



Division of Nuclear Chemistry and Technology  
*American Chemical Society*

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

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## NEWSLETTER JANUARY 2021

*Newsletter Editor: Andrew Klose*  
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### Topics

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- > ELECTION RESULTS
- > UPCOMING PROGRAMMING
- > NUCL DIVISION MEMBER HIGHLIGHT
- > NUCLEAR CHEMISTRY SUMMER SCHOOLS
- > 2020 CORYELL AWARDS
- > AWARDS NOMINATIONS COMMITTEE
- > ACTINIDE SEPARATIONS CONFERENCE

### FROM THE PAST CHAIR

*Tori Forbes*

I just wanted to write a short note of thanks to all of the NUCL members for their support this past year. It was quite a hectic time and I appreciated the flexibility as we worked through the issues related to the national meetings. I also want to thank those of you who attended the virtual business meeting in October 2020. We received a lot of great ideas through the open forum that we hope to work on in the future. I also look forward to working with the 2021 NUCL Chair, Professor Thomas Albrecht-Schönzart, during the coming year. Here's looking forward to a better 2021!

### FROM THE CHAIR

*Thomas Albrecht-Schönzart*

Welcome to the New Year! I wish all of you a healthy, safe, and productive 2021. While we all hoped that the world would return to normal by the end of 2020, it is abundantly clear that 2021 will represent a continuation of the challenges from 2020 as well as ones that none of us could have anticipated. The good news is that vaccinations have begun, and millions have already received their initial doses.

The end of the COVID-19 pandemic is finally on the horizon. Moreover, the NUCL division of ACS remains healthy and visible within the scientific community. Division members should anticipate either virtual meetings in 2021 or postponement of meetings to later years. The Spring ACS Meeting is entirely virtual but will be an active and important meeting for division members to attend. I suspect the Fall meeting will be virtual too given the slowness of vaccinations in the US and difficulties for international colleagues to enter the US. More topical conferences of interest to NUCL division members including *Mitigrations*, *Actinides*, and *Plutonium Futures* have all opted for in-person meetings after 2021 rather than occurring virtually. The greatest impact that these changes has had is on the education of students. Developing public speaking skills is a critical component of scientific training, and early career scientists must develop these skills to be successful. Furthermore, the formation of scientific networks and the initiation of new collaborations that occurs at in-person meetings have both suffered during the pandemic. I would encourage all of you to be creative in overcoming these impediments to your career development. I look forward to seeing all of you in person soon. In the meantime, stay safe, be patient, and focus on the good things in life.

## ELECTION RESULTS

Below are the results of the Fall 2020 NUCL Division Executive Committee Elections.

**NUCL Vice Chair 2021 (Chair Elect 2022, Chair and Program Chair 2023, Immediate Past Chair 2024)**

Richard Wilson – Argonne National Lab

**Councilor (2021 – 2023)**

Graham Peaslee – University of Notre Dame

## Alternate Councilors (2021 – 2023)

Paul Benny – Oak Ridge National Lab

Julie Ezold – Oak Ridge National Lab

## Member-at-Large (2021 – 2023)

Deborah Penchoff – Institute of Nuclear Security, University of Tennessee

## NATIONAL MEETING PROGRAMMING

### SPRING 2021 – Virtual

**APRIL 5 - 16, 2021**

*Theme: Bonding Through Chemistry*

The 261<sup>st</sup> ACS National Meeting & Exposition will be held April 5-16, 2021 and will be a virtual event. Please contact Tara Mastren for more information ([Tara.Mastren@utah.edu](mailto:Tara.Mastren@utah.edu)).

- **Seaborg Award Symposium in honor of Sue B. Clark**  
*Organizers: Janet Bryant ([janetsbliss@hotmail.com](mailto:janetsbliss@hotmail.com)), Amares Chatt ([A.Chatt@dal.ca](mailto:A.Chatt@dal.ca)), Aurora Clark ([auclark@wsu.edu](mailto:auclark@wsu.edu)), Nathalie Wall ([nathalie.wall@ufl.edu](mailto:nathalie.wall@ufl.edu))*
- **Radiotherapeutics: From Isotope Production to Targeted Delivery**  
*Organizers: Rebecca Abergel ([abergel@berkeley.edu](mailto:abergel@berkeley.edu)), Ethan Balkin ([Ethan.Balkin@science.doe.gov](mailto:Ethan.Balkin@science.doe.gov)), and Stosh Kozimor ([stosh@lanl.gov](mailto:stosh@lanl.gov))*
- **Young Investigators in Nuclear and Radiochemistry**  
*Organizers: Deborah Penchoff ([dpenchof@utk.edu](mailto:dpenchof@utk.edu)) and Dory Miller ([dmille84@vols.utk.edu](mailto:dmille84@vols.utk.edu))*
- **Computational Methods for Lanthanides and Actinides**  
*Organizers: Deborah Penchoff ([dpenchof@utk.edu](mailto:dpenchof@utk.edu)), Charles C. Peterson ([Charles.Peterson@unt.edu](mailto:Charles.Peterson@unt.edu)) and Theresa Windus ([twindus@iastate.edu](mailto:twindus@iastate.edu))*

- **General Topics in Nuclear Chemistry and Technology**  
*Organizers: Thibaut Lécrivain (Thibaut.Lecrivain@inl.gov) and Kristian G. Myhre (myhregk@ornl.gov)*
- **Artificial Intelligence Applications in Nuclear- and Radiochemistry**  
*Organizers: Deborah Penchoff (dpenchof@utk.edu) and Charles C. Peterson (Charles.Peterson@unt.edu)*

## NUCL DIVISION MEMBER HIGHLIGHT

*Alison Tamasi, Editor*



*Dr. Brian Powell  
Fjeld Professor in Nuclear Environmental  
Engineering and Science  
Clemson University*

Dr. Brian Powell's favorite piece of wisdom to share is that nobody can do everything, so judiciously refining one's research focus and developing strong collaborations is key to success. It's fitting advice from someone so accomplished in the unique and challenging niche of environmental radiochemistry. Originally a student of environmental chemistry, Brian was introduced to the world of nuclear chemistry through an internship doing industrial waste processing research at what is now Savannah River National Lab. But what really captured Dr. Powell's imagination was taking his knowledge of

radiochemistry and working alongside Annie Kersting and Mavrik Zavarin to observe radioisotope movements at the kilometer scale while doing field research at the Nevada National Security Site and Daniel Kaplan at the Savannah River Site. It's easy to see how these experiences shaped the research pursuits that Brian honed in on – studying radioisotope mobility in natural and engineered systems – which he pursues with infectious passion and enthusiasm. At home Brian unwinds by being an avid homebrewer, working with his wife, Melissa, in her tea and herb shop, and spending quality time with his wonderful 10-year-old daughter, Mae.

## DOE & ACS NCSS 2021

*Lynn Francesconi, Director*

We request your assistance in identifying outstanding undergraduates who might be interested in, and qualified for, the Department of Energy and American Chemical Society sponsored Nuclear and Radiochemistry Summer School Program. We are seeking curious and highly motivated students with strong science backgrounds. If selected, these students receive an all-expense paid opportunity to complete a 6-week summer course (June 14, 2021 – July 23, 2021) in Nuclear and Radiochemistry in either California or New York. They also earn hours (tuition paid) of undergraduate chemistry credit through either San Jose State University or SUNY-Stony Brook. Selected students also receive a stipend of \$4,000.

An announcement for the Nuclear and Radiochemistry Summer Schools that can be distributed to students is attached to this Newsletter. It describes the application procedure and the background we hope applicants will have when applying. Students must be US citizens. This information and an on-line application form can also be found on the web at:

[https://www.nucl-acs.org/?page\\_id=1731](https://www.nucl-acs.org/?page_id=1731)

The deadline for applications is February 1, 2021. Please distribute this announcement to your undergraduate students and encourage them to consider this unique opportunity! If you or your students have any questions about the DOE and ACS sponsored program, please do not hesitate to contact me at [Lfrances@hunter.cuny.edu](mailto:Lfrances@hunter.cuny.edu).

## 2020 CORYELL AWARD RECIPIENTS

Congratulations to Andrew Mitchell (University of Missouri – Columbia) and MaKenna Koble (Augustana University), our 2020 recipients of the Charles D. Coryell Award. This award honors undergraduate students who have completed research projects on nuclear or nuclear-related areas. The contributions are judged on the basis of ingenuity, novelty, and potential usefulness. MaKenna's project focused on developing a Python-based program for use with an iodine saturated absorption spectrometer and Andrew synthesized Tc(III) and Re(III) Schiff-base complexes for radiopharmaceuticals. They will receive a monetary award and honored at the next NUCL business meeting.

## AWARDS NOMINATIONS COMMITTEE OF NUCL

*Thomas Albrecht-Schönzart*

The Awards Nominations Committee of the Division was formed to encourage and facilitate nominations for national ACS awards. Please nominate a colleague for one of the awards given below or another ACS award (<https://www.acs.org/content/acs/en/funding-and-awards/awards/national.html>).

The Awards Nominations Committee members 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-acs.org/?page\\_id=89](http://www.nucl-acs.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)

Suggestions and questions should be addressed to Thomas Albrecht-Schönzart ([talbrechtschnoezart@gmail.com](mailto:talbrechtschnoezart@gmail.com)).

# ACTINIDE SEPARATIONS CONFERENCE

The [Actinide Separations Conference](#) will be held virtually May 18-20, 2021, and will be hosted by Pacific Northwest National Laboratory. Registration and the call for abstracts are open.

This is a forum where scientists and engineers 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.

Conference topics include:

- Actinide and lanthanide separations
- Speciation and redox chemistry of actinide elements
- Used nuclear fuel reprocessing
- Pyrochemical processing of *f*-elements
- *f*-element chemistry in molten salts and ionic liquids
- Fission product chemistry as it relates to actinide separations
- Medical isotopes production and separations
- Actinide forensics
- Safeguards and analytical developments

Early registration costs \$75 through March 31, then is \$100. There are additional registration discounts for students and retirees.

Abstracts are due April 1, as are nominations for the Glenn T. Seaborg Actinide Separations Award. The submission forms are found on the website.

Find more details on the [Actinide Separations Conference event website](#). For program questions or sponsorship opportunities, contact Gregg Lumetta ([gregg.lumetta@pnnl.gov](mailto:gregg.lumetta@pnnl.gov), 509-375-5696) or Gabe Hall ([gabriel.hall@pnnl.gov](mailto:gabriel.hall@pnnl.gov), 509-375-5716).

##

Event URL: <https://pnnl.cvent.com/events/actinide-separations-conference-2021/event-summary-42ee392ba87049268862201c5175a17d.aspx>

Alternate URL on the PNNL Events web page:

<https://www.pnnl.gov/events/actinide-separations-conference>

# EARN CASH & COLLEGE CREDIT !

## NUCLEAR & RADIOCHEMISTRY UNDERGRADUATE SUMMER SCHOOL

San Jose State University  
San Jose, CA

Brookhaven National Lab  
Long Island, NY

**June 14, 2021 through July 23, 2021**



The **U.S. Department of Energy** and the **American Chemical Society**, Division of Nuclear Chemistry and Technology, sponsor an **INTENSIVE 6-week courses** in **Nuclear and Radiochemistry** for undergraduates held in San Jose or Brookhaven with 12 students each. Funding is provided by the U.S. Department of Energy.

### AWARDS

Provided are a **stipend of \$4000**, all tuition and fees, housing, transportation to and from the Summer School location, books, and laboratory supplies. Transferable college credit is awarded through the ACS accredited chemistry programs at San Jose State University (7 units) or the State University of New York at Stony Brook (6 units).

### QUALIFICATIONS

Candidates should be undergraduates with an interest in nuclear science who are presently in their sophomore or junior year of study at a US college or university. They should have completed at least two years of chemistry, one year of physics, and one year of calculus. Applicants must be US citizens.

### APPLICATION

**Completed applications must be received no later than February 1, 2021.** See website below for application form. Announcement of awards will be made in early March 2021.

### COURSE DESCRIPTION

The course consists of lectures on the fundamentals of nuclear science, radiochemistry, and their applications in related fields. Laboratory work introduces state-of-the-art technology and instrumentation used in basic and applied nuclear science. Also included are a Guest Lecture Series and tours of nearby research centers at universities, National Laboratories, and other nuclear facilities. Students meet and interact with prominent faculty and scientists who are working in nuclear and radiochemistry, nuclear medicine, nuclear forensics, and related fields.

### ADDITIONAL OPPORTUNITIES

Participants are encouraged to join a research project for the following summer. Assistance will be provided to secure these summer positions and for admission to PhD programs at leading universities. An **“Outstanding Student”** is selected from each summer school site to attend the American Chemical Society national meeting the following Spring, all expenses paid.

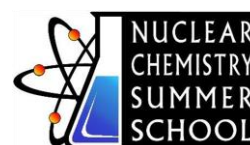
#### FOR MORE INFORMATION:

Dr. Lynn Francesconi  
Director, Nuclear & Radiochemistry Summer School  
Professor, Dept Chemistry, Hunter College, CUNY

Tel: 212-772-5353 Fax: 212-772-5332  
Email: [lfrances@hunter.cuny.edu](mailto:lfrances@hunter.cuny.edu)

#### ON-LINE APPLICATION FORM:

[www.nucl-acs.org/?page\\_id=1731](http://www.nucl-acs.org/?page_id=1731)



### IMPORTANT NOTICE

Due to COVID-19, this information is subject to change. Additional requirements may be added.