



# Spectroscopy Society of Pittsburgh April Meeting

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

**Wednesday – April 21, 2010**

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 **4/16/10**

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## **TECHNOLOGY FORUM - 5:30 PM**

Gregory Boulos, Slow Food USA- Mid-Atlantic Region

### **"Community Based Food Systems"**

When considering our food, we typically don't think about much at all. Grocery store aisles beckon us with a myriad of colorful cardboard opportunities - but in reality the further our diet gets from the field, the more unhealthy our bodies, our land and our environment become. This talk is about rebuilding the ecology of our community food systems. Taking the perspective that by producing our own food within our communities, we increase our intake of fresh healthy produce, experience more of the great outdoors and reconnect with our heritage. I'm hoping to make the point that it also builds stronger community 'tribal' bonds and helps us as a society to build more resilient connections within our own neighborhoods.



While I am not a soil or plant scientist, I would like to take the opportunity to talk with the audience about the potential for Spectroscopic research in an agricultural ecosystem to enhance regenerative production practices and nutrient density of the food crops. Thank you again for the opportunity to share my story.

### **Bio**

Greg Boulos is involved in many sustainable initiatives from food to fuel to energy efficiency. Formerly the Western Regional Director for PASA, Greg is currently Mid Atlantic Regional Governor for Slow Food USA, CEO of Homesteaders Consulting LLC, co-owner of Blackberry Meadows Farm, co-founder of Transition Pittsburgh, Pittsburgh's Coalition for Food Abundance and Yinzers. His network includes professionals in regenerative design, agriculture, green energy, distributed manufacturing, ecopreneuring and community building. With a Masters in Sustainable Systems and certificate from Leadership Pittsburgh, Greg advances sustainability as a Board member of the Rotary Club of Pittsburgh, and the Greater Pittsburgh Community Food Bank.

## **TECHNICAL PROGRAM - 8:15PM**

Graham R. Fleming, Vice Chancellor for Research University of California Berkeley

### **"Energy, Spectroscopy and Photosynthesis"**

The United States' current energy consumption is about 3.3 TW (100 EJ/year) while the total solar power incident on the U.S. is 1500 TW (48,000 EJ/year). Clearly, conversion of sunlight to other energy sources can provide for much of the nation's energy needs provided that the energy of sunlight can be converted into a storable form. Of course, this is what plants and photosynthetic algae do. Synthetic solar power converters, such as photovoltaic devices, are also in use, although long-term storage of electricity remains an unsolved problem. In this talk, I aim to highlight ways in which spectroscopy can be used to provide the knowledge base to find ways to increase the efficiency of harnessing solar power of both natural and synthetic systems.

## Bio

Graham Fleming currently serves as UC Berkeley's Vice Chancellor for Research, a position which he assumed in April 2009. Fleming served as Berkeley Lab's Deputy Director from 2005 through 2007, and has been at the forefront of a major revolution in the biophysical sciences. Through joint appointments as Melvin Calvin Distinguished Professor of Chemistry at UC Berkeley, and Founding Director of both the Berkeley Lab's Physical Biosciences Division and UC Berkeley's California Institute for Quantitative Biosciences (QB3), he has re-shaped the intersection of physical and biological sciences, while maintaining his own ground-breaking investigations into ultrafast chemical and biological processes, in particular, the primary steps of photosynthesis. Throughout his administrative career, Fleming has remained a highly active and successful scientific researcher. He has authored or co-authored more than 400 publications, and is widely considered to be one of the world's foremost authorities on ultrafast processes. In addition to his many other activities, Fleming has given numerous talks around the world on the inter-relation and inter-complexity of energy, climate and photosynthesis.



## Dinner Reservations:

Please email Carolyn Benga at [crbssp@yahoo.com](mailto:crbssp@yahoo.com) or call (412) 487-0915 to make dinner reservations NO LATER THAN FRIDAY, April 16, 2010. This month's dinner is a "Welcome to Spring." The entrée will be Sautéed Medallions of Pork with Cider Bourbon Sauce served with Dauphinoise Potatoes and Fresh Seasonal Vegetables. Baby spinach Salad with Raspberry Vinaigrette will begin the meal and Black forest Cake 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.