



Division of Nuclear Chemistry and Technology  
*American Chemical Society*

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

**NEWSLETTER**  
**January 2019**

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**FROM THE PAST CHAIR**

*Lynn Francesconi*

Greetings and best wishes for a happy and prosperous 2019! It has been a privilege to serve as chair for the Division of Nuclear Chemistry and Technology in 2018. I have enjoyed serving the Division and I sincerely thank you for your support during this year. I owe a debt of gratitude to the executive committee for their leadership and advice over the year.

Some highlights of the year include the exceptional programming for the ACS NUCL Division national meetings. The successful programming is due to the efforts of Amy Hixon and John Auxier II, program chairs for spring and fall meetings, respectively. I would like to issue a hearty thank you to all of the symposium organizers and especially new member involvement in symposium organization. The young investigator Symposium at the Spring ACS meeting is always exciting. Many graduate students, postdoctoral fellows and undergraduates presented their research and deemed their experiences in giving seminars and interacting with the audience as “encouraging”, “hopeful”, “inspirational”, and other superlatives.

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Alternate Councilor

**PAUL BENNY**, 2018-2020

Members-at-Large, Executive Committee

**SUE CLARK**, 2019-2021

**JUSTIN WALENSKY**, 2018-2020

We continued the tradition starting of hosting the social time after the business meeting at restaurants off site. This is a very economical practice for the Division and is a time to meet and encourage students starting out in the field and catch up with colleagues in an enjoyable atmosphere with great food. Thanks to Brian Powell and Alan Packard for organizing the Spring and Fall social times.

The Awards Committee was very busy this year. In addition to the yearly Awards, the NUCL Division is proud to have three of our members selected as 2018 ACS fellows. These are Jaqueline L. Kiplinger (Los Alamos National Laboratory), Walter D. Loveland (Oregon State University), and Dawn A. Shaughnessy (Lawrence Livermore National Laboratory). Many thanks to the Awards Committee: Paul Mantica (chair), Walter Loveland, Kimberly Thomas, and Scott Wilber.

The Nuclear Chemistry Summer Schools are vital to encourage undergraduates to pursue a career in nuclear chemistry and radiochemistry. The National Director, Dave Robertson, has been the major force in the continued success of this program. Annalise Van Wyngarden serves as the Site Director at San Jose State University and Trish Baisden is the primary instructor at SJSU. Louis Pena is the Site Director at Brookhaven. We need to thank these individuals and the guest instructors and guest speakers for their service in providing a superior education in nuclear and radiochemistry to the undergraduates and recruiting many of these young scientists into the field. Dave will step down in Fall, 2019 and I will have the honor of serving as the National Director from 2020-2023. I hope to have your support in this important responsibility.

We need to continue to work towards increasing the membership and diversity of our division. This is important for the health of the division. We also need to develop a plan

for continued funding for the Glenn T. Seaborg Award in Nuclear Chemistry. This is our division's important and prestigious ACS award.

Finally, thank you again for your support during my term as Chair. I have enjoyed my service and I hope to continue to be of service to the NUCL Division in the future. I now hand the gavel off to Jen Shafer who is your Chair for 2019.

## **FROM THE CHAIR**

*Jen Shafer*

Happy New Year all! I hope that you all enjoyed some holiday rest with your families are ready to begin the year anew. Aside from a few early snows, the winter in Colorado has been relatively mild. I'm hoping for a couple of spring snow storms to provide some nice breaks to what can otherwise be hectic semesters.

I would like to take a moment to thank Lynn Francesconi for her wonderful service as Division Chair. As she mentioned, Lynn's service to the division will be extended in the coming years as the National Director of the Nuclear Chemistry Summer School. Lynn is excited about maintaining strong relationships with the national labs and institutions that have been contributing speakers and instructors. We are deeply grateful for the presence of people like Lynn that make such significant contributions to lead the division and the development of new nuclear scientists. If you see Dave Robertson, please be sure to pass along your appreciation. He is the outgoing National Director for the Summer School and served two three-year terms.

The NUCL Division elections concluded in November last year. We are fortunate to have Thomas (Tom) Albrecht-Schmitt as the Vice Chair-Elect (Chair 2021) and Sue Clark

continue in her role as Member-at-Large. Tom is the Gregory R. Choppin Professor at Florida State University and Sue is the Chief Science and Technology Officer and a Battelle Fellow at Pacific Northwest Laboratory. The executive committee has a well-balanced mix of both experience and gender diversity. If you are interested in being an officer, please don't hesitate to run in upcoming elections!

Thank you for electing me the 2019 Chair of the Division. During my "campaign" I mentioned I would focus on "increasing divisional networking/communication and facilitating/enhancing the visibility of nuclear and radiochemistry research". In the coming year I hope to increase interfaces with ACS National to increase the profile of the division. This year is the International Year of the Periodic Table (IYPT) and ACS has reached out to me regarding various ways to interface with the NUCL division. They are particularly interested in super heavy element discovery and emerging periodic trends in the heavier part of the table. If you have anything in particular planned for the IYPT, please let me know! I'll get in touch with folks at ACS to make sure your event is publicized appropriately.

Another way to improve networking and visibility is through social media. Did you know the NUCL Division has a Facebook page? It does! I manage the page, but anyone can post (assuming the content is reasonable and nuclear related). I have been trying to get jobs posted here and highlight scientific discoveries. If you have something you would like for me to post, please send it my way. I'm not on Twitter, but understand the chemistry community is much more vibrant on Twitter. If someone would be interested in managing a Twitter page for the NUCL division, please let me know. As a division, some of the best ways we can help our members are by promoting their science and helping them find jobs. Please help with any content you have that might be of value.

The program for Spring 2019 is complete thanks to the hard work of our Spring National Meeting Program Chair, Amy Hixon, and the numerous organizers that were kind enough to lead a symposium. The spring Orlando meeting will be busy with five symposia – including the Glenn T. Seaborg Symposium recognizing Thomas Albrecht-Schmitt. Please refer to the Program Chair notes further in the newsletter regarding our wonderful symposia for the Orlando meeting. The Fall 2019 meeting appears to be full with six symposia, but we could make room for a particularly compelling symposium if necessary. We are still searching for organizers for Young Investigators and the Radiotherapeutics symposia at the Spring 2020 meeting in Philadelphia. Programming for Fall 2020 meeting in San Francisco is wide open.

As a division we continue to shake the trees for funding regarding a longstanding sponsor for the Seaborg Award. This prestigious award is valuable to the membership and the national profile of nuclear and radiochemistry. Please contact any of the NUCL officers if you have ideas for identifying future support.

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.

## **NUCL ELECTION RESULTS:**

*Thomas Albrecht-Schmitt*  
was elected Vice Chair 2019, Chair-Elect 2020, Program Chair, 2021

*Sue Clark*  
was re-elected as a member at large (2019 – 2021)

## NATIONAL MEETING PROGRAMMING

### 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. Registration and housing is now open for the meeting. The NUCL symposia listed below will be held in the Orange County Convention Center. Please contact Amy E. Hixon ([ahixon@nd.edu](mailto:ahixon@nd.edu)) for more information.

- **Crosscutting Research in Environmental Radiochemistry and Nuclear Forensics**  
*Organizers: Luther McDonald ([luther.mcdonald@utah.edu](mailto:luther.mcdonald@utah.edu)) and Amy E. Hixon ([ahixon@nd.edu](mailto:ahixon@nd.edu))*
- **Young Investigators in Nuclear and Radiochemistry**  
*Organizers: Alison Tamasi ([tamasi.alison@epa.gov](mailto:tamasi.alison@epa.gov)) and Melissa Deri ([Melissa.deri@lehman.cuny.edu](mailto:Melissa.deri@lehman.cuny.edu))*
- **Seaborg Award Symposium in honor of Thomas Albrecht-Schmitt**  
*Organizer: Kenneth Raymond ([knraymond@gmail.com](mailto:knraymond@gmail.com))*
- **General Topics in Nuclear Chemistry and Technology**  
*Organizers: Jenifer Shafer ([jshafer@mines.edu](mailto:jshafer@mines.edu))*
- **Computational Methods in Lanthanide and Actinide Chemistry**  
*Organizers: Deborah Penchoff ([dpenchof@utk.edu](mailto:dpenchof@utk.edu)) and Charles Peterson ([charles.peterson@unt.edu](mailto:charles.peterson@unt.edu))*

### 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 will be available from January 14 through March 18. Please contact John Auxier II ([jauxier@utk.edu](mailto:jauxier@utk.edu)) for more information.

- **Celebration of the centennial of Rutherford's first nuclear reaction**  
*Organizers: Todd Bredeweg ([toddb@lanl.gov](mailto:toddb@lanl.gov)) and Donivan Porterfield ([dporterfield@lanl.gov](mailto:dporterfield@lanl.gov))*
- **Water Behavior in Concentrated Electrolytes**  
*Organizers: Sue Clark ([sue.clark@pnnl.gov](mailto:sue.clark@pnnl.gov)) and Aurora Clark ([auclark@wsu.edu](mailto:auclark@wsu.edu))*
- **Nuclear Forensics**  
*Organizers: John Auxier II ([jauxier@utk.edu](mailto:jauxier@utk.edu)), Nicole Vanagas ([nv137@georgetown.edu](mailto:nv137@georgetown.edu)), and LTC Geoffery Bull ([Geoffrey.Bull@usma.edu](mailto:Geoffrey.Bull@usma.edu))*
- **General Topics in Nuclear Chemistry and Technology**  
*Organizers: Jenifer Shafer ([jshafer@mines.edu](mailto:jshafer@mines.edu)) and Gian Surbella ([robert.surbella@pnnl.gov](mailto:robert.surbella@pnnl.gov))*
- **Molten Salt Reactor Chemistry**  
*Organizers: Kristian Myhre ([myhreckg@ornl.gov](mailto:myhreckg@ornl.gov)) and Joanna McFarlane ([mcfarlanej@ornl.gov](mailto:mcfarlanej@ornl.gov))*
- **Computational Methods for Lanthanides and Actinides**  
*Organizers: Deborah Penchoff ([dpenchof@utk.edu](mailto:dpenchof@utk.edu)) and Charles Peterson ([Charles.peterson@unt.edu](mailto: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. Tentative symposia are listed below. Please contact Amy E. Hixon ([ahixon@nd.edu](mailto:ahixon@nd.edu)) for more information or if you would like to volunteer to organize a symposium.

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

**NUCL DIVISON MEMBER HIGHLIGHT**

*Alison Tamasi, editor*



**Dr. John Auxier II**  
**Los Alamos National Laboratory**

While growing up, John Auxier was intrigued by his father's career at Rocky Flats, so it's no surprise that John's curiosity led him to pursue nuclear science. Dr. Auxier honed his knowledge of the field through targeted coursework at the University of Tennessee as well as taking advantage of opportunities such as the Nuclear Chemistry Summer School and internships at Los Alamos National Laboratory. But a moment that really resonated with John was his interaction with the Army FA52 component, who conduct applied radiochemistry in support of nuclear and counterproliferation efforts. He loved the mission-mindedness and customer focus needed to solve their rapid-response problems, and he thinks of his work differently knowing that there are real people with urgent problems relying on his science. Perhaps it is this grounded focus that has led to, and will continue to motivate, his impactful scientific contributions in response related nuclear forensics and applied post-det nuclear forensics. With such a passion for his work, it can be hard for John to find time for his hobbies, but he loves to snowboard and go fishing, and even pick up a banjo when the opportunities for playing some bluegrass crop up.

## **AWARDS NOMINATIONS COMMITTEE OF NUCL**

*Paul Mantica*

The Awards Nominations Committee of the Division was formed to encourage and facilitate nominations for national ACS awards. The Awards Nominations Committee members (Walter Loveland, Paul Mantica, Suresh Srivastava, Kimberly Thomas) will be approaching members to encourage nominations for ACS Fellows. The ACS Fellows Program was created by the ACS Board of Directors in December 2008 to recognize members of ACS for outstanding achievements in and contributions to science, the profession, and the Society.

A listing of ACS Fellows who are members of the NUCL division is posted on the division website

[www.nucl-acis.org/?page\\_id=89](http://www.nucl-acis.org/?page_id=89)

Additional information on ACS Fellows Program is available at:

[www.acs.org/content/acs/en/funding-and-awards/fellows.html](http://www.acs.org/content/acs/en/funding-and-awards/fellows.html)

The nomination deadline is expected to be the first week of April 2019.

# 43<sup>rd</sup> Actinide Separations Conference

## May 20-23<sup>rd</sup> 2019

### Kingsport, Tennessee



#### Purpose

The purpose of the Actinide Separations Conference is to provide a forum in which U.S. scientists and engineers can meet annually to present and discuss problems, experiences, results of research in progress, and other matters of interest concerning development, testing, and application of actinide and fission product separations chemistry and engineering.

Although the conference is intended for U.S. scientists and engineers, foreign scientists who are working in the field of actinide separations are also encouraged to participate.



#### Scope



- Presentation of results of both bench-scale and pilot plant-scale research and development (R&D) studies of new and/or improved methods, both aqueous and nonaqueous, and equipment for recovering, separating, and, where appropriate, purifying individual actinide elements and associated fission products or groups of actinides as well as associated fission products from any matrix for analytical, waste treatment, immobilization, or medical and industrial purposes.

- Discussions of plant-scale experience with and testing of new and/or improved technology and equipment for recovering, separating, and purifying actinide elements or associated fission products.
- Presentation and discussion of any technology or experience that is directly and clearly related to the separation of actinide elements or associated fission products.