



Division of Nuclear Chemistry and Technology
American Chemical Society

NUCL Webpage – <http://www.nucl-acs.org>

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NEWSLETTER

April 2018

Newsletter Editor: Andrew Klose
Email: andrew.klose@augie.edu

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FROM THE CHAIR

Lynn Francesconi

The weather in New York City and in the East, in general, is cold and windy. While the calendar says that it is spring, spring seems to be reluctant to appear. However, the ACS meeting in New Orleans experienced wonderful spring weather and it was great to leave heavy coats behind. The technical sessions in the NUCL Division were, as usual, outstanding and well attended. The NUCL symposia were held in the Embassy Suites; that was a very comfortable venue and a good location, close to other hotels and to the convention center. NUCL cosponsored a symposium on Radiopharmaceutical Chemistry with FLUO and that symposium was also located in the Embassy Suites to facilitate moving between the symposia. Many thanks to Amy Hixon, Spring Programming Chair, for arranging this.

At this ACS meeting, we honored Dr. Suresh C. Srivastava, of Brookhaven National Laboratory, who is the recipient of the 2018 Glenn T. Seaborg Award for Nuclear Chemistry. A Symposium in honor of Suresh was organized by Dr. Cathy Cutler of Brookhaven National Laboratory.

Symposia at the Spring, 2018 ACS meeting for the NUCL division included Isotope Harvesting At Accelerator Facilities, organized by Todd Bredeweg, Graham Peaslee, and Gregory Severin; Actinide Complexes and Nanoclusters, organized by Karah Knope and Tori Forbes, with nominal cosponsor INOR; Computational Methods for Lanthanides and Actinides: Theory and Applications, organized by Deborah Penchoff; Radiopharmaceutical Chemistry, that was co-sponsored with FLUO and organized by Suzanne Lapi, Alan Packard, Gilles Tamagnan, and Neil Vasdev.

The Young Investigators in Nuclear and Radiochemistry Symposia was organized by Todd Bredeweg and Ralf Sudowe. Graduate students, postdoctoral fellows and undergraduates presented their research in diverse areas of nuclear and radiochemistry. From discussions with the young investigator participants, their experiences in giving seminars and interacting with the audience were “encouraging”, “hopeful”, “inspirational”, and other superlatives.

The NUCL Division social hour followed the business meeting on Tuesday evening. This year, the social time was held at Tomas Bistro, just a few blocks from the Embassy Suites. Holding the social time off site is very economical for the Division and the atmosphere and food were terrific. The attendance was great and we all met new people in the NUCL division. We plan to continue this tradition. I would like to thank Brian Powell for organizing the social hour in New Orleans. If you are interested in organizing or helping to organize the social time for the Fall National Meeting in Boston, MA (August 19-23, 2018), please contact me or any of the NUCL officers.

The programming for the Fall National Meeting in Boston, MA is essentially complete at this time. There are six symposia and they

promise to be sensational. I would like to thank John Auxier II, Program Chair for fall meetings, for his overall programming organization. The symposia in the NUCL division for the fall, 2018 meeting are: Nuclear Forensics, organized by John Auxier II, Todd Bredeweg, Robert Serbella; Radioanalytical Methods in Public Health, organized by John Brockman and Roy Planalp; Environmental Radiochemistry, organized by Don Reed, Xavier Gaona, Marcus Altmaier, Amy Hixon, Brian Powell, and Mavrik Zavarin; Computational Methods for Lanthanides and Actinides: Theory and Applications, organized by Deborah Penchoff and Charlie Peterson; and Radiochemistry Education, organized by Melissa Deri and Donna McGregor. Finally, there is a Symposium in honor of Dr. Leonard Mausner on the occasion of his retirement from Brookhaven National Laboratory, organized by Cathy Cutler and Silvia Jurisson. These symposia in addition to the general topics in nuclear and radiochemistry should provide a great scientific experience for scientists in the NUCL division and in other divisions.

If you are interested in organizing a symposium for the Spring, 2019 National Meeting in Orlando, FL, please contact Amy Hixon. If you wish to organize a symposium for the Fall, 2019, meeting in San Diego, CA, please contact John Auxier II.

I would like to draw attention to the need for financial support of the Glenn T. Seaborg Award in Nuclear Chemistry. We must develop a plan for continued funding for this important and prestigious ACS award. Please contact any of the NUCL officers if you have ideas for identifying future support.

The NUCL Division is a very supportive division and we welcome new members. I would like to ask our members to recruit new members among your colleagues, students, and friends. Nuclear and Radiochemistry

permeates most other disciplines and interdisciplinary and multidisciplinary research is important. A little recruiting of ACS members into the NUCL division will promote the health and viability of the NUCL division. At future meetings, we will have a table/poster at the Sci Mix poster session and we need members, preferably young(er) to talk to potential new members.

Finally, please do not hesitate to contact me with concerns, comments and information that will be useful to the NUCL Division.

COUNCILOR'S REPORT

Silvia Jurisson,

Graham Peaslee, and

Paul Benny (Alternate Councilor)

The ACS is governance structure is largely comprised of elected councilors that represent either Technical Divisions (20%) or Local Sections (80%). The Nuclear Division is large enough now to have two ACS councilors who represent our interests at the Council Meeting held at every national meeting as well as on several sub-committees that discuss matters that impact the Division. Together with Nuclear Division members that represent local sections the Councilors funnel information from the ACS governance to the Nuclear Division members and they also can convey concerns from the membership to the ACS leadership.

This Spring at the ACS National Meeting in New Orleans, we learned that there were 16,585 registered attendees, with almost 6,500 students. The total membership of the ACS is a little over 150,000 currently and many of the leadership efforts center about recruiting new members, retaining existing members, and improving the value proposition of the ACS for current members. To that end the Meetings and Expositions Committee (of which Silvia is a member) held a Strategic Planning Meeting (1.5 days) ahead

of the full meeting to discuss goals and brainstorm ideas on how to make the meeting better for all members. The National meeting in Atlanta in the Fall of 2021 will be shortened to 4 days (no Thursday programming) and a reduction in the number of satellite sessions held in hotels (where the costs are not negotiated ahead of time by the ACS) instead of in the convention center itself. One suggestion was to encourage poster sessions in the Exhibitor area over the noon hour (i.e., 11:30-2:30 pm) without any oral sessions during this time; details are still being discussed. A meeting with division chairs is being planned for the Fall meeting in Boston to further discuss this and have divisional input. At the Boston meeting in the Fall of 2018, there will be draped-off space available in the wide corridors of the Boston Convention Center. Headphones will be used in these areas to minimize distractions from outside the area noise.

A new ACS Meeting App was launched with the New Orleans meeting. The intent is that members will not need to upload a new app for each meeting, but will be able to open the current meeting within this app. There are still some "bugs" to be worked out, as always with new apps, but hopefully this will be a good improvement. If you had any difficulties that you would like to have relayed to the ACS Staff, let us know.

At the main Council meeting, electronic balloting selected Luis A Echegoyen and Thomas R. Gilbert to run as candidates for President-Elect in the Fall National Election. Katherine L. Lee and Laura E Pence were selected as District I candidates by their representatives, and John E. Adams and Joseph A Heppert were selected as District V candidates. Additionally, 4 Directors-at-Large were announced for the 2019-2021 term (Frank D. Blum, Lee H. Latimer, Ingrid Montes, Angela W. Peters) and the Committee on Committees (ConC) announced that Susan

M. Schelble was selected to fill a vacancy for the 2018-2019 term.

Council approved a Petition on the Composition of Society Committees that changes the requirement for Councilors on Society Committees from at least two-thirds to a majority, and removes the requirement that the Chair and Vice-Chair of a Society Committee be a Councilor. This petition came about because sometimes Council members on committees do not have the appropriate background (for example, budgetary or financial) to effectively lead the committee.

Council voted to recommit to the Divisional Activities Committee the proposed change in the formula for allocating dues funds to divisions. The main reasons for this were a lack of clarity on how regional and international meeting participation affects this, and a lack of how this impacts the smaller versus medium versus larger divisions. This will likely come back at the Fall Boston meeting.

If you have any additional suggestions for the ACS in this regard, or concerns about anything ACS-related, please don't hesitate to contact your councilors who will do their best to let your voice be heard.

TREASURER'S REPORT

Brian A. Powell

As of March 20, 2018 the division had \$94,396 in our checking account and \$76,969 in our savings account. The checking account balance is inflated by approximately \$20,000 that will be billed soon for the 2017 and 2018 allotments the division is required to pay for the Seaborg Award. Therefore, a more accurate portrayal of the checking account is around \$74,000. We received our February Dues Payments (\$7,745) and annual division allotment (\$16,411) which are also inflating

our checking account. As discussed previously, we should seek out means of funding the Seaborg Award so that it does not take up a large part of our annual operating expenses. I will begin planning for this over the summer and anyone interested in participating is invited. Please contact me at bpowell@clemsun.edu.

The division sponsored our social events at offsite locations during the Fall 2017 and Spring 2018 national meetings and we estimate it saved the division approximately \$8,000. We will continue to use off-site venues at future meetings. Thus, please contact me if you are interested in helping to plan the event or if you know of a good venue in the host city.

We have had only minor expenses so far this year contributing to the programming at the NORM 2017 meeting, the upcoming SERMACS 2018 meeting, and the 2018 Inorganic Chemistry Gordon Research Conference.

UPCOMING PROGRAMMING

The **20th Symposium on Separation Science and Technology for Energy Applications** will be held Oct. 21st – 24th, 2018 at the Park Vista Hotel in Gatlinburg, TN. Please see the Call for Abstracts flyer at the end of this Newsletter for more information.

Plutonium Futures – The Science 2018, A Topical Conference on Plutonium and Actinides, will be held Sep. 9th – 14th, 2018 at the Wyndham San Diego Bayside in San Diego, CA. See the flyer at the end of this Newsletter for more information.

NATIONAL MEETING PROGRAMMING

FALL 2018 – Boston, MA

August 19-23, 2018 (*John Auxier II*)

Theme: Nanotechnology

The 256th ACS National Meeting & Exposition will be held August 19-23, 2018 in Boston, MA. Please contact John Auxier II (jauxier@utk.edu) with any questions. Symposia include:

- **Nuclear Forensics**
Organizers:
John Auxier II (jauxier@utk.edu),
Todd Bredeweg (toddb@lanl.gov), and
Robert Serbella
(Robert.surbella@pnnl.gov)
- **Symposium in honor of Leonard Mausner**
Organizers: Cathy Cutler
(ccutler@bnl.gov) and
Silvia Jurisson
(JurissonS@missouri.edu)
- **New Radioisotope Chemistry for Nuclear Medicine**
Organizers: John Brockman
(brockmanJD@missouri.edu) and
Roy Planalp (Roy.Planalp@unh.edu)
- **Environmental Chemistry**
Organizers: Don Reed
(dreed@lanl.gov),
Marcus Altmaier
(marcus.altmaier@kit.edu),
Xavier Gaona (Xavier.Gaona@kit.edu),
Amy Hixon (ahixon@nd.edu),
Brian Powell (bpowell@clemson.edu),
and *Mavrik Zavarin*
(zavarin1@llnl.gov)

- **Radiochemistry Education**
Organizers: Melissa Deri
(Melissa.deri@lehman.cuny.edu) and
Donna McGregor
(dmcgreg@hunter.cuny.edu)
- **Computational Methods for Lanthanides and Actinides: Theory & Applications**
Organizers: Deborah Penchoff
(dpenchof@utk.edu) and
Charlie Peterson
(Charles.peterson@unt.edu)
- **General Topics in Radiochemistry**
Organizer: Lynn Francesconi
(lfrances@hunter.cuny.edu)
- **Molten Salt Chemistry**
Organizer: Richard Mayes
(mayerst@ornl.gov)
This is co-sponsored with I&EC.

SPRING 2019 – Orlando, FL

March 31 – April 4, 2019

Theme: Chemistry for New Frontiers

The 257th ACS National Meeting & Exposition will be held March 31 - April 4, 2019 in Orlando, Florida. We anticipate that the call for papers will be due in July 2018 and are looking for symposium ideas and chairs beyond those listed below. Please contact Amy Hixon (ahixon@nd.edu) if you are interested in volunteering.

- **Crosscutting Research in Environmental Radiochemistry and Nuclear Forensics**
Organizers: Luther McDonald
(luther.mcdonald@utah.edu) and
Amy Hixon (ahixon@nd.edu)

- **Young Investigators in Nuclear and Radiochemistry**
Organizers: Alison Tamasi (tamasi.alison@epa.gov) and Melissa Deri (Melissa.deri@lehman.cuny.edu)
- **Seaborg Award Symposium (TBD)**
- **General Topics in Nuclear Chemistry and Technology**
Organizers: Jenifer Shafer (jshafer@mines.edu)
- **Nuclear Chemistry and Technology for Materials Production**
Organizers: Laetitia Delmau (delmaulh@ornl.gov)

FALL 2019 – San Diego, CA
August 25 - 29, 2019

Theme: Chemistry of Water

The 258th ACS National Meeting & Exposition will be held August 25-29, 2019 in San Diego, CA. We are looking for symposium ideas and symposium chairs for this meeting. Please contact John Auxier II if you are interested (jauxier@utk.edu). Tentatively planned symposia include:

- **Celebration of the centennial of Rutherford's first nuclear reaction**
Organizers: Todd Bredeweg (toddb@lanl.gov) and Donivan Porterfield (dporterfield@lanl.gov)
- **Water Behavior in Concentrated Electrolytes**
Organizers: Sue Clark (sue.clark@pnnl.gov) and Aurora Clark (auclark@wsu.edu)
- **Nuclear Forensics**
Organizers: John Auxier II (jauxier@utk.edu) and Nicole Vanagas (nv137@georgetown.edu)

- **General Topics in Nuclear Chemistry and Technology**
Organizers: Jenifer Shafer (jshafer@mines.edu)
- **Molten Salt Reactor Chemistry**
Organizers Needed

NUCLEAR CHEMISTRY SUMMER SCHOOL UPDATE

J. David Robertson

National Director, 2012-2019

RobertsonJo@missouri.edu

The 2018 Nuclear Chemistry Summer Schools will be held June 9 through July 21 at San Jose State University and Brookhaven National Laboratory. Funding for the program is provided by the DOE Heavy Element Chemistry program in the Chemical Sciences, Geosciences, & Biosciences Division and by the Isotope Program in the Office of Nuclear Physics. Annalise Van Wyngarden will serve as Site Director at SJSU and Trish Baisden will be the primary instructor at SJSU. Louis Pena will again serve as Site Director at BNL. The deadline for receiving all application materials was February 1. We received over 100 complete applications for the 24 positions. My sincere thanks to the selection committee for their work on reviewing such a large number of applications from so many outstanding students. This year's selection committee consisted of Tori Forbes from the University of Iowa, John Auxier from the University of Tennessee, Dawn Shaughnessy from Lawrence Livermore National Laboratory, and Dan Stracener from Oak Ridge National Laboratory.

The outstanding students from the 2017 summer program, Michael Zott (BNL) and Alexander O'Brien (SJSU), were recognized at the NUCL Business Meeting in New Orleans. Alexander is majoring in Chemical Engineering at the University of Arkansas and Michael is majoring in Chemistry at Georgia Institute of Technology.

It has been a privilege to serve as National Director of the Nuclear Chemistry Summer Schools for the last seven years. My term as Director ends in the fall of 2019. In order to ensure a smooth transition for the program and submit the renewal application for the DOE Summer School grant, the Executive Committee of NUCL appointed the Director for the next grant period (2020-2023) at the meeting in New Orleans. Lynn Francesconi from Hunter College of the City University of New York will serve as the next National Director for the program. Please provide Lynn your support as she takes over this important responsibility for our division.

NUCL MEMBER HIGHLIGHT

Alison Tamasi, Editor and Author



Dr. Kimberly Thomas

Los Alamos National Lab, Retired

Dr. Thomas charted her course into nuclear chemistry fueled by a drive to finally learn about the last chapter in her science textbooks that teachers never had the time to get to. Once she got a taste of radiochemistry while working on irradiating the iron in bridged ferrocenes at Brookhaven National

Laboratory, she knew that she wanted to pursue the subject further. So Kim set out to Berkeley to earn her PhD working under Glenn Seaborg. While there, it was serendipitous that she was able to get to know a trailblazing woman who shared her determination, Darlene Hoffman. In fact, immortalized in Dr. Thomas' lab notebook (and later copied and given to Darlene) is a page that reads "Oh great, Darlene Hoffman was here and now I have another thesis project," in reference to the creation and characterization of Bk-242, which wound up being integral to Kim's dissertation. When Kim, on Darlene's suggestion, first visited the snow-capped mesas of New Mexico she knew where she wanted to live, and so she built a diverse and successful career at Los Alamos National Laboratory. Even though there was an institutional bias against hiring women at the time, Dr. Thomas was hired directly to staff and used her skills to contribute to many projects. From nuclide transport out of stored reactor fuel to radioisotope production for medical and classified uses, she loved that she was able to work on many projects all from the same desk. A desk, by the way, that was in an office she shared with the Manhattan Project scientist who made the initiators for Fat Man and Little Boy and whose knowledge Dr. Thomas eagerly absorbed. Of course, Kim also avidly accomplished the things she set her mind to outside of the lab. For example, while watching her young children play soccer, she thought "I can do better than that referee," so she spent the next 30 years working as a referee and now instructs and assesses other soccer referees. Now that she's retired Kim is pursuing enjoyment full-time, though naturally she still makes time to help other radiochemists. She and her husband love to travel, and one of their favorite places is St. Thomas, which has what they call the 3 B's – books, beer, and beach.

AWARDS NOMINATIONS COMMITTEE OF NUCL

Paul Mantica

Kinard Distinguished Service Award

The W. Frank Kinard Distinguished Service Award, established in 2014, recognizes NUCL members for outstanding service to the division and the field of nuclear science. The award is named in honor of Prof. W. Frank Kinard, who passed away in June 2013. Frank served the NUCL division as its secretary for 17 years, and for 15 year was the primary instructor for the Nuclear Chemistry Summer School in San Jose. The award consists of a personalized plaque and certificate, and is presented to the awardee at the NUCL Business Meeting held during the Fall ACS National Meeting.

The Awards Nominations Committee is soliciting nominees for the 2018 Kinard Award. A nomination letter (no more than 2 pages) on the nominator's letterhead detailing the nominee's service contributions, as well as a short (2 page) CV from the nominee, should be sent electronically to the Chair of the Awards Nominations Committee (Paul Mantica, mantica@msu.edu) no later than June 1, 2018. The current Awards Nominations Committee members (Walter Loveland, Paul Mantica, Kimberly Thomas, Scott Wilbur) will select the award winner.

Coryell Award for Undergraduate Research in Nuclear Chemistry

Graham Peaslee

Please remember to nominate undergraduate researchers for the annual Coryell award. Each year there is a \$1000 prize to be awarded to the successful nominee(s). Contributions are judged on the basis of ingenuity, novelty, and potential usefulness. To be eligible, a student must have been an undergraduate at some time during the 12-month period prior to the deadline date for submission of applications for the award. The student may be sponsored by a faculty member at the home institution or by a research director at another institution where the student performed the work. The nomination process involves a letter from the research mentor and a sample of the student's work, which is typically in the form of a report or a paper they have written, or significantly contributed towards. The annual deadline will be Sept. 14, 2018. Please contact Graham Peaslee (gpeaslee@nd.edu) if you have any questions.

20th Symposium on Separation Science and Technology for Energy Applications



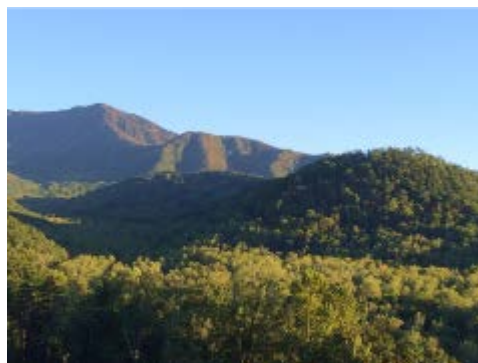
October 21-24, 2018

Park Vista Hotel, Gatlinburg, Tennessee, USA

CALL FOR ABSTRACTS

You are invited to participate in the 20th Symposium on Separation Science and Technology for Energy Applications, which will be held October 21-24, 2018 at the Park Vista Hotel in Gatlinburg, Tennessee.

SST symposia originated in 1979 to facilitate cross-disciplinary interactions on separation science and technology issues that are important in developing sustainable energy resources and systems and energy-efficient processes. We encourage presentations on a wide range of fundamental and applied research topics, including:



- ◆ **Membrane Separations**
- ◆ **Novel Separation Methods**
- ◆ **Solvent Extraction Processes**
- ◆ **Adsorption and Ion Exchange**
- ◆ **Nuclear Fuel Cycle Separations**
- ◆ **U.S. Department of Energy Applications**

You are invited to submit a 200- to 250-word abstract electronically through the symposium website at <http://sst.ornl.gov>. **The deadline for submission of abstracts for oral presentations is July 15.** Contributions for poster presentations will continue to be accepted until October 1.

The symposium is conducted with a program to foster cross-discipline discussion and interactions of professionals with students. The poster session, a networking mixer held on Monday evening, is an excellent forum to showcase recent research developments and promote lively discussion. Authors of both oral and poster presentations are invited to submit manuscripts describing their work for the SST Proceedings Issue, to be published in the peer-reviewed journal *Separation Science and Technology*.

Student participation is encouraged. We offer discounted student registration, thanks to the generosity of sponsors. Students are highlighted in a session of mini-presentations prior to the poster session. Outstanding student posters, judged by scientific merit and structure, will be recognized.

Please help distribute this announcement to potentially interested colleagues and associates. We look forward to seeing you in Gatlinburg in the Fall!

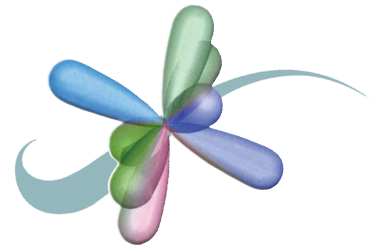
For questions regarding SST symposia, email sstconf@ornl.gov or contact:

David DePaoli, General Chair
(865) 574-6817
depaolidw@ornl.gov

Ken Nash, Co-Chair
(509) 335-2654
knash@wsu.edu



ANS Meetings



Plutonium Futures—The Science 2018

A Topical Conference on Plutonium and Actinides

September 9-14, 2018
Wyndham San Diego Bayside
San Diego, California, USA

**THIS YEAR'S CONFERENCE WILL
INCLUDE DISCUSSION OF:**

- **CONDENSED MATTER PHYSICS**
- **METALLURGY AND MATERIALS SCIENCE**
- **SURFACE SCIENCE, COLLOIDS, AND CORROSION**
- **PLUTONIUM CHEMISTRY**
- **NUCLEAR FUEL CYCLE**
- **DETECTION AND SPECIATION ANALYSIS**
- **ENVIRONMENTAL SCIENCE**

pu.ans.org

