



Richland Section American Chemical Society

FALL 2009

Applied Molecular Modeling

Not Just Video Games Anymore

September 16 at 6pm
Battelle Auditorium

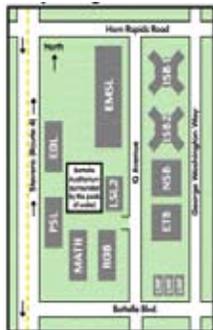


**DR. PETE
LUDOVICE**

Contrary to popular belief, molecular simulations can do much more than produce attractive images to enhance the lobby of the corporate headquarters. These simulations, carried out synergistically with existing experimental programs can produce significant insight into important structure property relationships in materials. The basics of molecular simulation and how it can predict important experimental results will be discussed. The practical approach to how such predictions can be used to produce insight into the rational design of materials with improved properties will also be illustrated through various examples. Molecular simulation examples include photo-resist materials for photolithography, mesoporous silicates, and other engineering polymers. These examples are used to illustrate how molecular simulations can not only help interpret experimental results but suggest structural changes that can improve properties.

Pete Ludovice received his B.S. and Ph.D. degrees in chemical engineering from the University of Illinois and MIT respectively. After postdoctoral studies, he worked at IBM, NASA and the Eidgenössische Technische Hochschule in Zürich. After several years in the simulation software industry he took a faculty position at the Georgia Institute of Technology in Atlanta. Georgia Tech professor by day and stand-up comedian by night Pete also hosts a local radio show on science and technology called "Inside the Black Box". His research interests include the application of molecular simulation to elucidating structure-property relationships in synthetic and biological macromolecules.

Battelle Auditorium



The Role of Chemistry in the Development of Regional Styles of

Beer & Ale

October 19 at 6pm
Battelle Auditorium

Have you ever wondered about how beer is made and the role that chemistry or microbiology plays in the process? The basic process of beer fermentation will be discussed from a small-scale perspective. From malting the barley and mashing the malt, through fermentation and conditioning, to packaging the finished product, particular attention will be paid to the role of chemistry in the development of regional beer styles and traditions. Connections will be made between steps in the process and results in the final product including color, bitterness, aroma, body, and taste. Many of these connections will illustrate the subtle, but important role that small chemical details can play.

Dr. Mark Thomson



Mark Thomson is currently an instructor of chemistry in the Department

of Physical Science at Ferris State University in Big Rapids, Michigan, where he teaches courses in general chemistry. He received his B.S. degree (1987) from the University of Utah in chemistry and his Ph.D. degree (1995) from Colorado State University in inorganic chemistry. He has been a homebrewer of ales, meads, and wines for 10 years, winning several ribbons at local and regional competitions. For the past 5 years he has also served as a Certified Beer Judge through the Beer Judge Certification Program (BJCP).



ELECTIONS

The three candidates for ACS President-Elect that will be on the fall ballot are Nancy B. Jackson (Sandia National Laboratory), Cheryl A. Martin (Rohm and Haas), and Mary Virginia Orna (College of New Rochelle). Additionally, the Council will choose two Directors-at-large for the ACS Board. The candidates are: H.N. Cheng (USDA), Howard Peters (retired, Peters, Verny, L.L.P.), Ray Dickie (retired, Ford Motor Co.), Valerie Kuck (retired, Lucent Technologies), and Dennis Chamot (National Research Council).

The biographies for each of the candidates will be posted on the Richland Section website. If you have any information/guidance you wish to share with me regarding the Director vote, please notify me at tim.hubler@pnl.gov, or 371-6274. I urge all our members to take the time to vote this fall; the online voting is quick, secure, and easy.

COUNCIL ACTIONS

There are two important petitions that have been considered regarding ACS election procedures for President-Elect. The Petition on Candidate Selection by Member Petition proposes to permit candidates to be selected by a petition process from members. This petition will now be up for action at the 2010 spring meeting of the Council.

There was also a Petition on Election Timelines and Procedures 2009 put forward by the ACS Committee on Nominations and Elections. The petition proposed to shorten certain election timelines and change petition candidates (who go straight on the ballot if they obtain enough signatures) to petition nominees (who need to be screened by Council along with other nominees chosen by the Committee on Nominations and Elections). This petition was recommitted to the committee with a request to separate the timeline issue from the procedures

(the proposed timeline changes are not controversial; the controversy relates to Council screening of petition candidates).

These are a set of complex issues, and I will be happy to provide any information that members may request regarding these petitions and I am also seeking input by members on these items.

ADDITIONAL INFORMATION

The Council VOTED to disband the Division of Chemical Technicians (TECH) effective December 31, 2009 based on a recommendation of the Divisional Activities Committee (DAC) and the TECH division officers. This past June, the transfer of former Student Affiliates to Student Member status and Associate Members to regular Member status was completed. As of July 31, the Society had 9,732 Student Members – 6,500 of them former Student Affiliates and more than 3,000 of them new Student Members.

RICHLAND SECTION WINS NATIONAL AWARD

The Richland Section was a finalist for three ChemLuminary Awards for our outreach efforts in 2008. All three awards were associated with the work spearheaded by the Women and Minority Affairs Committee, chaired by Anna Cavinato.

Assisted ably by our Eastern Oregon Student Members, our Section was named the winner in the category for Outstanding Overall Local Section Women Chemists Committee. This award is given to a local section by the national Women Chemists Committee to recognize outstanding efforts in promoting women in the chemical sciences.



Janet Bryant of Richland (center left) and Anna Cavinato of LaGrande (center right) were present to receive the Section's ChemLuminary award. They are flanked by ACS President Tom Lane and Women Chemists Committee Chair Dawn Brooks.

JEAN FUTRELL NAMED ACS FELLOW



Dr. Jean H. Futrell, a Chief Scientist at PNNL and local section member, was named to the initial class of ACS Fellows at a ceremony at the recent national meeting. The ACS Fellow program honors scientists who, in the words of Past-President Bruce E. Bursten, “share a common set of accomplishments, namely true excellence in their contributions to the chemical enterprise coupled with distinctive service to ACS or to the broader world of chemistry.”

Dr. Futrell grew up on a farm in Louisiana, went to undergraduate school at Louisiana Tech University, majoring in Chemical Engineering, and received a PhD in Physical Chemistry at UC Berkeley in 1958 as a member of Glenn Seaborg’s research group at the Lawrence Berkeley Laboratory (at that time known as the UC Radiation Laboratory). After working briefly in Texas for Exxon, and serving as an Air Force officer at Wright Patterson Air Force Base, he initiated an academic career at the University of Utah, then at the University of Delaware. He came to PNNL as Director of the Environmental Molecular Sciences Laboratory in 1999 and was named Battelle Fellow in 2002.

At Berkeley, Dr. Futrell’s PhD oral exam postulate was that ion energetics

could be used to deduce accurate thermochemistry, since ion-neutral interaction physics would essentially eliminate traditional activation energy barriers. This turned out to be a very good postulate. He also got interested in mass spectrometry fundamentals and has spent much of his career demonstrating that studies of ion chemistry provide very important insights into the kinetics of neutral reactions. Demonstrating that involved inventing unique mass spectrometry approaches, including the invention of tandem mass spectrometry. Instrumental developments he made for the purpose of investigating fundamental aspects of ion reactions are now found in thousands of commercial mass analyzers.

Dr. Futrell states, “I am singularly honored (and a bit surprised) by my selection as a member of the inaugural class of ACS Fellows. Since only two Office of Science National Laboratories were selected, I think this is an endorsement of the quality of science done at PNNL in addition to a personal honor.”

“My wife and I are delighted to be residents of the Tri-Cities, an under-appreciated part of our great country. The Pacific Northwest is the place we would choose to live over all other regions, a decision based on having lived in the South, West, Mountain West, Midwest and East Coast before emigrating to Richland.”

The Richland Section congratulates Dr. Futrell upon his selection to ACS Fellow.



COMING EVENTS

SEPTEMBER 16

Dr. Pete Ludovice, Applied Molecular Modeling – Not Just Video Games Anymore

OCTOBER 18-24

National Chemistry Week

OCTOBER 19

Mark Thomson, Ferris State U., The Role of Chemistry in the Development of Regional Styles of Beer and Ale

NOVEMBER 11

Dr. Wayne Jones, Jr., How Small Can You Go? Molecular Wires and Devices in the Modern World

OPT-IN NEEDED FOR NEWS HARD COPY

Opt-In Needed to Continue Receiving Newsletter Hard Copy

 email: acsrichlandsection@gmail.com

As reported in the spring newsletter, the Richland Section newsletter will move to email as the primary means of distribution in 2010. However, if you would like to continue receiving a hard copy of the newsletter, please let us know by either emailing your request to: acsrichlandsection@gmail.com

or sending a letter or postcard to the editors at the Pasco address printed on the newsletter. The change is expected to provide a significant savings in postal costs.

POINT-TO-PONDER CONTEST

Have a favorite saying that you think would make a great Point-to-Ponder? Send it in to the newsletter at acsrichlandsection@gmail.com, or by card or letter to the editors at the Pasco address printed on the newsletter.

One saying will be selected for publication, and the names of everyone that submits an entry will be entered in a drawing for a periodic table themed coffee mug. Entries due by October 15, so don't delay, act today!



Win
this
Mug!

Richland Section
Home Page

www.pnl.gov/acs/



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American Chemical Society
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Point to Ponder

Time is like a river...You cannot touch the same water twice ...because the flow that has passed will never pass again.
Enjoy every moment of Life! – *Anonymous*