



Division of Nuclear Chemistry and Technology
American Chemical Society

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

NEWSLETTER
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Abstracts for NUCL Division programming at the spring ACS Meeting in San Diego are due on October, 21st.

FROM THE CHAIR – Dave Hobart

Attendance at the Boston ACS meeting was somewhat leaner than previous national meetings most likely due to competition from related meetings in Hawaii, Santa Fe, and Europe. In Boston, 29 Technical Divisions and 4 Committees accepted 9,291 Papers with 836 Half-day Oral Sessions and 135 Poster Sessions with the theme, “Innovation from Discovery to Application”. The NUCL Division hosted 3 symposia in the seaport World Trade Center with 132 Papers presented orally. These symposia included: “Analytical Chemistry in Nuclear Technology”; “Transformation and Transport of Radionuclides in the Environment”; and “General Topics in Nuclear and Radiochemistry”. NUCL also co-sponsored the Division of Industrial and Engineering Chemistry Division Fellow Symposium in Honor of Kenneth Nash. Breaking with the Monday tradition, the NUCL Business Meeting was held Tuesday, August 18, followed by the Social Hour. Distribution of the NUCL 50th Anniversary lapel pins was carried out at the Boston meeting.

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Abstract submission is now open for the 2016 ACS Spring National meeting in San Diego with the theme, "Computers in Chemistry". When you are submitting abstracts please note that now there is a button you can select that is titled "Nuclear". Thanks to all members who encouraged the ACS to add this button. Six NUCL symposia are being organized for the San Diego meeting. The Program Chair for the San Diego meeting is Amy Hixon (amy.hixon.2@nd.edu). The symposia will include: "Symposium in Honor of Richard Martin - Tackling the Challenging Electronic Structure of Actinides"; "Young Investigators in Nuclear & Radiochemistry"; "Heavy Element Inorganic Chemistry – Tribute to Al Sattelberger"; "General Topics in Nuclear and Radiochemistry"; and two awards symposia. The 2016 Fall National ACS meeting will be in Philadelphia, PA with the theme, "Chemistry of the People, by the People and for the People." Please contact Paul Benny, NUCL Chair-Elect (bennyp@wsu.edu) or Amy Hixon if you are interested in organizing a symposium for this meeting.

Additional Meeting Announcements

The 2015 ACS Combined Southeastern/Southwestern Regional (SERMACS/SWRM) meeting will be in Memphis, TN November 4-7 at the Sheraton Memphis Downtown.
<http://sermacs.org/meetings/index.html>.

The 2015 International Congress of Pacific Basin Societies (PACIFICHEM) will take place in Honolulu, Hawaii December 15-20, 2015. The program for the congress is available at:
www.pacificchem.org/symposiadesc2015/

Housing reservations opened February 1, 2015, and Registration started in June 2015. NUCL Division has submitted an Innovative Grants Proposal to support student

participation at this conference. For more information on PACIFICHEM please visit:
www.pacificchem.org.

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. The first announcement is forthcoming.

NETZSCH is hosting the **2nd Ceramics and Nuclear Materials Workshop** in Albuquerque, NM, May 10-12, 2016. The workshop will provide a forum for scientists to present their latest research results obtained by using various thermoanalytical and thermophysical property testing methods. The workshop is designed to engage lively discussion and exchanging of ideas regarding thermal analysis as applied to nuclear materials. Renowned keynote speakers from all over the world will present a summary of state-of-the-art thermal analysis applications, including nuclear fuels based on metals, oxides, and molten salts, cladding materials, loss-of-coolant accidents (LOCA), nuclear waste management, energy storage, and alternative energy production. More details on this meeting can be found at www.cnw2016.com.

2016 ACS National Awards

In September the 2016 ACS National Award winners were announced. Congratulations are extended to: The Seaborg Award winner,

E. Philip Horwitz; The Garvan-Olin Medal recipient, Annie Kersting; and The Nobel Laureate Signature Awardees for Graduate Education in Chemistry, Thomas Albrecht-Schmitt (preceptor) and Matthew Polinski (student). These are important and prestigious awards and all NUCL Division members should consider nominating their colleagues or themselves for ACS National and NUCL Division awards.

2015 ACS Fellows

The 2015 class represents 25 National Committees, 31 Divisions, and 48 Local Sections of the ACS. NUCL Division nominated 4 well qualified candidates. I am pleased to announce that 1 of these was selected. Congratulations to Alice Mignerey for ACS Fellow recognition.

Nuclear Science Advisory Committee (NSAC) Updates

Suzanne Lapi and I attended the NSAC meeting on July 16th in Bethesda, MD. The “2015 Long Range Plan: Isotopes for the Nation’s Future” was accepted by the committee. Several NUCL members are participating on this subcommittee, including Suzanne Lapi, Dave Robertson, Mark Stoyer, and Scott Wilbur. The Subcommittee Chair is Larry Cardman (cardman@jlab.org).

Reports on Molybdenum-99 and Neutrinoless Double Beta Decay were approved and are forthcoming. The NSAC committee also discussed the Long Range Plan (LRP). Paul Mantica represented the NUCL division on the LRP writing group, and had responsibility for leading the chapter on Broader Impacts. The LRP Writing Group submitted the final LRP draft in September 2015. The NSAC will vote on acceptance at a Washington, D.C. meeting on October 15th and 16th. Updates on the LRP process will be provided on the

American Physical Society’s Division of Nuclear Physics website: www.aps.org/units/dnp/.

NUCL Division Elections

Please vote in the upcoming elections for Vice Chair 2016 (Chair Elect 2017, Chair and Program Chair 2018, Immediate Past Chair 2019) and Member at Large 2016-2018. The candidates are listed later in this Newsletter.

NUCL MEMBER HIGHLIGHT – *Alison Tamasi (editor)*

The member highlighted in this edition of the NUCL newsletter is Dr. Andy Boswell from the Genentech.

When his undergraduate professor Dale Ensor at Tennessee Technological University first



introduced Andy to nuclear science by suggesting he attend the Nuclear and Radiochemistry Summer School at San Jose State University, it was the beginning of a career-long connection to both nuclear science and to the

summer school. There Andy met his graduate advisor, Carolyn Anderson, who was herself an alumna of the Nuclear Chemistry Summer School, and he completed his PhD with Carolyn at Washington University in St. Louis in 2004. These days, Andy works at Genentech in California, utilizing radioisotopes as key tools to analyze large molecules with potential biotherapeutic applications, such as using I-125 as a tracer for Tyrosine residues or using radiometals such as In-111 and Zr-89 to map pharmacokinetics. But for the past several years, Andy has also graciously agreed to come and lecture for the Nuclear Chemistry Summer School at San Jose State. There he

helps to pay forward to the next generation the passion for nuclear science that the summer school once engendered in him.

UPCOMING PROGRAMMING - *Dave Hobart, Jeff Terry, Amy Hixon*

Spring 2016 – San Diego, CA – March 13 - 17, 2016 (*Amy Hixon*)

General Topics in Nuclear & Radiochemistry (Dave Hobart)

Symposium in Honor of Richard Martin - Tackling the Challenging Electronic Structure of Actinides (Aurora Clark, auclark@wsu.edu; Enrique Batista, erb@lanl.gov)

Young Investigators in Nuclear & Radiochemistry (Amy Hixon, ahixon@nd.edu; Lindsay Shuller-Nickles, lschulle@clemson.edu)

Heavy Element Inorganic Chemistry – Tribute to Al Sattelberger (David Clark, dlclark@lanl.gov; David Shuh, dkshuh@lbl.gov; Lynne Soderholm, ls@anl.gov)

Nobel Laureate Signature Award for Graduate Education in Chemistry: Symposium in Honor of Matthew Polinski & Thomas Albrecht-Schmitt (Thomas Albrecht-Schmitt, talbrechtschmitt@gmail.com)

Environmental Chemistry of Actinides: Francis P. Garvan-John M. Olin Medal Award Symposium in Honor of Annie B. Kersting (Mavrik Zavarin, zavarin1@llnl.gov; James Begg, begg2@llnl.gov)

Fall 2016 – Philadelphia, PA – August 21 – 25, 2016

The call for symposia papers will be submitted no later than December 1, 2015. Tentative symposia are listed below. Please contact Jeff Terry (terryj@iit.edu) if you are interested in chairing a symposium.

Modeling and Simulation (Todd Bredeweg; Susan Lapi)

Archaeometry in Nuclear Chemistry (Rachel Popelka-Filcoff)

Radiopharmaceuticals

Nuclear Forensics (John Auxier; Andy Giminaro)

Seaborg Award Symposium – In Honor of E. Philip Horwitz

Spring 2017 – San Francisco, CA - April 2 – 6, 2017

The call for symposia papers will be in July 2016. Tentative symposia are listed below. Please contact Amy Hixon (ahixon@nd.edu) if you are interested in chairing a symposium.

NUCL Summer School Reunion (Dale Ensor)

Nuclear Fission (Todd Bredeweg; Bob Rundberg)

Young Investigators in Nuclear and Radiochemistry

Seaborg Award Symposium

NUCL DIVISION ELECTION CANDIDATES

Candidates for NUCL Vice Chair 2016 (Chair Elect 2017, Chair and Program Chair 2018, Immediate Past Chair 2019):

- **Lynn C. Francesconi**, Hunter College, CUNY
- **Nathalie Wall**, Washington State University

Candidates for Member at Large 2016-2018:

- **Edward Baum**, Knolls Atomic Power Laboratory
- **Sue Clark**, Pacific Northwest National Laboratory

Candidate Biographies:

Lynn C. Francesconi, PhD is a professor of chemistry with tenure at Hunter College of the City University of New York (CUNY). She is the founder and director of the Radiochemistry Graduate Program at Hunter College/CUNY that seeks to introduce Radiochemistry and Nuclear Chemistry into Ph.D. graduate student training in high impact multi-disciplinary, multi-institution projects. This program has catalyzed a number of collaborative projects between science faculty at Hunter College and partnering institutions (medical institutions, national laboratories, industry) and has stimulated interest in radiochemistry and nuclear chemistry across Hunter College and the City University of New York. Professor Francesconi leads a research effort on the chemistry of radioactive metals including radiolanthanides. She has worked in this area for over 30 years in industry, medical schools and academia. Her work focuses on fundamental chemistry of radiometals, medical applications of radiometals, technetium-99 chemistry for Advanced Nuclear Energy Systems and environmental

remediation. Her research is funded by National Institutes of Health, National Science Foundation, Department of Energy and private foundations. She is a Visiting Researcher at Memorial Sloan Kettering Cancer Center in the Department of Radiology (2010- present). She was the Madame Curie Lecturer for the Royal Australian Chemical Institute in 2011. She has served on the Editorial Advisory Board of Inorganic Chemistry (2009-2012). She served on a number of Department of Energy panels, and on NIH and NSF study sections. Professor Francesconi began her academic career at Hunter College in the Chemistry Department in 1992 as an Assistant Professor. Prior to joining Hunter College, she was a Research Assistant Professor at the University of Pennsylvania in the Department of Radiology (1989-1992) and an investigator at Squibb Institute for Medical Research (1983-1989). Professor Francesconi received her BA from Ithaca College (Ithaca, NY) and her Ph.D. from the University of Illinois (Urbana, IL).

Nathalie A. Wall is an Associate Professor of Chemistry at Washington State University. She holds a Doctorate from the University of Paris (France) and was a post-doctoral fellow in the Chemistry Department of Florida State University. She worked in the Nuclear Waste Repository Department of the French Commissariat à l'Energie Atomique (Atomic Energy Agency, France) during her doctoral studies; she was a staff member in the Nuclear Waste Repository Sciences Department at Sandia National Laboratories before moving to WSU. Her research focuses on environmental behavior of radionuclides, for applications in nuclear waste management and nuclear forensics - additional information can be found on her website <http://nawall.chem.wsu.edu/>. N. Wall has been an ACS and NUCL Division (formerly DNCT) member since 2001. She currently is a member of the ACS Glenn T. Seaborg Award Canvassing Committee and Chair Elect of the

ACS Washington-Idaho Border Section. She has organized and chaired several ACS symposia and participated to the 2007 and 2014 ACS/NUCL Division Strategic Planning activity.

Edward Baum, BMPC- Knolls Atomic Power Lab (Edward.Baum@unnpp.gov), received a M.S. in Nuclear Chemistry from the University of Maryland (1986) and a Ph.D. in Nuclear Chemistry (1993) from the University of Kentucky. While at the University of Kentucky, he spent two summers as a teaching assistant at the Summer School in Nuclear and Radiochemistry at Brookhaven. In 1993, he started at Knolls Atomic Power Lab, as a lab scientist. He is a co-author on Nuclides and Isotopes: Chart of the Nuclides, 15th, 16th, and 17th editions. He was an Adjunct Professor at RPI (1994-95) teaching the Nuclear Chemistry and Radiochemistry courses. In 2010, he became manager of the current Radio & Analytical Chemistry unit within KAPL. He has been a member of the ACS and the NUCL division since 1983.

Sue B. Clark, PhD holds the position of Battelle Fellow in the Energy and Environment Directorate with Pacific Northwest National Laboratory and Regents Distinguished Professor of Chemistry with tenure at Washington State University in Pullman, Washington. In this joint appointment, she leads a research effort focused on the chemistry and chemical engineering of processing nuclear materials. Her current research areas include radioanalytical chemistry, environmental chemistry, chemistry of radioactive waste systems, and actinide separations. She began her current position as a joint appointee in January, 2015. She began her academic career at WSU in the Chemistry Department in 1996 as an Assistant Professor, and served as Department Chair (2005- 2007). She also served as Interim Vice Chancellor for Academic Affairs at WSU's Tri-Cities campus

(2008), and Interim Dean of the College of Sciences (WSU system-wide) in 2010. Prior to joining Washington State University, she was an Assistant Research Ecologist at the University of Georgia's Savannah River Ecology Laboratory (1992-1996), and Senior Scientist at Westinghouse Savannah River Company's Savannah River Technology Center (1989-1992). Prof. Clark is a fellow of the American Association for the Advancement of Science (AAAS), the American Chemical Society (ACS), and is the 2012 recipient of the ACS's Olin-Garvan Medal. In the Nuclear Division, she has served as the Director of the Nuclear and Radiochemistry Summer Schools (2001-2006), and Alternate Councilor (~1998-2001). She is also an elected member of the Washington State Academy of Sciences, and an elected member of the Governing Board for the US Council for Chemical Research from 2009 to 2011. She held an appointment to the US Nuclear Waste Technical Review Board, appointed by President Barack Obama (2011-2014). She also served on the National Academy's Nuclear and Radiation Studies Board (2004-2009), and has been a member of many of the study committees established by the Board. She served on the Basic Energy Sciences Advisory Committee for the U.S. DOE (2003 – 2011), and has served as a consultant to Battelle Memorial Institute, the Helmholtz Association of German Research Centers, and the International Atomic Energy Agency. She holds a BS degree in Chemistry from Lander College (Greenwood, SC) and MS and PhD degrees in Chemistry from Florida State University (Tallahassee, FL).

AWARD NOMINATIONS COMMITTEE OF NUCL – *Steve Yates*

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>).

Glenn T. Seaborg Award for Nuclear Chemistry

(<http://www.acs.org/content/acs/en/funding-and-awards/awards/national/bytopic/glenn-t-seaborg-award-for-nuclear-chemistry.html>) --

Nominations are initiated by individuals and the procedures are given on the ACS website. The next deadline is **November 1, 2015**.

ACS Fellows

(<http://www.acs.org/content/acs/en/funding-and-awards/fellows.html>) -- Nominations can be initiated by individuals; however, the Division can nominate up to four individuals as ACS Fellows annually. Nominations for the 2016 class of Fellows are scheduled to **open February 1, 2016** and **close April 1, 2016**.

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) and the next deadline is **July 1, 2016**.

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