



Division of Nuclear Chemistry and Technology  
*American Chemical Society*

NUCL WWW Home Page – <http://www.nucl-acs.org>

## NEWSLETTER

April 2016

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#### FROM THE CHAIR – *Paul Benny*

NUCL Division members,  
Firstly, I would like to thank Dave Hobart for his service as Chair of the NUCL division last year. He did an excellent job organizing and directing the NUCL division, while interfacing with ACS. We are grateful for his contributions and service over the years to help lead the division. If you haven't received a 50 year anniversary pin for the NUCL division (formerly known as Division of Nuclear Chemistry and Technology (DNCT)) that Dave helped put together, we will still have some available that can be handed out at the next meeting.

We had another successful national meeting at San Diego, CA during the week of March 13th-17th. If you weren't able to make the meeting, you missed some exciting presentations from new investigators to pillars in the nuclear field. There were 140 papers presented across six symposia throughout the week. Most of these symposia honored our NUCL division members (Albrecht-Schmitt, Kersting, Martin, Polinski, Sattelberger).

Chair, 2016

Program Chair, 2016

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**SILVIA JURISSON**, 2014-2016

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Alternate Councilor

**DAWN A. SHAUGHNESSY**, 2015-2017

Members-at-Large, Executive Committee

**SUZANNE LAPI**, 2015-2017

**SUE CLARK**, 2016-2018

It is also noteworthy that several NUCL division members received national awards that were recognized at the ACS awards banquet in San Diego reflecting on their high impact contributions and influence on the scientific field.

The upcoming fall meeting will be in Philadelphia, PA in August 2016. We have a number of diverse symposia to present papers in: the Glenn T. Seaborg Award: Philip Horwitz, Nuclear Forensics, Nuclear Modeling & Simulation, Physicochemical Characterization of Nuclear Fuels, and Surface Chemistry of Actinides & Fission Products. Please mark it on your calendar and hopefully we will see you in Philadelphia.

The Nuclear Science Advisory Committee (NSAC) met on March 23, 2016 in Washington D.C. to discuss current state and developments in the nuclear science field. More information can be found on the NSAC meeting minutes at the NSAC homepage (<http://science.energy.gov/np/nsac/>). Current trends in funding suggest a positive outlook for nuclear science. DOE and NSF directors' budget projections are estimated with positive growth in allocations of 2-6% for FY 2017 pending congressional approval.

## NUCL MEMBER HIGHLIGHTS

*Alison Tamasi (editor)*



*Dr. Christopher Cahill  
Professor of Chemistry and International Affairs,  
George Washington University  
American Institute of Physics State Department Fellow*

As a professor, Chris Cahill is extremely well-versed in learning and the development of new knowledge. After years of teaching the basics of nuclear science to the best and the brightest policy students – those destined to make key decisions – he decided to approach the intersection of science and policy from the other perspective and immerse himself as a scientist in learning policy during a sabbatical at the US State Department. Though he has an extensive background in uranium chemistry and the synthesis of hybrid materials, in his position as an American Institute of Physics State Department Fellow Dr. Cahill is gaining unique and detailed knowledge of how nuclear chemistry informs policy and vice versa, which he can pass on to his students when he returns to teaching in the fall. One of the most stark differences he has noticed thus far is the pacing of policy – whereas collaborations in science can take only a short time to develop into meaningful data, a policy effort can take several years to develop and represents a much greater time and energy commitment. While Chris is busily applying his nuclear knowledge to policy, just a few blocks away his research group is making breakthroughs in the elucidation of assembly criteria for the noncovalent interactions of actinide complexes. And when he is not busy pushing the boundaries of knowledge, Chris is happily spending time with his wife Cathy and their 3-year-old son Wesley, who will no doubt grow up to inherit his father's love of learning.



*Dr. Philip Wilk  
DOE Office of Science, Heavy Element Chemistry  
Program Manager*

Philip Wilk could legally operate a nuclear reactor before he could legally have an alcoholic drink. Thanks to his experience with the undergraduate-run TRIGA reactor at Reed College, Philip found an early interest in nuclear and radiochemistry. He developed that interest into a career by learning from radiochemistry giants Glenn Seaborg and Darlene Hoffman while studying superheavy elements (105 and 107) before moving on to work at Lawrence Livermore National Laboratory. Though his primary research focus at LLNL was plutonium chemistry, Philip continued contributing to the field of superheavy element chemistry as part of the Dubna-Livermore collaboration, which is the group responsible for the discovery of several new elements. These most recent additions to the periodic table include elements 113, 115, 117, and 118. Perhaps due to his early head-start as a nuclear chemist or more likely due to his impressive dedication to the field, Philip's career quickly progressed, and when Lester Morss retired, Philip was hired into his position as a program manager of heavy element chemistry, where he oversees a diverse portfolio of nuclear chemistry research. Though he sometimes misses lab work, Dr. Wilk is impacting the field every day by busily fostering the forward momentum of heavy element research progress. He

punctuates his busy working life by using his pilot's license to fly Cessna aircraft as part of a local flying club.

## **MEMBERS IN THE NEWS**

Silvia Jurisson, Professor of Chemistry at the University of Missouri-Columbia and Councilor for the NUCL Division, along with her research team recently received a patent for their work in the field of nuclear medicine. The patent was awarded for the development of a method to bind arsenic radioisotopes to thithiol complexes. The patented method could prove invaluable in battling small-cell cancers in the body. A news release can be found by clicking on the following link:

<http://www.newswise.com/articles/nuclear-medicine-tools-could-be-beneficial-in-the-fight-against-several-human-cancers>

Congratulations, Silvia!

## **COUNCILOR'S REPORT**

*Graham Peaslee and Silvia Jurisson*

The Nuclear Division, by virtue of the size of its membership is represented in the ACS governing body (the Council) by two divisional councilors who are elected by the Division. There are also several local section councilors who happen to be NUCL division member who are elected to serve by their local sections.

In addition to attending the ACS meeting and serving on the NUCL executive committee these councilors attend a Wednesday morning Council meeting to discuss (and vote upon) new business for the ACS, and to listen to a series of reports from the numerous ACS committees. Your divisional councilors attended this meeting and some of the highlights of our activities are listed below.

At the San Diego meeting, there were 16,237 attendees registered (including 5979 students). The next meeting will be held in

Philadelphia, PA on August 21-25, 2016, while subsequent ACS national meetings will be held in San Francisco, CA on April 2-6, 2017, and Washington, DC on August 20-24, 2017. There will be NUCL division programming at each of these national meetings and the abstract submission deadlines will be about six months in advance of the meeting.

The Council selected Peter K. Dorhout and Thomas R. Gilbert as candidates for 2017 President-Elect.

The Council voted to set the member dues for 2016 at the fully escalated rate of \$166. This rate is established pursuant to an inflation-adjustment formula in the ACS Constitution and Bylaws.

Silvia remains a member of the Meetings and Expositions Committee and Graham remains a member of the Nomenclature, Terms & Symbols Committee.

If there are any ACS governance issues you would like to see addressed, please don't hesitate to contact either of your divisional councilors.

## NUCL STUDENT AWARD WINNERS

The 2015 Nuclear and Radiochemistry Summer School Outstanding Student Awards and the 2015 Coryell Award for Undergraduate Research in Nuclear Chemistry were presented to the recipients during the Spring 2016 ACS meeting. Congratulations to the winners: Outstanding Student (Brookhaven) – Christopher Caroff (Westminster University); Outstanding Student (San Jose) – Ellen Monzo (U. of Minnesota-Duluth); Coryell Award - Ashlyn Jones (U. of Tennessee-Knoxville).

Thank you to Dave Hobart for submitting photos of the award recipients.



*Graham Peaslee (right) presents Ashlyn Jones with the 2015 Coryell Award.*



*Dave Robertson (right), chair of the Nuclear and Radiochemistry Summer School, presents Ellen Monzo with the 2015 NCSS Outstanding Student Award (San Jose location).*



*Dave Robertson (right) presents Christopher Caroff with the 2015 NCSS Outstanding Student Award (Brookhaven location).*

## UPCOMING PROGRAMMING

### FALL 2016 – PHILADELPHIA, PA August 21 – 25, 2016 (*Jeff Terry*)

The abstract submission deadline for the Philadelphia ACS Meeting has passed. The symposia are listed below. Please contact Jeff Terry ([terryj@iit.edu](mailto:terryj@iit.edu)) for more information.

- **Seaborg Award Symposium – In Honor of E. Philip Horwitz**  
*Organizers: Mark Jensen, Mark Dietz*
- **Nuclear Modeling and Simulation**  
*Organizers: Todd Bredeweg, Suzanne Lapi*
- **Nuclear Forensics**  
*Organizers: John Auxier, Andy Giminaro, Todd Bredeweg*
- **Physicochemical Characterization of Nuclear Fuels**  
*Organizer: Jeff Terry*
- **Surface Chemistry of Actinides and Fission Products**  
*Organizer: Daniel Velazquez*
- **Polymeric Materials as Imaging Agents & Theranostics**  
*(Co-sponsored with POLY, POLY is the primary sponsor)*
- **Radiopharmaceutical Chemistry**  
*(Co-sponsored with FLUO, MEDI, INOR, POLY, FLUO is the primary sponsor)*

### SPRING 2017 – SAN FRANCISCO, CA April 2 – 6, 2017 (*Amy Hixon*)

We anticipate the call for symposia papers to be in July 2016. Tentative symposia are listed below. Please contact Amy Hixon ([ahixon@nd.edu](mailto:ahixon@nd.edu)) if you are interested in chairing a symposium.

- **NUCL Summer School Reunion**  
*Organizer: Dale Ensor*
- **Archaeometry in Nuclear Chemistry** *Organizer: Rachel Popelka-Filcoff*
- **Nuclear Fission**  
*Organizers: Todd Bredeweg and Bob Rundberg*
- **Young Investigators in Nuclear and Radiochemistry**
- **Seaborg Award Symposium**

## ADDITIONAL MEETINGS

**The Plutonium Futures - The Science conference** will be held in Baden-Baden, Germany, September 18-22, 2016. This conference is a series of conferences to provide an international forum for the presentation and discussion of current research on the physical and chemical properties and environmental interactions of plutonium and closely-related actinide elements. The conference is co-sponsored by the European Commission (EU), the Commissariat à l'Energie Atomique et aux Energies (CEA), France and the Atomic Weapons Establishment (AWE), United Kingdom. Abstract submission is now open and will continue until April 30, 2016. More information can be found at <http://www.pufutures2016.eu/>

**The 16<sup>th</sup> International Workshop on Targetry and Target Chemistry (WTTC16)** will be held in Santa Fe, NM from August 19<sup>th</sup> to September 1<sup>st</sup> of 2016. Abstract submission is now open and closes April 30<sup>th</sup>. Please visit the workshop website for more information: (<http://www.wttc16.us/>).

## AWARD NOMINATIONS COMMITTEE OF NUCL

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

(<http://www.acs.org/content/acs/en/funding-and-awards/awards/national.html>).

**W. Frank Kinard Distinguished Service Award**, established in 2014, recognizes NUCL members for outstanding service to the Division and the field of nuclear science -- Nomination procedures are given on the NUCL website ([http://www.nucl.acs.org/?page\\_id=611](http://www.nucl.acs.org/?page_id=611)) and the next deadline is **July 1, 2016**.

Suggestions and questions should be addressed to Steve Yates ([yates@uky.edu](mailto:yates@uky.edu); 859-257-4005).

## Coryell Award for Undergraduate Research

Please note that the award deadline for the Coryell Award for undergraduate research has been moved back this year until September 1<sup>st</sup>. Any undergraduate who has been actively doing research in the nuclear chemistry field in the previous year is eligible for consideration of this award. To nominate a student for this award (which includes a certificate and a \$1000 check), please submit a sample of the student's work (in the form of a written report or a publication), together with a nomination letter from the research mentor that describes the extent and the nature of the student's involvement in the research. All the application materials should be emailed to Graham Peaslee ([peaslee@hope.edu](mailto:peaslee@hope.edu)) before September 1.

# Call for Papers:

## Nuclear and Radiochemistry Summer School: Past, Present, and Future

254<sup>nd</sup> National Meeting of the  
American Chemical Society  
San Francisco, CA April 2 – 6, 2017

*Sponsored by the Division of Nuclear Chemistry and Technology (NUCL)  
of the American Chemical Society*

Abstracts are invited from graduates of the nuclear science summer school. Talks should focus on how your experience at the summer school provided focus for your career in nuclear and radiochemistry. The purpose of the symposium is to highlight the importance of the summer school in recruiting current and future generations of scientists. Speakers are encouraged to present past and current research.

Organized by:

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Abstracts will be due in the fall of 2016. You should submit your abstract using Online Abstract Submittal Form System (OASys) at <http://abstracts.acs.org/>. Feel free to contact the organizers to indicate your interest or to answer any questions.