Society for Analytical Chemists of Pittsburgh

April Meeting

Former Chairs Night

Wednesday, April 4, 2018

DUQUESNE UNIVERSITY
Pittsburgh

5:30 PM	Social Hour	Power Center Ballroom
6:30 PM	Dinner	Power Center Ballroom
7:30 PM	Student Affiliate Meeting	Power Center Ballroom
7:40 PM	Business Meeting	Power Center Ballroom
8:00 PM	Technical Meeting	Power Center Ballroom

Deadline for Dinner Reservations: Wednesday, March 28, 2018
ONLINE RESERVATION FORM

TECHNICAL PROGRAM – 8:00 PM

Kevin A. Schug, Ph.D.
Professor & Shimadzu Distinguished Professor of Analytical Chemistry
Department of Chemistry & Biochemistry
University of Texas at Arlington

"Development and Application of a Vacuum Ultraviolet Detector for Gas Chromatography"

The pantheon of gas chromatography (GC) detectors has remained essentially unchanged for many years, until recently. The vacuum ultraviolet spectroscopic absorption detector for GC (GC-VUV) was introduced in 2014, and it has been demonstrated as a universal qualitative and quantitative detector with applications in many fields including food, petrochemical, flavors and fragrances, and the environment. It is highly complementary to GC-MS in that the electronic absorption spectra are more sensitive to changes in isomeric structures than electron ionization mass spectra. Simultaneous capture of absorption events between 120 and 240 nm ensures that all chemical species absorb and have unique absorption spectra. Collection at rates up to 100 Hz means that fast separations can be accommodated; in fact, chromatographic resolution can be sacrificed due to enhanced spectroscopic resolution. Different classes of compounds have similar spectral features, and this has led to unique algorithms for compound classification in applications, such as finished gasoline characterization. The gas phase absorption cross-section for a molecule is a physical property, and this leads to interesting possibilities for pseudo-absolute quantitation. In this talk, a brief history and overview of the fundamentals of GC-VUV will be given, followed by an overview of applications and interesting capabilities enabled by this technique.

BIOGRAPHY: Kevin A. Schug is Professor and the Shimadzu Distinguished Professor of Analytical Chemistry in the Department of Chemistry and Biochemistry at The University of Texas at Arlington (UTA). He received his B.S. degree in Chemistry in 1998 from the College of William and Mary, and his Ph.D. degree in Chemistry from Virginia Tech in 2002 under the direction of Prof. Harold M. McNair. From 2003-2005, he performed post-doctoral research at the University of Vienna in Austria under the direction of Wolfgang Lindner. Since joining UTA in 2005, his research has been focused on the theory and application of separation science and mass spectrometry for solving a variety of analytical and physical chemistry problems, in the fields of environmental, pharmaceutical, biological, and energy research. He has 150 peer-reviewed publications and over 400 presentations, posters, and invited talks to his group's credit. He has been the primary mentor and research advisor to more than 20 graduate and 50 undergraduate students. Dr. Schug has received several research awards, including the 2009 Emerging Leader Award in Chromatography by LCGC Magazine and the 2013 American Chemical Society Division of Analytical Chemistry Young Investigator in Separation Science Award. For his teaching, he received the 2014 University of Texas System Regents' Outstanding Teaching Award and was named in 2016, as a Fellow of the University Of Texas System Academy Of Distinguished Teachers.

DINNER RESERVATIONS: Please complete the **Online Dinner Reservation Form** NO LATER THAN Wednesday, March 28, 2018. The form is also located under the Meeting Notice on website www.sacp.org. Should you not be able to access the form, please call 412-825-3220, ext 212 Amy Bovino the SACP Administrative Assistant to make your dinner reservation. The entrée choices for April are Rack of Lamb or Braised Leak & Gruyere Quiche w/ Red Pepper Coulis. Please let us know if you have any dietary restrictions. Dinner will cost $10 ($5 for undergraduate students). Checks can be made payable to the SACP.

PARKING: Duquesne University Parking Garage entrance is on Forbes Avenue. Upon entering the garage, you will need to get a parking ticket and drive to upper floors. Bring your parking ticket to the dinner or meeting for a validation sticker. Should any difficulties arise, please contact Duquesne University.