



Division of Nuclear Chemistry and Technology
American Chemical Society

NUCL WWW Home Page – <http://www.cofc.edu/~nuclear>

Chair, 2013
Program Chair 2013
ROBERT S. RUNDBERG
Los Alamos National Laboratory
P.O. Box 1663, MS-J514
Los Alamos, NM 87545
Phone: (505) 667-4785
rundberg@lanl.gov

Chair-Elect, 2013
Program Chair, 2014
PAUL F. MANTICA
Michigan State University
National Superconducting Cyclotron Lab
1 Cyclotron
East Lansing, MI 48824
Phone: (517) 908-7456
mantica@msu.edu

Vice-Chair, 2013
Program Chair, 2015
DAVID E. HOBART
5715 Hwy 85 North #1430
Crestview, FL 32536
Phone: (505) 227-4728
dhobart15@gmail.com

Secretary, 2011-2013
Vacant

Treasurer, 2011-2013
ALICE MURRAY
Savannah River National Laboratory
Aiken, SC 29808
Phone: (803) 725-0440
alice.murray@srnl.doe.gov

Councilors
STEVEN W. YATES, 2011-2013
yates@uky.edu

GRAHAM F. PEASLEE, 2012-2014
peaslee@hope.edu

Alternate Councilor
DAWN A. SHAUGHNESSY, 2012-2014

Members-at-Large, Executive Committee
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RICHARD ROBERTS, 2013-2015

NEWSLETTER
July 2013

Newsletter Editor: Lætitia Delmau
Email : delmaulh@ornl.gov

Topics

- > **FROM THE CHAIR**
- > **OBITUARY – WILLIAM FRANK KINARD**
- > **UPCOMING PROGRAMMING**
- > **SUMMER SCHOOL**
- > **TREASURER'S REPORT**
- > **CALL FOR PAPERS**

FROM THE CHAIR – *Bob Rundberg*

The July newsletter (now nearly August newsletter due to my own tardiness in generating the Chair's address) initiates on a somber note. Our dear colleague and longtime NUCL division secretary, Frank Kinard, has passed away after a short battle with cancer. The obituary contained in this newsletter provides an overview of Frank's many contributions to the division both as an instructor at the Nuclear Chemistry Summer School and in his time as division secretary. There is much that Frank quietly did in the background that will fall to a new person (or multiple people) to support within the division and the community. The Environmental Division of ACS has expressed interest in co-sponsoring a symposium in Frank's honor. At this time, we are seeking NUCL volunteers to support organization of such a symposium. Planning is in the very early stages and a decision has not been made regarding which national ACS meeting will serve as host to this symposium. If you have interest in organizing, please contact Jenifer Braley (jbraley@mines.edu).

The New Orleans National meeting NUCL division was very well attended. However the impact of sequestration and DOE travel restrictions has had a noticeable impact on attendance by national laboratory scientists. I am not sure what if anything can be done to reverse this situation.

The future of science in the United States will suffer if elected officials don't act as advocates for science at the national laboratories.

At the New Orleans executive meeting we discussed the possibility of a K-12 educational outreach. The purpose of this outreach is to help develop a better understanding by the public of radioactivity and nuclear science. Donivan Porterfield has already submitted a proposal to the ACS for special project funding for this purpose. Thank you Donivan!

OBITUARY – WILLIAM FRANK KINARD

It is with great sadness and a sense of loss that we mark the passing of a long-standing member of the NUCL Division, stalwart member of the NUCL Executive Committee, and a close personal friend of many. Dr. William Frank Kinard, of Charleston, SC, passed away Tuesday night, June 11th after a brief battle with cancer at the age of 70. For those of us who knew him well, we will miss his friendship, his sense of humor, and his smile.



Frank was born on November 16, 1942, to Helen Kinard and the late Colonel Edwin A. Kinard. In high school, Frank excelled in

both the classroom and in athletics earning letters in football, basketball and baseball. Frank was a national merit scholar and received his BS from Duke University and his Ph.D. from the University of South Carolina. He later did post-doctorate work for Dr. Greg Choppin at Florida State University followed by additional research at the University of Puerto Rico. While in Puerto Rico, Frank accepted a professor position with the College of Charleston. Frank's area of expertise was nuclear chemistry and radiochemistry. He served as Secretary of the American Chemical Society Nuclear Chemistry and Technology Division for 17 years. For more than 15 years he was the Director and Principal Instructor of the Summer School in Nuclear and Radiochemistry at San Jose State University sponsored by the Department of Energy. He authored over thirty-five technical publications. Frank served as Chair of the Department of Chemistry and Biochemistry at the College of Charleston from 1982-1989. Frank loved to mentor students in the lab and he will be remembered for the many generations of students he inspired during his 41 year career. Frank took great pride in the success of former students and often reveled in their latest career advancements.





UPCOMING PROGRAMMING - Jenifer Braley

The Indianapolis meeting is just around the corner and I'll look forward to seeing you there! Programming will start Sunday morning and will conclude Wednesday afternoon. The Actinide Materials and Nuclear Reactions symposia will run concurrently on Sunday and Monday. General Topics in Nuclear and Radiochemistry will also run Monday afternoon. The Young Investigators in Nuclear and Radiochemistry and Recent Advances in the Inorganic Chemistry of Technetium and Rhenium symposia will run on Tuesday and Wednesday, respectively. We will be hosted in the Hyatt Regency Hotel (<http://www.indianapolis.hyatt.com/en/hotel/home.html>). As usual, the NUCL Business Meeting and Social Hour will be held on Monday evening, starting at 6 pm.

Bob Rundberg (Chair, 2013), Paul Mantica (Chair, 2014) and other helpful parties have been key in developing programming for the upcoming Indianapolis meeting and the 2014 meetings. If you have interest in programming further out, ample room exists for the 2015 Spring (Denver) and Fall (Boston) meetings. The theme for the Denver meeting, "Chemical Resources: Extraction,

Refining and Conservation", could fit very well with some divisional interests. Thank you to all current and future organizers for their programming contributions.

Fall 2013 – Indianapolis – Chemistry in Motion (transportation)

– Actinide Materials (Organizers Peter Burns, Ginger Sigmon)

– Young Investigators (Organizers: Suzy Lapi, Mikael Nilsson)

– Nuclear Reactions (Title TBD) (Organizers: Walt Loveland, other organizers welcome)

– General Topics in Nuclear and Radiochemistry (Organizers: Ken Nash and Jenifer Braley)

– Recent advances in the inorganic chemistry of technetium and rhenium (Organizers: Ken Czerwinski, Lynn Francesconi, Silvia Jurisson)

Spring 2014 – Dallas – Chemistry of Power and Advanced Materials

– Seaborg Award Symposium (Organizer: TBD)

– Global Status of Nuclear Energy (Organizer: Ken Nash, WSU, knash@wsu.edu, Jeff Terry, IIT, terryj@iit.edu)

– Norm Edelstein Symposium (Organizers: Al Sattelberger, ANL, asattelberger@anl.gov; David Shuh, LBNL, dkshuh@lbl.gov; Lynda Soderholm, ANL, soderholm@anl.gov; David Clark, LANL, dlclark@lanl.gov)

– Radiation Hardened Materials for Accelerators, Reactors and Spacecraft – Ram Devanathan (PNNL, ram.devanathan@pnnl.gov)

– Nuclear Batteries and Radioisotope Micropower Sources (Organizer: David Meier, PNNL, david.meier@pnnl.gov)

– Thermodynamics, Reactivity, and Spectroscopy of the Heavy Elements (co-sponsored with PHYS) –Angela Wilson (North Texas, akwilson@unt.edu), Paul Bagus (North Texas, bagus@unt.edu), Laura

Gagliardi (Minnesota, gagliardi@umn.edu), and Hicham Idriss (SABIC, KSA, idriss@sabic.com)

Fall 2014 – San Francisco – Chemistry for a Sustainable World

– Comprehensive Test Ban Treaty Verification (Organizer: Sean Liddick, MSU, liddick@nscl.msu.edu)

– High-Level Waste Storage (Organizer: Nathalie Wall, WSU, nawall@wsu.edu)

– Nuclear Fusion, from NIF to the Stars (Organizers: Mark Stoyer, LLNL, stoyer1@llnl.gov; Lee Bernstein, LLNL, lbernstein@llnl.gov)

– Environmental Radiochemistry Symposium (Organizers: Don Reed, LANL, dreed@lanl.gov; Ralf Sudowe, UNLV, ralf.sudowe@unlv.edu; Brian Powell, Clemson, bpowell@clemson.edu)

– Young Investigators (Organizers: Cody Folden, TAMU, folden@comp.tamu.edu; Jeff Terry, IIT, terryj@iit.edu)

– Radiopharmaceutical Chemistry (co-sponsored with FLUO and MEDI) – Alan Packard (Harvard, alan.packard@childrens.harvard.edu)

– General Topics in Nuclear Chemistry and Technology (Organizers: Paul Mantica, MSU, mantica@msu.edu; Jen Braley, CSM, jbale@mines.edu)

If you are interested in any of the 2014 topics and would like to serve as a Symposium Co-Organizer, please contact Paul Mantica, 2014 NUCL Chair (mantica@msu.edu), or Jenifer Braley, NUCL Program Chair (jbale@mines.edu) If you are interested in developing a symposia for 2015, please contact Dave Hobart, 2015 NUCL Chair, (dhobart15@gmail.com) or Jenifer Braley.

Spring 2015 – Denver, CO – March 22-26, 2015 - *Chemical Resources: Extraction, Refining and Conservation*

– Seaborg Award Symposium (Organizer: TBD)

- Analytical Chemistry in Nuclear Technology - Dave Hobart and Charles Coleman
- Radioisotope Production –Dennis Phillips, Suzy Lapi, Silvia Jurisson

Fall 2015 – Boston, MA – August 16-20, 2015 - *A History of Innovation: From Discovery to Application*

– Young Investigators (Organizer: TBD)

If you are interested in organizing a symposium for 2015, please contact Dave Hobart, 2015 NUCL Chair (dhobart15@gmail.com), or Jenifer Braley, NUCL Program Chair (jbale@mines.edu).

Several other concepts in development

Radiochemistry Infrastructure – cooperative with the Health Physics Society

Archaeometry (contact Dave Robertson)

SUMMER SCHOOL – *Dave Robertson*

The Summer Schools at Brookhaven National Lab and San Jose State University began June 17 and will conclude on July 26. The names and schools of the twenty-four participants are given below. I cannot emphasize enough the lasting, significant impact that our friend and colleague Dr. Frank Kinard had on the future of nuclear and radiochemistry in the United States in his role as primary instructor at SJSU from 1999 through 2012. He was in many ways the “face” of the Nuclear Chemistry Summer Schools and will be greatly missed. We are fortunate that Dr. Trish Baisden volunteered her time to assist Frank last summer and stepped in to serve as primary instructor for the SJSU program this year. Louis Pena and Herb Silber continue to serve as the site directors at BNL and SJSU, respectively.

Brookhaven National Lab	
Amy Brandt	Truman State University
Brendon Cook	Alfred University
Peter Doyle	Geneva College
Megan Dustin	University of Notre Dame
Michelle Hiebert	Concordia College
Mary Hillegass	University of Chicago
Jordan Johnson	University of Tennessee at Martin
Rosemery Membreno	Hunter College
Eliza Miller	Gonzaga University
John Strikwerda	Calvin College
Kyle Hancock	Clarkson University
Sarah Gray	Tennessee Technological University

San Jose State University	
Hillary Asberry	Western Kentucky University
Kevin Bruemmer	Southern Methodist University
Seth Cory	Clarke University
Devon Dodd	Arkansas Tech University
Kevin Glennon	University of Arkansas
Colin Johnson	Gonzaga University
Marie Kirkegaard	Harvey Mudd College
Rebecca Lewis	Northeastern University
Johannah Miller	Minot State University
Jason Richards	Utah State University
Erin Sheffels	Reed College
Sarah Zinn	Ohio Northern University

I regret to inform the Division that The President's FY2014 Budget, released on April 10th, proposed eliminating the Nuclear Chemistry Summer Schools. The elimination of the funding for the Summer Schools was part of a larger proposal to consolidate STEM funding from across the federal government as well as reorganizing and eliminating certain STEM programs. There has already been significant pushback on the plan. Unfortunately, **unless Congress intervenes**, the Department of Energy will have to cease financial support for the Nuclear Chemistry Summer Schools.

Since the 1940s our nation recognized the strategic need for research and training in nuclear science, nuclear chemistry and radiochemistry. Over time, funding to universities and National Laboratories declined in these areas. A manpower shortage resulted, described in a 1988 NRC report (*Training Requirements for Chemists in Nuclear Medicine, Nuclear Industry, and Related Areas*) and the recent 2012 NAS report (*Assuring a Future US-Based Nuclear and Radiochemistry Expertise*). The ACS Summer School in Nuclear and Radiochemistry (NCSS) was established with the objective of introducing the fields of nuclear chemistry and radiochemistry to outstanding physics, engineering and chemistry undergraduates to bring them into the pipeline. Since they were first introduced in 1984, the Summer Schools have successfully introduced 601 of this nation's best and brightest undergraduate students to nuclear and radiochemistry and provided information on graduate education and career paths in these fields. Nearly 20% of the Summer School participants have gone on to pursue careers in the nuclear sciences and many of these individuals are now in a position to influence other young people to enter our field.

There is still time to influence the budgetary process. I would ask that you take the time to contact members of the House Committee on Science, Space, and Technology to let them know how devastating elimination of the Nuclear Chemistry Summer Schools would be to workforce development in nuclear and radiochemistry in the United States. A list of the committee members can be found at <http://science.house.gov/about/membership> ***An email or letter from those of you whose Representative is a member of the committee will be the most effective!*** I suggest that you emphasize how important nuclear and radiochemistry is to our national security, energy independence, and modern

health care, and that we are dangerously thin in these programs throughout the United States today. Cancelling one of the successful programs that has helped us bridge the gap over the last thirty years will only make this situation worse.

Questions, comments, or concerns regarding the summer school program should be directed to:

Prof. J. David Robertson
National Director, ACS Nuclear and
Radiochemistry Summer Schools
University of Missouri
Columbia, MO 65211-7600
Phone 573-882-2240
robertsonjo@missouri.edu

TREASURER'S REPORT – *Alice Murray*

The organizers of three of the symposia at the 2013 Spring American Chemical Society meeting in New Orleans under the auspices of the Nuclear Chemistry and Technology Division obtained sponsorship funding to facilitate travel and registration for presenters as well as funding for refreshments. Those symposia expenses were:

- Isotope Production: Past, Present and Future: Symposium in Honor of Michael J. Welch - \$5447.80 in expenses with \$1525.20 remaining;
- Glenn T. Seaborg Award for Nuclear Chemistry: Symposium in Honor of Richard G. Haire - \$17904.54 in expenses with \$1613.86 remaining;
- Radiochemistry and Risk Assessment of Food and Water Contaminated with Radionuclides - \$2124.70 in expenses with \$535.30 remaining.

The NUCL Division expenses for the meeting were \$6783.28 for the facilities and refreshments at the Monday evening social

event as well as \$445 for one registration and \$624.54 for travel for the two NUCL Councilors.

Currently NUCL has \$63314.08 in its checking account and \$76870.37 in its savings account.

PLUTONIUM FUTURES

The Science Conference 2014 will be held at the Renaissance Hotel in Las Vegas, Nevada from September 7 – 11. The conference will be hosted by the Lawrence Livermore National Laboratory in collaboration with Los Alamos National Laboratory and sponsored by the American Nuclear Society. Additional information and a web site will be provided in the near future.

CALL FOR PAPERS

Symposium in Honor of Norman Edelstein: **A Distinguished and Diverse Scientific Career in Actinide Chemistry**

Division of Nuclear Chemistry and Technology
American Chemical Society Spring Meeting 2014
16-20 March 2014 in Dallas, Texas USA

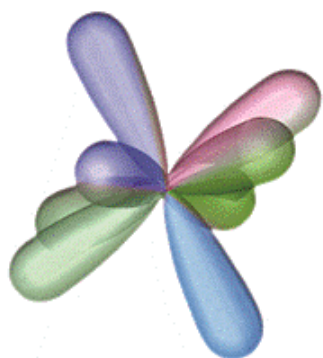


The colleagues of Norman M. Edelstein, an Emeritus Senior Scientist in the Actinide Chemistry Group of the Chemical Sciences Division of the Lawrence Berkeley National Laboratory (LBNL), are convening a special Symposium within the Nuclear Chemistry and Technology Division of the American Chemical Society to honor, recognize, and celebrate the scientific contributions of Norman to the field of actinide chemistry.

Edelstein spent most of his career at LBNL, 1964-2000, conducting fundamental research on the lanthanide and actinide elements. In 2000 he went on assignment to the Division of Chemical Sciences, Geosciences, and Biosciences at the U.S. Department of Energy as a full time advisor (detailee) for the Heavy Element Chemistry Program for one and a half years. Upon his return to LBNL he continued as a part time advisor to the DOE Heavy Element Chemistry program until 2010. He formally retired from LBNL in 2002 and was appointed an Emeritus Senior Scientist. The Actinide Chemistry Group was formed in 1975. Norman served as the Group Leader from its inception until 2000. During this time Edelstein also served as Deputy Director of the Chemical Sciences Division from 1991 to 1997 and in 1999. In 1997-1998 he was the Interim Division Director. Edelstein is a fellow of the American Physical Society and a member of the American Chemical Society and American Association for the Advancement of Science. He is well-known for his collaborative scientific efforts, both nationally and internationally. He remains extremely active and can be found in his office at LBNL nearly every day. Edelstein is the author of approximately 230 research articles and more than a half dozen book chapters. Notably, he is an Editor of the recent 3rd and 4th editions of the *Chemistry of the Actinide and Transactinide Elements* with Jean Fuger and Lester Morss.

Edelstein's research interests include the optical, magnetic, and electronic structure of the actinides and lanthanides, the general inorganic and solution chemistry of the actinides, and synchrotron radiation studies of actinides and other environmentally-relevant materials.

The organizers are encouraging abstract submission and look forward to seeing you in Dallas in the Spring of 2014. The deadline for abstract submission is October 7, 2013. We expect the symposium consist of three to four days of oral presentations, posters, and a symposium banquet. For more information, please contact one of the symposium organizers David K. Shuh (DKShuh@lbl.gov), Dave L. Clark (DLClark@lbl.gov), Lynne Soderholm (LS@anl.gov), or Al Sattelberger (ASattelberger@anl.gov).



Plutonium

Futures—The Science Conference 2014 will be held at the Renaissance Hotel in Las Vegas, Nevada September 7-12, 2014. It will be the eighth conference in the series, which was initiated by Los Alamos National Laboratory in 1997. Previous conferences have been held in Santa Fe, New Mexico, in 1997 and 2000; Albuquerque, New Mexico, in 2003; Asilomar, California, in 2006; Dijon, France, in 2008; Keystone, Colorado, in 2010; and Cambridge, United Kingdom, in 2012. The 2014 conference is co-sponsored by Lawrence Livermore and Los Alamos National Laboratories and the American Nuclear Society (ANS).

The Plutonium Futures conferences provide an international forum for the discussion of current research on the physical, chemical, and mechanical properties of plutonium and other actinides. By bringing people of diverse disciplines together, the conference aims to enhance the dialogue among scientists and engineers on the fundamental properties of plutonium and their technological consequences. The conference will include discussions of condensed matter physics, materials science, metallurgy, surface science, corrosion, colloids, actinide chemistry, detection and speciation analysis, environmental science, fuel-cycle issues, and advanced nuclear fuels. A tutorial session will be held on the opening Sunday afternoon.

Kerri Blobaum and Scott McCall are the general and program chairs, respectively. Information on registration, call for papers, and lodging will be available through the ANS webpage. Questions or requests to be added to the conference mailing list should be sent to Kerri Blobaum (blobaum1@llnl.gov) or Scott McCall (mccall10@llnl.gov).

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