



Division of Nuclear Chemistry and Technology
American Chemical Society

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

Program Chair, 2019
JEN SHAFER
Colorado School of Mines
Golden, CO 80401
Phone: (303) 273-3996
jshafer@mines.edu

Chair-Elect, 2019
Program Chair, 2020
TORI FORBES
University of Iowa
Iowa City, Iowa 52242
Phone: (319) 384-1320
tori-forbes@uiowa.edu

Vice Chair, 2019
Program Chair, 2021
THOMAS ALBRECHT-SCHMITT
Florida State University
Tallahassee, FL 32306
Phone: (850) 644-3810
albrecht-schmitt@chem.fsu.edu

Secretary, 2017-2019
SAMANTHA SCHRELL
Los Alamos National Lab
Los Alamos, NM 87544
sschrell@lanl.gov

Treasurer, 2017-2019
BRIAN POWELL
Clemson University
Anderson, SC 29625
Phone: (864) 656-1004
bpowell@clemson.edu

Councilors
SILVIA JURISSON, 2017-2019
jurissons@missouri.edu
GRAHAM F. PEASLEE, 2018-2020
gpeaslee@nd.edu

Alternate Councilor
PAUL BENNY, 2018-2020

Members-at-Large, Executive Committee
SUE CLARK, 2019-2021
JUSTIN WALENSKY, 2018-2020

NEWSLETTER

April 2019

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

Topics

- > FROM THE CHAIR
- > COUNCILOR'S REPORT
- > UPCOMING PROGRAMMING
- > NUCL MEMBER HIGHLIGHT
- > NUCLEAR CHEMISTRY SUMMER SCHOOL UPDATE
- > SOLICITATION FOR NCSS INSTRUCTOR AT SJSU
- > AWARDS NOMINATION COMMITTEE

FROM THE CHAIR

Jen Shafer

In Colorado we just experienced the second school closing and “Bomb Cyclone” storm of the spring. The first cut power to more than 100,000 in the Denver Metro area and the second was a bit of rain that turned to snow (one of my colleagues named it Snowma-DUD-en’ instead of Snowmaggadon). Both storms had a 50° change in temperature within a 24-hour period. I’m grateful I left my snow tires on. Fortunately, neither of these storms interfered with travel to Orlando!

The 2019 Spring ACS National Meeting was held in Orlando from March 31st to April 4th. We had a full agenda of symposia, including the two-and-a-half-day affair honoring our most recent Glenn T. Seaborg awardee, Thomas Albrecht-Schmitt. The Immediate Past ACS President, Peter Dorhout, “tweeted” this nice image of Tom receiving his award. Admittedly, I was caught up in the moment trying to give a pleasant, not-too-smiley-smile and forgot to flex appropriately.



We had nice a turnout throughout the meeting for Crosscutting Research in Environmental Radiochemistry and Nuclear Forensics, Young Investigators in Nuclear and Radiochemistry, General Topics in Nuclear Chemistry and Technology and Computational Methods in Lanthanide and Actinide Chemistry. We are consistently grateful for all our organizers and the participation of our division in these meetings. As Silvia Jurisson will discuss below, many factors will be impacting our placement in national meeting conference centers in the years to come. Therefore, having well populated programming will be important to maintain a presence in a given meeting's convention center.

Regarding the Fall 2019 National meeting in San Diego, abstract submission is now closed. If you would still like to submit an abstract to the fall meeting, I'm sure a polite request to one of our program chairs, Amy Hixon or John Auxier, could get you added to the program. Programming for the Spring 2020 meeting is pretty much set, as I believe organizers have been identified for the Radiotherapeutics symposium, but Fall 2020 programming in San Francisco remains wide open.

Holding our Social Hour at an off-site venue has continued to be cost savings success. Operating in this fashion is heavily dependent on local Division members who are familiar with the restaurants proximate to the meeting. The Orlando Social Hour was organized by Professor Vasileios Anagnostopoulos at the University of Central Florida. Thank you Vasileios! I believe we are looking for an organizer to help with organizing the NUCL Social Hour in San Diego. If you are interested, please reach out to one of our Program Chairs.

The NUCL business meeting covered a variety of topics, but probably none more important than identification of instructors for both the Brookhaven and San Jose State Nuclear Chemistry summer schools. Please see Lynn's

write-up below regarding the details of needs at each respective summer school.

Another matter the division is working on is renewing the Divisional Bylaws. Our bylaws are ~13 years old and only a handful of divisions (looking at you Division of Small Chemical Business!) are more out of date than us. The primary issue with the Bylaws is that, technically, none of our electronic elections we hold for division officers have been valid. We are updating our bylaws to allow for electronic elections as well as include several other important things, such as policies regarding harassment. Bylaws have been drafted, reviewed and approved by the executive committee (thank you very much Graham Peaslee and Samantha Schrell for taking point on this!). I have ordered return envelopes and will be working on stuffing and addressing 943 envelopes this upcoming quarter with support from my administrative staff at Mines. When you receive your ballot, please vote and return so that we have enough election turnout to validate the results. I'm very excited to cement this as a part of my legacy as NUCL division chair.

I would be remiss if I didn't highlight the ACS Program-in-a-Box (PIB) that featured our own division Member, Professor Cody Folden from Texas A&M, discussing super heavy element synthesis. The #ACSPIB hashtag on twitter indicated schools from Emory to Chico High School to UW Eau Claire were engaged (just to name a few!). I received the following feedback from ACS regarding this event:

- 404 groups hosted at least 10,103 attendees. This is the first time ACS had more than 10,000 attendees and more than 400 groups. For comparison, the Space Chemistry PIB held last fall had ~8,000 attendees.
- The event reached across the United States, including US Territories (Puerto Rico and the Virgin Islands),

and internationally in Argentina, Egypt, Malaysia, Nigeria, Mexico, Columbia, and Brazil.

- We received an email list of 368 attendees who expressed interest in learning more about the ACS NUCL Division. I am open to thoughts people might have regarding educating the interested masses.

It is exciting to see the Division and the members get this level of engagement from the chemical community! I would like to express my whole hearted thanks to Cody, who put his presentation together on a relatively short fuse. His presentation is available at www.acs.org/pib and, if you're just interested in Cody's presentation, it starts at the 23-minute mark.

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

COUNCILOR'S REPORT

Silvia Jurisson and Graham Peaslee

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 Orlando, we learned that there were 15,605 registered attendees, which included about

6000 students. The total membership of the ACS is a little over 151,000 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. Interestingly, domestic membership in the ACS continues to drop, but membership increased slightly over the last year because of the increasing international members of the ACS which now make up about 19% of the total membership.

The ACS Meeting App was used exclusively at the Orlando meeting with no hard copies available. The members will not need to upload a new app for each meeting, but will be able to open the current meeting within this app. If you had any difficulties that you would like to have relayed to the ACS Staff, let us know.

From the Meetings & Expositions (M&E) committee meeting (Silvia Jurisson is a member; chair of Technical Programming sub-committee of M&E) there was much discussion about extending the abstract deadline for the Fall meeting in San Francisco until after the Spring meeting in Philadelphia (22-26 March 2020). In order to do this, the ACS staff will be letting Division Program Chairs know their room assignments (all technical sessions will be in the Moscone Convention Center) in early January (01/06/2020), the same day abstract submission opens. The number of rooms assigned will be based on historical data from the various divisions for the Fall meeting over the past 3 years. Abstract submission will close on 04/06/2020 (one month later than if rooms are not assigned (as currently done, and about 4 months before the Fall meeting opens). There will likely be some adjustments made to this new timeline as implementing any new system will have its glitches.

In Boston, an alternative room design was evaluated for reducing the footprint of the

meeting in which headsets were used to hear speakers. This was expanded in Orlando. A different vendor provided the headsets (one ear only); there were some issues and these were resolved as quickly as possible. Future headsets will be for both ears. There will also be some ePosters at the San Diego meeting as an experiment to reduce the footprint of the meeting and to further engage members. We'll hear how it went at our next meeting.

An interesting statistic that was brought up during the M&E meeting was the increase in the number of concurrent sessions. In the Spring 2007 meeting, 82 rooms were used for technical sessions for 14,596 attendees. During the Spring 2018 meeting, 132 rooms were used for 16,272 attendees. That number increased to 140 rooms for Orlando for 15,605 attendees. This is quite an increase in concurrent room use without much variation in the number of attendees. The last item to mention is a reminder that there will be no Thursday programming in the Atlanta Fall meeting in 2021.

Silvia Jurisson was asked to serve on an ACS Task Force to "Reimagine ACS Meetings for the Future" (meaning from 2030 onward). There are representatives from several relevant ACS committees and from the ACS staff as well. We had our initial meeting in Orlando and were tasked with starting from scratch for the new meetings platforms (all meetings-national, regional, etc.) including number of meetings, types of meetings, etc. If you have any ideas for this please let me know (jurissons@missouri.edu) regarding both things you would like to see and things you would not like to see in future meetings. We'd really appreciate your input and ideas.

From the Divisional Activities Committee (DAC) meeting (Graham Peaslee is a member), Innovative Project Grants (IPGs) were discussed and an evaluation rubric will be developed, so that applicants will know how they are scored. These grants are \$7500 (or

two in the same year for \$12,000) per Technical Division to try "innovative" projects that will positively affect Division members. If you have any ideas for Divisional activities that you think would help the Division or its membership contact one of the councilors and we can help with the 2-page proposal. It was also suggested that the Nuclear Division consider a Strategic Planning Retreat IPG next year to help set a long-term goal for the Division. Several Nuclear Division Executive Committee members will put together such a proposal next Summer. If you are interested in becoming an officer of the division and helping out – this strategic planning retreat in 2020 would be a great place to begin. Please contact any Nuclear Division Executive Committee member to let us know you are interested in assisting.

The Committee of Constitution and Bylaws has reviewed the bylaws of the Nuclear Division and suggested revisions that bring us up to date with the official bylaws of the ACS that allow for more modern governance mechanisms such as electronic balloting. There will be a post-card sent to all members this Spring that will ask you to review the proposed bylaw revisions and to approve them. We have to have a post-card election to allow electronic elections in the future. Please take a few minutes to return these post-cards when they arrive. Thank-you.

At the main Council meeting, electronic balloting selected H. N. Cheng and Carol A. Duane to run for President-Elect, 2020. Ballots will be sent to the membership in the fall.

Following much discussion, the Council approved a Petition to Streamline the ACS Governing Documents. The Petition will become effective if and when the proposed changes to the Constitution are approved by the Membership of the Society, and if and when the Board of Directors approves the

Petition. Both are likely to happen in the next year.

President Carpentier led a special discussion on ACS relevance to current and future members, asking that the councilors make recommendation/suggestions on challenges and opportunities that they see. Topics suggested included increased support for local sections and industry members, helping students transition into the professional careers, and implementing a monthly payment tool for ACS dues.

Council voted to support the recommendation of the Budget and Finance Committee to set member dues for 2020 at the 2019 rate of \$175. This pause in the dues escalation for one year is part of the effort to retain members. The dues will escalate with inflation as usual next year.

Council voted to continue the Committee on Nomenclature, Terminology & Symbols (of which Graham Peaslee is a member – as well as several other Nuclear Division Members including Paul Karol) and the Committee on Senior Chemists.

If you have any additional suggestions for the ACS, 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.

NATIONAL MEETING PROGRAMMING

FALL 2019 – San Diego, CA

August 25 - 29, 2019

Theme: Chemistry of Water

The 258th ACS National Meeting and Exposition will be held August 25-29, 2019 in San Diego, CA. Symposia are listed below. Abstract submission has closed. Please contact John Auxier II (jauxier@utk.edu) for more information.

- **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), *Nicole Vanagas*

(nv137@georgetown.edu), and *LTC*

Geoffery Bull

(Geoffrey.Bull@usma.edu)

- **General Topics in Nuclear Chemistry and Technology**

Organizers: Jenifer Shafer

(jshafer@mines.edu) and *Gian*

Surbella (robert.surbella@pnnl.gov)

- **Molten Salt Reactor Chemistry**

Organizers: Kristian Myhre

(myhreckg@ornl.gov) and *Joanna*

McFarlane (mcfarlanej@ornl.gov)

- **Computational Methods for Lanthanides and Actinides**

Organizers: Deborah Penchoff

(dpenchof@utk.edu) and *Charles*

Peterson (Charles.peterson@unt.edu)

SPRING 2020 – Philadelphia, PA

March 22 – 26, 2020 (Amy Hixon)

Theme: Macromolecular Chemistry: The Second Century

The 259th ACS National Meeting & Exposition will be held March 22-26, 2020 in Philadelphia, Pennsylvania. We are in the early planning stages for the Spring 2020 National Meeting. Symposia are listed below. Please contact Amy E. Hixon (ahixon@nd.edu) for more information.

- **Macromolecular Actinide Chemistry**
Organizers: Peter C. Burns (pburns@nd.edu) and Ginger E. Sigmon (gsigmon@nd.edu)
- **Radiotherapeutics**
Organizer(s) needed
- **Young Investigators in Nuclear and Radiochemistry**
Organizers: Deborah Penchoff (dpenchof@utk.edu) and Justin Powers-Luhn (jpowersl@vols.utk.edu)
- **Computational Methods for Lanthanides and Actinides**
Organizers: Deborah Penchoff (dpenchof@utk.edu) and Charles Peterson (Charles.peterson@unt.edu)
- **Seaborg Award Symposium (TBA)**
- **General Topics in Nuclear Chemistry and Technology**

NUCL DIVISION MEMBER HIGHLIGHT

Alison Tamasi, editor



Dr. Melissa Deri
Asst. Prof. of Chem.
Lehman College,
CUNY

Dr. Melissa Deri's success is a direct result of her passion for sharing science with others and the joy she finds in radiochemistry. As she says "What's not to love? Nuclear reactions are literally alchemy and that's as close to magic as you can get." When she attended the Nuclear Chemistry Summer School at Brookhaven National Lab, Melissa was able to

see how radiopharmaceutical research meshed with her long-standing interest in human health. For her PhD she pursued the development of chelating agents for Zr-89 radiopharmaceuticals, and then followed that with a postdoc centered on intensive study of chemical education and the theory of science curriculum development. This naturally led to her current position at Lehman College where she is able to continue applying innovative teaching practices while also establishing her own radiochemistry laboratory and research program. Dr. Deri has truly come to embody the support that she finds so compelling about the radiochemistry community, and she is now facilitating the opportunities for the next generation of scientists that she was once afforded herself. When she isn't working, Melissa loves to travel and experience exceptional cuisines, and she keeps her imagination sharp by reading, watching movies, and above all filling her life with as much music as possible.

UPDATE ON THE NUCLEAR CHEMISTRY SUMMER SCHOOLS

J. David Robertson

This summer will be the third summer of the current 3-year Nuclear Chemistry Summer School grant. Lynn Francesconi has been selected as the next Director of the Summer School program and will be submitting the renewal proposal for the program. Funding for the program is currently provided by the Heavy Element Chemistry program in the Chemical Sciences, Geosciences, & Biosciences Division and by the Isotope Program in the Office of Nuclear Physics. This year's program will be held June 16 through July 27 at Brookhaven National Laboratory and San Jose State University. Annalise Van Wyngarden (a former participant in the Summer School) 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 165 web applications and 108 complete applications. 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 Melissa Deri from Lehman College CUNY, Greg Severin from Michigan State University, David Rotsch from Argonne National Laboratory, and Kevin John from Los Alamos National Laboratory.

The outstanding students from the 2018 program, Corianna Borton (BNL) and Angus Koller (SJSU), were recognized at the NUCL Business Meeting in Orlando.

J. David Robertson
RobertsonJo@missouri.edu

SOLICITATION FOR LEAD INSTRUCTOR FOR NCSS AT SJSU

Lynn Francesconi

The ACS- Nuclear Chemistry Summer School, founded in 1984, has provided outstanding radiochemistry and nuclear chemistry experiences/ education to talented undergraduates. The success of the NCSS depends on the capable and dedicated NUCL division members who have volunteered their time in a variety of roles that have had an indelible effect on the undergraduate students, inspiring and encouraging many of the students to pursue careers in nuclear chemistry and radiochemistry.

We are now looking for the next generation of instructor(s) for the 6-week program at the San Jose State University (SJSU) site. The Nuclear Science Facility at SJSU is well-equipped, offering wet chemistry laboratories, a counting facility, and state-of-the-art instrumentation. In addition to the lead instructor(s), the program staff includes the SJSU Site Coordinator who provides

administrative support for the program, the Radiation Safety Officer who teaches the 1-credit radiation safety course and assists with laboratory activities, and two teaching assistants, who are past NCSS students selected from the previous summer school. Past course instructors have included technical staff from national laboratories, university and small college professors. This is a unique opportunity to engage with 12 students selected from a national competition and the two teaching assistants. This program has been shown to be a life-changing experience for both the students and the instructors.

Our intent is to bring at least one additional instructor to work with the current lead instructor, Trish Baisden, in summer, 2020 with the hope of transitioning the program to another lead instructor in 2021. If you are interested in being becoming the lead instructor and/or participating as a co-instructor in the program, please contact Lynn Francesconi at lfrances@hunter.cuny.edu.

AWARDS NOMINATIONS COMMITTEE OF NUCL

Thomas Albrecht-Schmitt

The Awards Nominations Committee is seeking nominations for the Frank Kinard Distinguished Service Award in Nuclear Chemistry. This award seeks to recognize individuals that have provided significant and sustained service to the NUCL division and nuclear sciences in the broadest sense. Please send nominations to the chair of the Awards Nominations Committee, Thomas Albrecht-Schmitt at albrecht-schmitt@chem.fsu.edu.