (Molecular Spectroscopy and Separation Science) and E55 (Manufacture of Pharmaceutical Products).



Michelle Meighan received her Ph.D. in Chemistry from Arizona State University under the tutelage of Dr. Mark Hayes. Michelle has a diverse research background, beginning in her undergraduate studies performing environmental analysis using atomic absorption, continuing with Raman studies of hydrothermal vents with Dr. Karl Booksh, and extending her dissertation research in novel electrophoretic methods. She was also fortunate to conduct research at the University of Tasmania through the NSF's East Asia and Pacific Summer Fellowship. Michelle is currently working at Adaptive Curriculum, a leader in the field of online education in math and science.

Michelle is very active in the scientific community. With SAS, she was the Student Representative from 2008 to 2009, helped start the Arizona State University Student Chapter, and served on the Membership Committee in 2009. Michelle is also very active with the American Chemical Society, acting as Chair of the Central Arizona Local Section Younger Chemists Committee, as well as currently serving on the Graduate Education Advisory Board.

The Coblentz Society call for Nominations

- Coblentz Award
- Williams-Wright Award
- The ABB Sponsored Bomem-Michelson Award
- Ellis R. Lippincott Award
- Cobletz and Fateley Student Awards



The Coblentz Award is presented annually to an outstanding young molecular spectroscopist under the age of 40. The candidate must be under the age of 40 on January 1 of the year of the award. Files of candidates will be kept active until the date of age eligibility is exceeded. Annual updates of files of nominated candidates are encouraged. Nominations should include a detailed description of the nominee's accomplishments, a curriculum vitae, and as many supporting letters as possible.

The Williams-Wright Award is presented annually to an industrial spectroscopist who has made significant contributions to vibrational spectroscopy while working in industry. Government labs are not considered industry in this definition. No restrictions are placed on the selection of the Awardee because of age, sex, or nationality, but the Awardee must still be working at the time the award is presented.

The ABB Sponsored Bomem-Michelson Award is dedicated to the memory of Professor A. A. Michelson, developer of the Michelson interferometer. ABB sponsors the award to honor scientists who have advanced the technique(s) of vibrational, molecular, Raman, or electronic spectroscopy. The recipient must be actively working and must be at least 37 years of age.

The Lippincott Award is to honor Dr. Ellis R. Lippincott's memory by the recognition of significant contributions and notable achievements in the field of vibrational spectroscopy. The medal is sponsored jointly by the Coblenz Society, the Optical Society of America, and the Society for Applied Spectroscopy. The Awardee will present an address related to the contributions for which he or she is being honored.

Coblenz and Fateley Student Awards The Coblenz Society has for many years encouraged young scientists by seeking nominations of outstanding students for the Coblenz Student Awards. Awardees receive a copy of the Society's Desk Book, a certificate, and a year's membership in the Society. One student will be chosen to receive the Fateley Student Award, which includes a presentation in the student awards session and a \$1000 prize. The names of all awardees and the names of their faculty advisors will appear in the Society's Newsletter. All awardees who attend SCIX (FACSS) in 2012 will receive their award in person at a presentation during the poster session on Sunday evening by the then president of the Coblenz Society.

For additional instructions/details on the submission of nominations packages please go to:
<http://www.coblenz.org/awards/call-for-award-nominations>

December Historical Events in Spectroscopy by Leopold May, Catholic University

December 3, 1886



One hundred and twenty-five years ago, Karl Manne Georg Siegbahn, a researcher on X-ray spectroscopy, was born on this date. In 1924, he received the Nobel Prize in Physics for his discoveries and research in the field of X-ray spectroscopy.

December 18, 1856



Joseph J. Thomson, who discovered the electron in 1897, was born on this day. He received the Nobel Prize in Physics in 1906 in recognition of the great merits of his theoretical and experimental investigations on the conduction of electricity by gases.

December 18, 1908

E. Bright Wilson, Jr., Honorary Member of SAS, was born on this day. He was a researcher in infrared spectroscopy.

December 24, 1834 The inventor of the standard lamp of 10 candle-power using pentane, Augustus G. Vernon-Harcourt, was born on this day.

December 25, 1642



Sir Isaac Newton, who discovered the nature of light and first observed the visible spectrum with a glass prism, was born on this date. He also studied alchemy.

December 25, 1904



Gerhard Herzberg, who was born on this day, did research on the electronic structure and geometry of molecules and free radicals using spectroscopy. He received the Nobel Prize in Chemistry in 1971 for his contributions to the knowledge of electronic structure and geometry of molecules, particularly free radicals. He was an Honorary Member of SAS.

December 31, 1931



James Winefordner, Honorary Member of SAS, was born on this day. He studied the measurements of the emission characteristics of various laser plasmas and the application of physical principles to obtain fundamental information, including plasma temperatures, species number densities, and line broadening.

More historical events are available at Dr. May's website, <http://faculty.cua.edu/may/SpectHist.htm>

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