



Spectroscopy Society of Pittsburgh

February Meeting

Wednesday – February 18, 2015

Duquesne University



5:30 PM	Technology Forum Speaker's Presentation - Laura Falk Hall located in Mellon Hall
5:30 to 6:30PM	Social Hour - City View Café (6th Floor of Union)
6:30PM	Dinner - City View Café (6th Floor of Union)
8:00PM	Business Meeting– Laura Falk Hall located in Mellon Hall
8:15PM	Technical Program Speaker's Presentation– Laura Falk Hall located in Mellon Hall

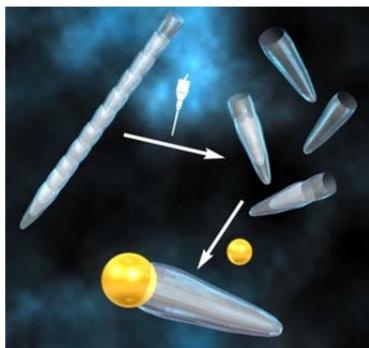
Deadline for Dinner Reservations 2/12/15 at NOON

[On-line Reservations](#)

TECHNICAL PROGRAM - 8:15 PM

Alexander Star, University of Pittsburgh

“Nano-gold Decorated Carbon Nanostructures and Their Applications”



Single-walled carbon nanotubes and more recently graphene have attracted considerable interest for the development of chemical sensors. These carbon nanostructures are just one atom thick, and their electronic properties are extremely sensitive to adsorption of chemical species on their surface. When decorated with metal nanoparticles, these nanostructures exhibit a large and selective electronic response toward many analytes with potential applications in industrial sensors and medical diagnostics.

Carbon nanostructures can also be used as nano-carriers for applications in medical therapeutics. To this end, we developed cup-shaped carbon nanostructures, which have an elliptical hollow space that can be corked by gold nanoparticles at the opening. To illustrate the potential of corked nanocups as drug delivery systems, loading with common fluorescent dyes, as well as chemotherapeutic drugs, was performed. By using Raman spectroscopy, we were able to demonstrate the loading and release of the cargo in biochemical model systems and tumor-associated cells.

Alexander Star is an Associate Professor of Chemistry and Bioengineering at the University of Pittsburgh. His current research is focused on synthesis and properties of carbon nanomaterials and their applications in sensors, energy conversion devices, and nanomedicine. Originally from Kazakhstan, Professor Star received his B.Sc. and Ph.D. degrees in chemistry from Tel Aviv University in 1994 and 2000, respectively. He then spent two years as a postdoctoral associate at California NanoSystems Institute at the University of California, Los Angeles, where he investigated synthetic schemes to functionalize carbon nanotubes in a noncovalent fashion to improve their processability and biocompatibility. Between 2002 and 2005 he served as Senior Scientist and Manager of Applications Development at Nanomix, Inc. – a nanotechnology startup company – where he worked on development and commercialization of carbon nanotube-based sensors. He joined the Chemistry faculty at the University of Pittsburgh in 2005. During his academic career, Professor Star co-authored 95 peer-reviewed publications, four book chapters, and was listed as a



co-inventor on nine issued patents and over 20 patent applications. His research was recognized by Intel Award, three University of Pittsburgh Innovator Awards, Chancellor's Distinguished Research Award, NSF CAREER Award, and NIEHS Outstanding New Environmental Scientist (ONES) Award.

TECHNOLOGY FORUM - 5:30 PM

Peter Greenlaw, Author

"The New Health Conversation"



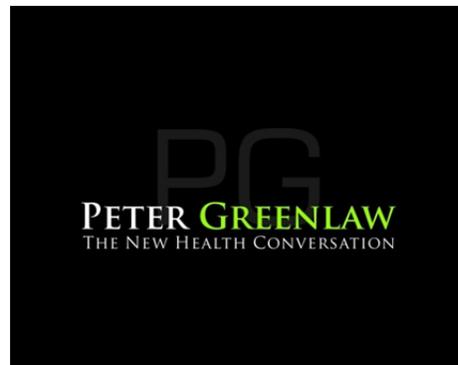
Peter Greenlaw is the world's foremost health science investigator on toxins and aging. He's the author of "Why Diets are Failing Us. More than ten years ago. Peter learned that he had cardiovascular problems, high blood pressure, and was at very high risk for a heart attack. His doctor's scary advice was to lose 40 pounds, go on a vigorous exercise and diet program, and use Lipitor. If not, he would not see his kids graduate from high school. At the time he was only 57 years old. What would you do? I think this is a time when most men would look for a way to extend their life and be healthier.

Peter was introduced to a nutritional system that changed his life called **Isagenix**. Using this system, he lost 20 pounds. To his astonishment he went from a 42-inch waist to a 34-inch waist—a size maintained for the past nine years. In all, he lost more than 30 pounds and has kept them off ever since. More importantly, he continues to

be free of the need for prescription drugs—a major triumph.

Peter Greenlaw has been called "the researcher of the researchers." Spurred by his own experiences, he has devoted 10 years of life to the study of environmental toxins and their effects on disease, obesity, and health. He has conducted more than 1,000 lectures on this subject all over the world. He has been interviewed numerous times on radio and television.

Peter's goal is to change the world by educating all of us on the problems posed by environmental toxicity and what you can do about it. He is also involved with **Isagenix**, one of the leading companies in cellular cleansing.



Peter will also do a book signing of his newest book "The TDOS Syndrome".

Dinner Reservations:

Please register on-line at <http://www.ssp-pgh.org/monthly-meeting-rsvp/> to make dinner reservations NO LATER THAN Thursday, February 12, 2015 at noon. The entrée for February will be Mushroom Ravioli or a vegetarian option. Dinner will cost \$10 (\$5 for students) and checks can be made out to the SSP. If you have any dietary restrictions, please indicate them 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.