



Spectroscopy Society of Pittsburgh November Meeting

Duquesne University – Mellon Hall of Science (Laura Falk Hall)

Wednesday – November 19, 2008

Technology Forum Speaker's Presentation **5:30PM**

Social Hour **6:00PM**

Dinner in the City View Café (6th Floor) **6:30PM**

Business Meeting **8:00PM**

Technical Program Speaker's Presentation **8:15PM**

Deadline for Dinner Reservations **11/14/08**

Carolyn Benga crbssp@yahoo.com or (412) 487-0915

TECHNOLOGY FORUM - 5:30 PM

Dr. Dan Wagner

“Natural Medicines from Three Continents“

Dr. Wagner will take us on a botanical and pictorial adventure into the rainforests of Central & South America and Africa. He will discuss his research into drugs that are derived from rainforest plants and their relevance to modern medicine.

Bio

Dr. Dan Wagner is a clinical and natural pharmacist (ethnopharmacist) from the North Hills. He opened NUTRI-FARMACY, Western PA's only all natural pharmacy, in 1997. He consults with patients who take both prescriptions and vitamins, herbs & other nutrients, and helps them integrate the benefits of both for better health. He has traveled extensively to the rainforests of South and Central America and Africa studying medicinal plants and has worked with some of the best known herbalists and ethnobotanists. He strives to incorporate this knowledge into his integrative medicine practice



TECHNICAL PROGRAM - 8:15PM

Dr. Gary L. Glish



“Photons and Electrons as Alternatives to Collisions for Obtaining Chemical Structure Information Using MS/MS”

Tandem mass spectrometry (MS/MS) is a potent method for obtaining structural information of analytes. The ion activation step in the MS/MS experiment almost always involves a collision between the parent ion and a target gas, so-called collision induced dissociation (CID). Ion traps can be particularly efficient at CID, albeit with some limitations. However, because of the ion manipulation capabilities of ion traps they also offer opportunities, often unique, for other activation methods using photons or/and electrons. This presentation will focus on the use of infrared multiphoton dissociation (IRMPD) and electron capture dissociation (ECD) for ion activation in quadrupole ion traps.

IRMPD has some advantages over CID in a quadrupole ion trap, and these advantages can be enhanced by the ion manipulation capabilities of the ion trap. Variations of the IRMPD experiment will be presented.

ECD is typically performed in FT-ICR instruments, but we have a unique ECD cell based on a linear ion trap that is part of a hybrid linear ion trap/time-of-flight (LIT/TOF) instrument. This instrument has the capability of performing CID and ECD on alternate scans on the LC time scale. Other experiments, which take advantage of the ion manipulation capabilities of the ion trap, involving ECD combined with other activation techniques, e.g. ECD+CID and ECD/IRMPD, will also be presented.

Bio

Gary L. Glish received a B.A. from Wabash College in 1976 with majors in Chemistry and Economics. Deciding that he wanted to be able to do experiments to test hypotheses, he chose Chemistry over Economics for graduate school and obtained a Ph.D. from Purdue University (Advisor: R. Graham Cooks), in 1980. After receiving his

Ph.D. Gary was a research scientist and group leader at Oak Ridge National Laboratory until 1992. In 1992 he took his current position on the faculty in the Department of Chemistry at the University of North Carolina where he is currently Professor of Chemistry.

Professor Glish has an impressive record of scholarly activities. The more important of which are 4 U. S. patents, published over 100 papers in refereed journals, co-author of a book and several book chapters, conference/symposium organizer and reviewer for many publications. He is currently President of the American Society for Mass Spectrometry.

Professor Glish is the director of a large research group of students at all levels and post-doctoral researchers at the University of North Carolina. Gary's research interests are in the areas of mass spectrometry instrumentation, ion activation, ion chemistry, and development of methods for characterizing compounds of biological and environmental interest. In the area of instrumentation his focus has been on hybrid mass spectrometers and quadrupole ion traps.

Gary has conceived and built several hybrid mass spectrometers including the first tandem quadrupole/time-of-flight mass spectrometer in 1984. He began his involvement with quadrupole ion traps in 1984 and more than half of his 100+ publications are related to quadrupole ion trap development and applications. His group was the first to couple ESI with a quadrupole ion trap. Past environmental research included in developing new methods for analysis of drinking water disinfection by products and for characterization of aerosol particles.

Dinner Reservations:

Please email Carolyn Benga at crbssp@yahoo.com or call (412) 487-0915 to make dinner reservations NO LATER THAN FRIDAY, November 14, 2008. This month's entrée will be Crusted Salmon Fillet, Rice Pilaf and Sugar Snap Peas with Garlic Butter. Caprese Salad with Sliced Tomatoes, Fresh Mozzarella and a Balsamic Vinaigrette salad will start the meal and Ice Cream Filled Profiteroles with Chocolate Sauce will be served for dessert. Dinner will cost \$8 and checks can be made out to the SSP. If you have dietary restrictions, please let Carolyn know when you RSVP.

Parking Instructions:

The Duquesne University Parking Garage is located on Forbes Avenue. Upon entering the garage, receive parking ticket and drive to upper floors. Pick up a parking chit at the dinner or meeting. If any difficulties arise, contact Dr. Mitch Johnson at Duquesne University.