



# Society for Analytical Chemists OF PITTSBURGH



## FEBRUARY MEETING

***Monday, February 2, 2009***  
**8:00 p.m.**

Duquesne University  
Laura Falk Hall

Dinner: City View Café (6<sup>th</sup> Floor)



**LLOYD M. SMITH, PH.D.**

PROFESSOR OF CHEMISTRY AND DIRECTOR OF THE GENOME CENTER  
UNIVERSITY OF WISCONSIN-MADISON

**"New Technologies for Biomolecular Analysis:  
Surfaces Meet Mass Spectrometers"**

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5:30 PM	Social Hour.....	Student Union – City View Café (6 <sup>th</sup> Floor)
6:30 PM	Dinner.....	Student Union – City View Café (6 <sup>th</sup> Floor)
7:30 PM	Student Affiliate Meeting.....	Mellon Hall – Room 410
7:40 PM	Business Meeting.....	Mellon Science Building – Laura Falk Hall
8:00 PM	Technical Meeting.....	Mellon Science Building – Laura Falk Hall

### **Abstract:**

Two of the most powerful platforms in modern bioanalytical chemistry are surfaces (as in DNA, protein, carbohydrate, cell, and small molecule arrays) and mass spectrometry. Although both platforms routinely provide invaluable molecular information not accessible by any other means, both are also characterized by significant limitations. In this presentation recent work from our laboratory will be presented, in which we seek to address these issues, extend the performance and versatility of the platforms, and to develop the synergies between them. Topics to be addressed include: the development of carbon-based substrates and attachment chemistries for greatly increased surface stability, permitting novel applications such as combinatorial chemistry with label-free detection on surfaces; studies using acoustically levitated microdroplets as MS ion sources; and new approaches to address the chronic problem of ionization suppression in mass spectrometry.

### **Biography:**

Lloyd M. Smith is Professor of Chemistry and Director of the Genome Center at the University of Wisconsin-Madison, where he has been since 1988. He received an A.B. degree in Biochemistry from the University of California at Berkeley (1977) and a Ph.D. in Biophysics from Stanford University (1981). In 1982 he moved to the California Institute of Technology, where he developed the first fluorescence-based automated DNA sequencing instrument. He has been named one of Science Digest's Top 100 Innovators and has received the Presidential Young Investigator Award, Eli Lilly Analytical Chemistry Award, Association of Biomolecular Resource Facilities Award for the development of automated DNA sequencing, American Chemical Society Award in Chemical Instrumentation, and is the John D. MacArthur Professor of Chemistry. He has served in the past on the NIH National Human Genome Research Institute Advisory Council and the NIH Human Genome study section, and currently serves on the NIH Instrumentation and Systems Development study section. He is an author of 193 scientific papers and inventor on 23 issued U.S. patents. He is a cofounder of three biotechnology companies, Third Wave Technologies, GenTel BioSciences, and Apartia Pharmaceuticals. Third Wave Technologies was recently acquired by Hologic for \$580M. He served for many years on the Board of Directors of two public companies (Visible Genetics and Third Wave Technologies) and presently serves on the Board of Directors of three private companies, GWC Technologies, GenTel BioSciences, and Apartia Pharmaceuticals. He also serves as chair of the Scientific Advisory Board for GenTel BioSciences. His primary area of research is in the development of new technologies for the analysis and manipulation of biomolecules.

### **DINNER RESERVATIONS:**

Please email Larry Senor, Arrangements Co-Chair at [senor@pittcon.org](mailto:senor@pittcon.org), by Thursday, January 29, 2009 to make dinner reservations. Should you not have email, please call Larry at 724-327-4428. The entrée for February is Chinese Grilled Asian Flank Steak. Dinner will cost \$8 (\$4 for students) and checks can be made out to the SACP. If you have any dietary restrictions, let Larry know when you leave a message.

### **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. Contact Dr. Mitch Johnson at Duquesne University if any difficulties arise.