

November 2015 Newsletter

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I. NMAS and NM EPSCoR Symposium, Saturday November 14, 2015 in Albuquerque

The 2015 New Mexico Academy of Science Research Symposium will be held on Saturday, November 14, 2015 at the Hyatt Regency Downtown Albuquerque (330 Tijeras NW). The regular symposium program will start at 10:30 AM with registration followed by: a luncheon with a keynote speaker, three concurrent oral sessions, a poster session, and end with a reception and the presentation of awards to conclude about 6:30 PM. Approximately 30 oral presentations and 70 poster presentations are expected at this year's Symposium. An ACS sponsored Chemistry session will begin at 8:30 AM (Enchantment A-B room) on Saturday 14, 2015. Additional details and meeting registration information is available on the Symposium web site:

<http://www.nmepscor.org/events/2015-nmas-research-symposium>

Due to an abundance of chemistry related abstract submissions a small number of presentations could not be included in the scheduled afternoon oral sessions. Our Local Section has arranged with the Symposium organizers to sponsor a special morning oral session at which a few additional presentations will be made. We currently expect that morning session to commence at 8:30 am on Saturday, November 14, in the Enchantment A-B room of the Albuquerque Hyatt Regency downtown. Below are some of the titles and presenters for talks currently planned for the special morning oral session:

Probing the Conformational Landscape of σ and π Coupling in Donor-Bridge-Acceptor Biradicals
Martin L. Kirk, Department of Chemistry and Chemical Biology, The University of New Mexico

Large Ligand Folding Distortion Deriving from a Strong Pseudo Jahn-Teller Effect
Jing Yang, Department of Chemistry and Chemical Biology, The University of New Mexico

Capture the triplet exciton-Pt containing conjugated polymers
Wenhan He, Department of Chemistry and Chemical Biology, The University of New Mexico

Synthesis and Characterization of Poly(selenylene vinylene) and Poly(selenylene vinylene)-co-Poly(thienylene vinylene) through Acyclic Diene Metathesis (ADMET) Polymerization
Zhen Zhang, Department of Chemistry and Chemical Biology, The University of New Mexico

Nanostructuring Organic/Inorganic Multicomponent Composites for Solution Processable Solar Cells
Brad W. Watson, Department of Chemistry and Chemical Biology, The University of New Mexico

Photocatalyzed Reduction of Bicarbonate to Formate: Effect of ZnS Crystal Structure and Positive Hole Scavenger
Michael Heagy, Department of Chemistry, New Mexico Tech

While registration for the mentioned morning session will not be required we would encourage registration (\$25 for non-NM EPSCoR participants) and participation in the entire Symposium through the web site above. Especially for our Student and Retired / Emeritus Local Section Members or others in a dues waived category please contact Donivan Porterfield (dporterfield@lanl.gov) if our Local Section could offer any assistance for your attendance at this Symposium. The oral and poster presentations will cover a wide variety of scientific contributions from a number of New Mexico academic institutions.

Directions and other information regarding the Hyatt Regency Albuquerque is available at the following URL:

<http://albuquerque.hyatt.com/en/hotel/home.html>

Among the awards to be presented during the Symposium is the Outstanding New Mexico Science Teacher for which our Local Section will also provide recognition to the recipients.

II. Supporting the ACS Scholars Program through LANL Employee Giving Program

The ACS Scholars Program (<http://www.acs.org/scholars>) provides renewable scholarships for underrepresented minority students who want to enter the field of chemistry or a chemistry-related field. Awards of up to \$5,000 are given to qualified students. African American, Hispanic, or American Indian high school seniors or college freshman, sophomores, or juniors pursuing a college degree in the chemical sciences or chemical technology are eligible to apply. C&EN has featured articles on a number of ACS Scholar recipients in recent months in association with the 25th anniversary of the program. It is our hope that still more deserving qualified underrepresented minority students could benefit from this program and go on to work in the chemical profession in our New Mexico public and private institutions.

A number of individuals and organization as well as the ACS itself have contributed to this worthy program in the past. We would like to invite our LANL members to also contribute via their Employee

Giving Program to this program and assist future recipients to enter the chemistry profession. The individual small contributions from a number of our Members combined together may allow another future student to be supported by this ACS program. The LANL program allows for the designation of non-profit organizations to receive employee contributions and any associated matching funds. The information below will allow your designated contribution to benefit the ACS Scholars Program:

American Chemical Society – Scholars Program
1155 Sixteenth Street, NW
Washington, DC 20036

The American Chemical Society EIN is 53-019-6572

III. Rio Grande Symposium on Advanced Materials – Poster Awards

Through the support of our Local Section and other New Mexico STEM organizations the organizers of the 2015 Rio Grande Symposium on Advanced Materials (Albuquerque on Friday, October 2, 2015) were able recognize the following presentations with awards:

Outstanding Student Talks:

Aaron Dunn^{1,2}, *Multi-scale simulation of radiation damage accumulation and subsequent hardening in neutron-irradiated Fe*; contributing authors: Rémi Dingreville², and Laurent Capolungo¹; (1) Georgia Institute of Technology, (2) Sandia National Laboratories

Julian A. Vigil, *Electrodeposition as a method to prepare thin film electrocatalysts*; contributing authors: Timothy N. Lambert. Department of Materials, Devices, and Energy Technologies, Sandia National Laboratories

Graduate/Technologist Outstanding Posters:

Haneen Martinez¹, *Dynamic self-assembly and transformation of hybrid nanocomposite rings*, contributing authors: George D. Bachand; Center for Integrated Nanotechnologies, Sandia National Laboratories

Marissa Anderson¹, *Selective, Long-Term Transfection of Dividing and Non-Dividing Cells using Plasmid DNA-Loaded Mesoporous Silica Nanoparticle-Supported Lipid Bilayers*, contributing authors: Carlee Ashley¹, Eric Carnes^{1,2}, Patrick Fleig¹, and C. Jeffery Brinker^{1,2}; (1) Sandia National Laboratories, (2) University of New Mexico

Christopher Lino^{1,2}, *Rapid Selection of Nipah and Hendra Virus Vaccine Candidates from a Complex, Random Peptide Library Displayed on Virus-Like Particles of MS2 Bacteriophage*; contributing authors: Katharine Epler³, Jason Townson⁴, David Peabody², and Carlee Ashley¹; (1) Biotechnology and Bioengineering, Sandia National Laboratories, (2) Molecular Genetics and Microbiology, University of New Mexico, (3) Chemical and Nuclear Engineering, University of New Mexico, (4) Center for Micro-Engineered Materials, University of New Mexico.

Undergraduate/High School Posters Outstanding Posters:

Amanda Cappucilli, *The Synthesis of Tagged Nanoparticles for Fluid Flow Monitoring*; contributing authors: Timothy J. Boyle, LaRico J. Treadwell, Jeremiah M. Sears, and Ping Lu. Sandia National Laboratories, Advanced Materials Laboratory

Maria Kelly, *Synthesis and evaluation of nanostructured CoP films as bifunctional electrocatalysts for water electrolysis*; contributing authors: Julian A. Vigil, and Timothy N. Lambert. Department of Materials, Devices, and Energy Technologies, Sandia National Laboratories

Christopher Stevens^{1,5}, *Synthesis of Tin Phosphide and Tin Nanomaterials*; contributing authors: Bernadette A. Hernandez-Sanchez¹, Diane A. Dickie², Richard A. Kemp^{1,2}, Khalid M. Hattar³, and Timothy N. Lambert⁴; (1) Sandia National Laboratories, Advanced Materials Laboratory, (2) Department of Chemistry and Chemical Biology, University of New Mexico, (3) Sandia National Laboratories, Radiation-Solid Interactions Department, (4) Sandia National Laboratories, Department of Materials, Devices and Energy Technologies, (5) New Mexico Institute of Mining & Technology.

IV. Los Alamos Science on Tap – Thursday, December 17 at 5:30 PM

Our Local Section is partnering with the Los Alamos Bradbury Science Museum and the Los Alamos Creative District for the Thursday, December 17 “Science on Tap” presentation at the UnQuarked Wine Room (145 Central Park Square in downtown Los Alamos). The scheduled presentation is on “Next-generation Rocket Propellants” and the presenter is Bryce Tappan in the LANL High Explosives Science and Technology Group.

Los Alamos National Laboratory scientists recently flight tested a new rocket design that includes a high-energy fuel and a motor design that also delivers a high degree of safety. "What we're trying to do is break the performance versus sensitivity curve, and make a rocket that's both very high-energy, as well as very safe," said Bryce Tappan, an energetic materials chemist at LANL. "Typically, when you look at a propellant that's high-performance, it's not as safe a material."

The new rocket fuel and motor design adds a higher degree of safety by separating the fuel from the oxidizer, both novel formulations that are, by themselves, not able to detonate. "Because the fuel is physically separated from the oxidizer," said Tappan, "you can utilize higher-energy propellants."

Our December newsletter will have more details on this presentation. We also regret that not all who attempted to attend the June Los Alamos “Science on Tap” event could be accommodated due to venue occupancy limits.

V. ACS Member Dues: Where Do They Go?

Our Local Section Past-Chair, Kristin Omberg (LANL), also serves as the Chair of the ACS Committee on Budget & Finance. Kristin has authored an ACS Comment in C&EN (11/02/2015) to address the question of where your ACS member dues go. A question from one of our Local Section members was the impetus for this ACS Comment. For those who missed that comment in C&EN please see the link below:

<http://cen.acs.org/articles/93/i43/ACS-Member-Dues.html>

VI. September Local Section presentation on “Eat More Chocolate: Are You Kidding Me?”

We regret that not more of our Members were able to attend our Monday, September 28 presentation on “Eat More Chocolate: Are You Kidding Me?” by Dr. Joe A. Vinson (Department of Chemistry at the University of Scranton). As well we had a special short presentation by Tory Lapsys of Joliesse Chocolates on the chemistry involved in the making of quality chocolates. Our Members who did attend enjoyed Mediterranean appetizers from Yanni’s and chocolates from Joliesse Chocolates (Los Ranchos de Albuquerque) and the Chocolate Dude (Nob Hill, Albuquerque). As well our thanks also to the University of New Mexico ACS Student Member Chapter for organizing a raffle drawing of ACS items and assisting with other aspects of the meeting organization. Dr. Vinson was presenting at a number of ACS Local Sections in the southwest so the date of his presentation was dictated by the overall logistics of that trip whose cost was split among the several participating local sections with some financial assistance from ACS.

VII. Magdalena NM School District – Request for Student Assistance

Our Local Section has received an inquiry via ACS for assistance for three Lego student projects involving process chemical engineering being worked on by students in the Magdalena NM School District. If you would be willing to exchange some e-mails or Skype conversations with the involved student teams please contact Mary Singleton (maryhas@juno.com) or Donivan Porterfield (dporterfield@lanl.gov) so that we may put you in contact with the sponsoring teacher.

VIII. Lecture - "What's Up with U? Abandoned Mine Wastes in Native American Lands"

The New Mexico Museum of Natural History & Science (NMMNHS) in Albuquerque is sponsoring a presentation at 7:00 PM on Tuesday, November 17 on the topic of “What's Up with U? Abandoned Mine Wastes in Native American Lands” by José M. Cerrato, an Assistant Professor in the University of New Mexico Department of Civil Engineering.

Many abandoned uranium (U) mine waste sites remain in the Western U.S. More than 500 sites are located in Native American lands. Adequate remediation of these sites represents at least a multimillion dollar federal investment. It is necessary to understand the chemical and physical characteristics of these abandoned mine wastes for adequate management. Join Dr. Cerrato as he discusses this critical problem and his research on abandoned mine wastes in Native American communities in central-western New Mexico and northeastern Arizona.

This Lecture is co-sponsored by NM EPSCoR which is partnering with the NMMNHS to bring researchers and their work to the public. The presentation will take place at 7:00 PM in the new Education Lecture Hall at the New Mexico Museum of Natural History & Science, 1801 Mountain Rd. NW in Albuquerque. Purchase tickets (\$6 to \$4 each) in advance online to guarantee your seats, go to BrownPaperTickets.com. Online lecture ticket sales stop Noon the day of the lecture. The day of the lecture if seats are available they will be sold at the door as a first come, first served basis, at the NMMNH&S's Admissions desk. Doors open at 6:15pm. The New Mexico Museum of Natural History & Science reserves the right to cancel any event that does not reach a minimum of 6 participants. For more information see the Natural History Museum events web site:

<http://www.nmnaturalhistory.org/calendar>

<http://www.brownpapertickets.com/event/2252235>

IX. Local Section Officer Elections

Our Local Section will be holding elections this fall for the positions of 2017 Chair (2016 Chair-Elect), Secretary, Treasurer, and Advisors (3 positions). Please contact our Past-Chair with any questions about these positions, self-nominations, or nominations of others: Kristin Omberg, komberg@lanl.gov.

X. Local Section Officers for 2015

The following are our 2015 Local Section Officers. Please feel free to contact them for information or suggestions regarding the Local Section or ACS in general.

Position	Name	E-mail
Chair	Donivan Porterfield (LANL)	dporterfield@lanl.gov
Chair-Elect	Karen Schultz Paige (LANL)	ksp@lanl.gov
Past-Chair	Kristin Omberg (LANL)	komberg@lanl.gov
Secretary	Fu-Sen Liang (UNM)	fsliang@unm.edu
Treasurer	Andrea Ambrosini (SNL)	aambros@sandia.gov
Advisors	Steven Showalter (SNL)	skshowa@sandia.gov
	Kristin Omberg (LANL)	komberg@lanl.gov
	Rudolph Magyar (SNL)	rjmagya@sandia.gov
Councilors	Kristin Omberg (LANL)	komberg@lanl.gov
	Donivan Porterfield (LANL)	dporterfield@lanl.gov
Alternate Councilors	Ron Clark (Cycad Products)	cycadp@gmail.com
	Rudolph Magyar (SNL)	rjmagya@sandia.gov

XI. Control those ACS e-mail messages

Through the ACS web page you can unsubscribe or even subscribe to more e-mail messages from Society offices regarding various activities and membership benefits. Once you have logged into the ACS web site using your member information you will notice a small link on top right hand that is labeled as “My Account”. Clicking the “My Account” will open up a page with a number of additional links among which you will find “Manage Email Subscriptions”. Clicking that link will present a web page through which you can control your receipt of a number of different Society offices e-mail messages.

XII. Changes of Address

The distribution of our Local Section newsletter is dependent on accurate e-mail and US mail addresses being supplied to the ACS. Address changes can be submitted to ACS through the following means: service@acs.org, (800) 227-5558, or logging in to www.acs.org.

