



American Chemical Society Susquehanna Valley Section

MARCH 2014 NEWSLETTER

The four hundred and fifteenth meeting of the American Chemical Society Susquehanna Valley Section will be held at 7:30 PM on Wednesday, March 12th in Room 128A/B of the Natural Sciences Center ('New Science Building' on the campus map) on the campus of Susquehanna University in Selinsgrove, PA. The speaker will be Dr. Mathew Maye from Syracuse University.

“Designing Nanomaterial Architectures for Applications in Self-Assembly, Drug-Delivery and Energy Transfer ”

Dr. Mathew Maye
Associate Professor of Chemistry
Syracuse University

In this presentation we describe our approach towards designing nanomaterials from the bottom-up to have sizes, shapes, microstructures, and surface chemistries that collectively can alter a number of properties and increase potential applications. Using inorganic and materials chemistry methods, we synthesize alloy nanoparticles and semiconductive quantum dots with sizes that range from 5-30 nm. By further processing the materials, they can be transformed into asymmetric structures, like rods, or particles that possess large voids, like hollow spheres. Using organic and biochemistry approaches, we can alter the surface chemistry of these particles to possess an assortment of functionalities, like smart polymers, DNA, and peptides. By combining the function of the particle, with the recognition and chemical reactivity properties of the surface, these nanomaterials can then be employed in a number of applications. We will discuss their use in smart drug-delivery, as well as in bioluminescence based energy transfer and lighting.

Dr. Mathew Maye is an Associate Professor of Chemistry at Syracuse University. His lab focuses on using inorganic and materials chemistry to craft nanostructures with tailorable architectures and compositions, and to use novel self-assembly approaches to build artificial solids. He received his B.S. and PhD from SUNY-Binghamton, where he focused on analytical and materials chemistry with Prof. Chuan-Jian Zhong. As a PhD student he was supported by a Department of Defense graduate fellowship. After graduation, he worked as a fellow at Brookhaven National Laboratory with Dr. Oleg Gang, where he discovered novel ways to assemble nanoparticles into crystals.

DINNER: The lecture will be preceded by dinner at BJ's Steak and Rib House located at 17 North Market Street, Selinsgrove, Pennsylvania. RSVP to Renuka Manchanayakage at manchanayakage@susqu.edu or 570-372-4608 by 4:00 P.M. on Monday, March 10, 2014. Dinner will be ordered from the menu. Directions to BJ's Steak and Rib House can be found at www.bjsribs.com/locations.cfm.

DIRECTIONS TO SUSQUEHANNA UNIVERSITY:

From Route I-80 West:

Take the Danville exit, 224. Take route 54 east to Route 11 south towards Selinsgrove. Continue left on Route 11/15 south (continue as directed below from Route 11/15).

From Route I-80 East:

Take the Lewisburg exit, 210A. Take Route 15 south towards Selinsgrove. Turn right onto Route 11/15 south (continue as directed below from Route 11/15).

From Route 11/15:

Route 11/15 south becomes Market Street. Turn right onto W. Pine Street. West Pine Street becomes University Avenue. Follow the campus map to visitor parking.

A campus map can be found at: [Susquehanna University Campus Map](#). (the Natural Sciences Center/New Science Building (# 69) is designated with the arrow on the map below):



Mark Your Calendars for the April 2014 Meeting:

The April 2014 meeting of the American Chemical Society Susquehanna Valley Section will be held from 10:45 AM to 12:00 PM on **Saturday**, April 12, 2014 at the Pond Building at the Joseph Priestley House located at 472 Priestley Avenue, Northumberland, PA 17857. Speakers will include Mary Ellen Bowden of the Chemical Heritage Foundation and Joseph Priestley himself (portrayed by Ron Blatchley). There will also be a video presentation highlighting Priestley's discovery of carbon monoxide (CO). After lunch there will be tours of the house from 1:00 – 4:00PM. To learn more about Joseph Priestley and the Priestley house go to: www.josephpriestleyhouse.org/

2014 Conference on Undergraduate Research and Education in Nuclear Magnetic Resonance:

As a continuation of our semi-annual NMR conference event in eastern PA, the Department of Chemistry at Wilkes University encourages students and faculty in Pennsylvania and surrounding regions to join in a one-day symposium on 28 May 2014. As with the prior conferences, this event will focus on the increasing efforts of educators at principally undergraduate institutions (PUIs) to engage in research and education that exploits modern nuclear magnetic resonance spectroscopy. This year we are also having a concurrent session on Mass Spectrometry in an effort to promote the use of this technique in curricular and research applications. On-line registrations will be accepted up to 16 May 2014 and on-site registration will be available the morning of the conference. However to assist our planning efforts, we request a registration deadline of 6 May 2014. There are no registration fees and no required memberships. For more information, go to www.chem.wilkes.edu/~nmr/NMR_2014.html.

Section Web Page: <http://departments.kings.edu/SusquehannaValleyACS>
