Next Meeting:

Monday, September 18, 2017
Lehigh University

Can Coherence Enhance Function in Chemical and Biophysical Systems?

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Meeting Details:

Location: Lehigh University, University Center, Room 303, 29 Trembley Drive, Bethlehem, PA 18015

Times: 5:30 PM Social Hour
       6:00 PM Dinner
       7:00 PM Talk
       8:00 PM Business Meeting

Cost: $25.00 (includes social hour); $15 for students and retirees


Directions and Parking Information: http://www1.lehigh.edu/about/maps/drivingdirections/university-center

RSVP: Jennifer Cummings at jlc415@lehigh.edu by Sept 8, 2016. Please note LVACS in the subject line.
**Speaker:** Gregory D. Scholes, Ph.D., Princeton University -
Department of Chemistry, Princeton NJ 08544, gscholes@princeton.edu

Greg Scholes is the William S. Tod Professor of Chemistry at Princeton University. Originally from Melbourne, Australia, he later undertook postdoctoral training at Imperial College London and University of California Berkeley. He started his independent career at the University of Toronto (2000−2014) where he was the D.J. LeRoy Distinguished Professor. Dr. Scholes is the Deputy Editor for the Journal of Physical Chemistry Letters, Fellow of the Royal Society of Canada, a Senior Fellow in the Canadian Institute for Advanced Research program Biology, Energy, Technology, and a Professorial Fellow at the University of Melbourne. Dr. Scholes has had a long-standing interest in mechanisms of electronic energy transfer and the photophysics of molecular excitons. Current research concerns working out design principles for directing and regulating light-initiated energy flow in man-made and natural systems, like proteins involved in photosynthesis.

**Title:** Can Coherence Enhance Function in Chemical and Biophysical Systems?

**Abstract:** Coherence phenomena arise from interference, or the addition, of wave-like amplitudes in phase. While coherence has been shown to yield transformative new ways for improving function, advances have been limited to pristine matter, as quantum coherence is considered fragile. Recent evidence of coherence in chemical and biological systems, however, concludes that the phenomena is robust and can survive in the face of disorder and noise. I will present the state of recent discoveries. For example, two-dimensional electronic spectroscopy data allow quantitative analysis of vibronic coherence in the photosynthetic light harvesting complexes [1]. I will show how vibronic coherence plays a special role in downhill energy transfer, increasing energy transfer rates remarkably—even when electronic coupling is weak [2]. I will discuss how coherence can probe the function of catalysts and how it might be found in electron transfer reactions. I will conclude with a forecast for the role of function as a design element in realizing coherence [3].

LVACS News:

Strategic Plan Update:
The Executive Committee of the Lehigh Valley ACS met recently to assess progress on our strategic plan since our last strategic plan was launched in May 2012. We discussed our mission and vision against today’s environment and the new National ACS Strategic Plan currently under review. Follow-up meetings are being scheduled to develop a new Lehigh Valley ACS strategic plan for the next 5 years.

Comments from section members are welcome. Watch our website and social media for further communication on this topic during the fall.

Summer Picnic

The Lehigh Valley ACS held a *Family and Friends Picnic* on Sunday July 16 at Nockamixon State Park in Quakertown, PA. It was a sunny day and was filled with lots of food and drinks, chemistry trivia, music and games. 21 persons participated in this event and everyone had a fun day.
CMA Event Success:
The Lehigh Valley American Chemical Society Committee on Minority Affairs (LVACS CMA) held a successful fun-filled Coaster Art Event on June 10, 2017 at Forks Community Center, Easton PA. Jim Pruznick, art instructor facilitated the event. 17 attendees used their creativity and artistic ability to design the coasters, which they could then take home and keep as souvenirs.

Save the Date - Fall LVACS Meetings

Thursday, October 12th
Mineral technologies

Tuesday November 9th
East Stroudsburg University

Wednesday, January 24 2018
LVACS a virtual monthly meeting to be hosted at/by Penn State Berks
LVACS Members and Section Recognized:

ChemLuminary Awarded to Lehigh Valley Section!

The Lehigh Valley Section won a ChemLuminary Award at the 254th ACS National Meeting in Washington, D.C. The Section won the award for the most Outstanding Leadership Development Program: Developing Communication Strategies. The Section was also selected as a finalist for the following two awards: Best Overall Local Section Minority Affairs and Outstanding Sustainability Activities. The ChemLuminary Awards recognize local sections, regional meetings, division and International Chapters for their extraordinary work in promoting chemistry and the chemical sciences.

Lorena Tribe Honored as ACS Fellow!

Lorena Tribe, Ph.D., Associate Professor of Chemistry at Penn State Berks and our section’s Councilor was honored as an ACS Fellow at the 254th ACS National Meeting in Washington, D.C. The ACS Fellows Program created by the ACS Board of Directors in December 2008 recognizes members for outstanding achievements in and contributions to science, the profession, and the Society.
# 2017 LVACS Officers

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<tr>
<th>Position</th>
<th>Name</th>
<th>Organization</th>
<th>Address</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair</td>
<td>Celia Williams</td>
<td>Avantor Performance Materials, Inc.</td>
<td>1904 J.T. Baker Way, Phillipsburg, NJ 08865</td>
<td><a href="mailto:lvacscma@gmail.com">lvacscma@gmail.com</a></td>
</tr>
<tr>
<td>Treasurer</td>
<td>Lindsey Welch</td>
<td>Dept. of Chemical and Physical Sciences</td>
<td>Cedar Crest College Allentown, PA 18104</td>
<td><a href="mailto:lawelch@cedarcrest.edu">lawelch@cedarcrest.edu</a></td>
</tr>
<tr>
<td>Secretary</td>
<td>Seiji Inaoka</td>
<td></td>
<td></td>
<td><a href="mailto:sinaoka.chem98@gtalumni.org">sinaoka.chem98@gtalumni.org</a></td>
</tr>
<tr>
<td>Immediate Past Chair</td>
<td>Kelley Caflin</td>
<td>Picatinny Arsenal</td>
<td></td>
<td><a href="mailto:caflinacs@yahoo.com">caflinacs@yahoo.com</a></td>
</tr>
<tr>
<td>Chair Elect</td>
<td>John Freeman</td>
<td>East Stroudsburg University</td>
<td>East Stroudsburg, PA 18301</td>
<td><a href="mailto:jfreeman@esu.edu">jfreeman@esu.edu</a></td>
</tr>
<tr>
<td>Councilor</td>
<td>Jeanne Berk</td>
<td>Dept. of Chemical and Physical Sciences</td>
<td>Cedar Crest College Allentown, PA 18104</td>
<td><a href="mailto:jrberk@cedarcrest.edu">jrberk@cedarcrest.edu</a></td>
</tr>
<tr>
<td>Councilor</td>
<td>Lorena Tribe</td>
<td>Penn State Berks</td>
<td>Tupelhocken Rd, PO Box 7009, Reading PA 19610</td>
<td><a href="mailto:lut1@psu.edu">lut1@psu.edu</a></td>
</tr>
<tr>
<td>Councilor</td>
<td>Lorena Tribe</td>
<td>218 Luerssen Bldg</td>
<td></td>
<td><a href="mailto:lut1@psu.edu">lut1@psu.edu</a></td>
</tr>
<tr>
<td>Octagon Editor &amp; Webmaster</td>
<td>T. Michelle Jones-Wilson</td>
<td>East Stroudsburg University</td>
<td>East Stroudsburg, PA 18301</td>
<td><a href="mailto:mjwilson@esu.edu">mjwilson@esu.edu</a></td>
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</table>