



Division of Nuclear Chemistry and Technology
American Chemical Society

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

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NEWSLETTER

October 2022

Newsletter Editor: Andrew Klose
Email: andrew.m.klose@gmail.com

Topics

- > FROM THE CHAIR
- > UPCOMING PROGRAMMING
- > NUCL ELECTION CANDIDATES AND BIOGRAPHIES
- > NUCLEAR CHEMISTRY SUMMER SCHOOL
- > AWARDS NOMINATIONS COMMITTEE
- > CONFERENCE AND JOB ADVERTISEMENTS

FROM THE CHAIR

Nathalie Wall

Welcome to the Fall NUCL newsletter. Fall rhymes with election (maybe) and the 2022 election for the new NUCL division officers is coming soon. We will vote this year for the NUCL vice chair and secretary. Electronic ballots will be sent by ACS; make sure you cast your vote. It is also this time of the year when we are soliciting applications for the 2023 Nuclear Chemistry Summer School. The website will be open in November 2022. Please help advertise the NCSS 2023.

We have an exciting program for the upcoming Spring National Meeting. I hope to see many of you in Indianapolis. We are also preparing for the Fall meeting; contact Gian with your proposed symposia.

Finally, I want to bring your attention to our awards. I encourage you to nominate your colleagues for the Seaborg Award, Frank Kinard Award, ACS Fellows, and Chemluminaries. The NUCL Awards Nomination Committee is also eager to receive nominations for the Charles D. Coryell award, which celebrates undergraduate students conducting research in the nuclear chemistry field. Please contact Thomas Albrecht-Schoenart with your nomination and questions.

Cheers!
NAW

NATIONAL MEETING PROGRAMMING

SPRING 2023 – Indianapolis, IN

March 26 - 30

Theme: Crossroads of Chemistry

The 265th ACS National Meeting & Exposition will be held March 26 - 30, 2023 in Indianapolis, IN. The abstract deadline has passed. Please contact Tara Mastren (Tara.Mastren@utah.edu) with potential symposia topics or for more information.

- **General Topics in Nuclear Chemistry and Technology**

Organizers: Melissa Deri

(melissa.deri@lehman.cuny.edu) and

Nicholas Esker

(nicholas.esker@sjsu.edu)

- **Panel Session: Diversity Equity and Inclusion in the Nuclear Sciences**

Organizers: Deborah Penchoff

(dpenchof@utk.edu),

Tara Mastren

(Tara.Mastren@Utah.edu),

Vasileios Anagnostopoulos

(Vasileios.Anagnos@ucf.edu), and

Tyler Spano (spanotl@ornl.gov)

- **Seaborg Award: Symposium in Honor of Jason Lewis**

Organizers: Brian Zeglis

(bz102@hunter.cuny.edu) and

Kishore Pillarsetty

(pillarsn@MSKCC.ORG)

- **Nuclear Forensics**

Organizers:

Amy Hixon (Amy.Hixon.2@nd.edu),

Tyler Spano (spanotl@ornl.gov),

Meena Said (said1@llnl.gov)

- **Frank Kinard Awards**

Organizers: Nathalie Wall

- **Panel Session: Facilitating Advances in Nuclear and Radiochemistry through Computational Science**

Organizers:

Deborah Penchoff (dpenchof@utk.edu),

Charles Peterson

(cpeterson@oarc.ucla.edu),

Ashley Shields (shieldsae@ornl.gov),

and *Sarah Finkeldei*

(sfinkeld@uci.edu)

- **Radiochemical Separations**

Organizers: Dustin Demoin

(Dustin.Demoin@ezag.com) and

Laetitia Delmau (delmaulh@ornl.gov)

- **Computational Science Applications in Rare Earth Elements and Actinides**

Organizers:

Deborah Penchoff (dpenchof@utk.edu),

Charles C. Peterson

(Charles.Peterson@unt.edu) and

Theresa Windus (twindus@iastate.edu)

FALL 2023 – San Francisco, CA

August 13 - 17

Theme: Harnessing the Power of Data

The 266th ACS National Meeting & Exposition will be held August 13 - 17, 2023 in San Francisco, CA. Contact Gian Surbella via email at robert.surbella@pnnl.gov with any questions regarding the NUCL programming at the Fall 2023 meeting.

NUCL ELECTION CANDIDATES

Vice Chair/Chair Elect/Chair (2023 – 2025)

Glenn Fugate – PNNL
Annie Kersting – LLNL

Secretary (2023 – 2024)

Amy Hixon – University of Notre Dame

CANDIDATE BIOGRAPHIES

Dr. Glenn A. Fugate received his B.S. in Chemistry in 1996 from Tennessee Technological University and his Ph.D. in Inorganic Chemistry in 2004 from the Florida State University. He has held research associate positions at Clemson University (2003-2005) focused on environmental chemistry and the nuclear fuel cycle and at Washington State University (2005-2006) focused on Tc and Re radiopharmaceutical compounds. Glenn joined Savannah River National Laboratory in 2005 where he was involved in a range of research involving separations science, analytical method development, and nuclear fuel cycle facility processes and effluents. In 2015, he moved to Oak Ridge National Laboratory where he focused predominantly on reactive gas chemistry including uranium hexafluoride and rose to become a Group Leader of the Uranium Process Chemistry Group. He is currently transitioning into a senior staff position at Pacific Northwest National Laboratory to focus on nuclear forensics and nuclear fuel cycle facility processes and effluents.

Glenn has been an active member of the ACS and the I&EC and DNCT divisions since 1993, including holding leadership positions within the Savannah River Local Section (Chair 2010), the Separation Science & technology Subdivision (of I&EC, Chair 2011), and the I&EC Division (Chair 2019). He has played an

active role in programming within both the I&EC and DNCT divisions, having co-organized 11 symposia at national and regional meetings. Glenn was awarded the title of Fellow of the ACS in 2019.

Dr. Annie Kersting is a senior scientist at Lawrence Livermore National Laboratory and has more than 25 years of research experience at the intersection of chemistry, geology, environmental, and nuclear science. Her current research focuses on the geochemical mechanisms that control actinide transport in soil and groundwater with applications to nuclear forensics and environmental chemistry. She is passionate about advocating and mentoring early career scientists, postdoctoral fellows, graduate students and helping them become vibrant research scientists. Annie has extensive experience building research programs, university-national laboratory collaborations, and education initiatives focused on increasing diversity and developing the scientific talents of students and postdocs at both universities and national laboratories. Some of her past public service activities include associate editor of *Geochimica et Cosmochimica*, National Academies Science review boards and studies, Environmental Protection Agency Review Board member, ACS Seaborg Nomination Committee, Steering Committee and/or Session Organizer for ACS, MARC, Pu Futures, Migration, and Goldschmidt meetings. <https://people.llnl.gov/kersting1>

Dr. Amy E. Hixon earned her B.S. in Chemistry from Radford University in 2006. While a student, she attended the Nuclear Chemistry Summer School at the Brookhaven Campus and fell in love with environmental radiochemistry. She received her M.S. and Ph.D. degrees in Environmental Engineering & Earth Sciences from Clemson University in 2008 and 2013, respectively. While a doctoral candidate, she held a position

at the U.S. Nuclear Regulatory Commission in the Office of Federal and State Materials and Environmental Management Programs, where she supported the work of the Performance Assessment and Environmental Review branches. Currently, Amy is an Associate Professor and Director of Graduate Studies in the Department of Civil & Environmental Engineering & Earth Sciences at the University of Notre Dame and Director of the Actinide Center of Excellence, which is funded by DOE/NNSA. Her research group studies the environmental radiochemistry of plutonium and other actinide elements, the chemical and physical transformations of nuclear materials, and the synthesis and characterization of novel plutonium compounds. In addition to organizing several symposia in the NUCL division, she volunteered as co-Program Chair for the NUCL Division from 2016-2020 and has served as the Division Secretary since 2020.

NUCLEAR CHEMISTRY SUMMER SCHOOL

Lynn Francesconi

We will be soliciting applications for the Nuclear Chemistry Summer School for summer, 2023. The application site on the NUCL division website will be open in November, 2022. The Nuclear Chemistry Summer School (NCSS) is an intensive six week program for undergraduates. The NCSS is funded by the Department of Energy, Office of Science, and administered by the American Chemical Society. The program consists of an undergraduate course with lectures on the fundamentals of nuclear science, radiochemistry, and their applications in related fields. Laboratory exercises introduce state-of-the-art instrumentation and technology used in basic and applied nuclear science. In addition to the formal instruction, the course includes a Guest Lecture Series and field trips to university research centers,

National Laboratories, and other nuclear facilities. Students meet and interact with prominent scientists who are working in nuclear and radiochemistry, nuclear fuel cycle, nuclear medicine, nuclear forensics, and related fields.

The NCSS is held at two sites, San Jose State University and Brookhaven National Laboratory. In summer, 2023, the six-week NCSS will be from June 12, 2023 through July 21, 2023. Students will be provided a stipend of \$4,000 for these six weeks, all tuition and fees, transportation to and from the Summer School location, housing, books, and laboratory supplies. Transferable college credit is awarded through the ACS accredited chemistry programs at San Jose State University (7 units) or Stony Brook University (6 units). Please advertise the NCSS 2023 to your students and look out for the application website that will be open in November, 2022 on the NUCL division website.

AWARDS NOMINATIONS COMMITTEE OF NUCL

Thomas Albrecht-Schoenzart

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>).

Charles D. Coryell Award

Any undergraduate who has been actively doing research in the nuclear chemistry field in the previous year is eligible for consideration of the Charles D. Coryell 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. The nomination deadline is by June 1, 2023, and all application materials should be emailed to Thomas Albrecht-Schoenzart (talbrechtschoenzart@gmail.com).

CONFERENCE ANNOUNCEMENT

The 16th biennial conference of the South Pacific Environmental Radioactivity Association (SPERA) 2022 will take place from Monday 28 November to Wednesday 30 November with an optional RACI Workshop held on Thursday 01 December.

The conference is being held at Haere-roa Event Centre, Christchurch New Zealand. Abstract submissions for posters are open: <https://au.eventscloud.com/website/1134/programme/>

JOB OPENINGS

STAFF SCIENTIST - LAWRENCE LIVERMORE NATIONAL LAB

We have an opening for a **Research Scientist** who will conduct research in the analysis and interpretation of radiochemical data from nuclear explosions. You will work with a multi-disciplinary team to develop new capabilities for post-detonation nuclear forensics and stockpile stewardship. This position is in the Nuclear and Radiochemistry

Group within the Nuclear and Chemical Sciences Division and will support the Global Security (N Program) and Weapons and Complex Integration Directorates. More information on the position can be found here: <https://us.smrtr.io/4cVM>

POSTDOCTORAL POSITIONS - LAWRENCE LIVERMORE NATIONAL LAB

We have an opening for a Postdoctoral Researcher to play a major role in development of novel radiochemical separation and delivery techniques at the micro scale for production of targets for high energy density programs. This position is in the Nuclear and Radiochemistry group of the Nuclear and Chemical Sciences Division. More information on the position can be found here: <https://us.smrtr.io/5XXh>

Additionally, we have an opening for a Postdoctoral Researcher to play a major role in development of novel radiochemical separation and quantification techniques for nuclear forensics. You will develop systems tailored towards rapid separation of radionuclides, produce isotopes using neutron and charge-particle irradiation methods, and develop accurate radiochemical measurement techniques. This position is in the Nuclear and Radiochemistry group of the Nuclear and Chemical Sciences Division. More information on the position can be found here: <https://www.llnl.gov/join-our-team/careers/find-your-job/all/radiochemistry/3743990000574586>



RADIOCHEMISTRY FACULTY OPEN RANK (ASSISTANT PROFESSOR – PROFESSOR)

The Department of Chemistry at HUNTER COLLEGE OF THE CITY UNIVERSITY OF NEW YORK (CUNY) invites applications for a full-time, tenure-track position in Radiochemistry beginning Fall, 2023 at the Assistant, Associate, or Professor rank. Applications are encouraged from candidates with research interests in fundamental and applied aspects of radiochemistry and nuclear chemistry. These include research related to nuclear fuel cycle, environmental remediation, plant biology and biofuels, radioanalytical chemistry, and actinide chemistry. Candidates with interdisciplinary radiochemistry research interests that intersect with our current strengths in analytical, biochemistry, molecular imaging/ therapy, and fundamental chemistry of radiometals are encouraged.

Candidates must have a Ph.D. (or equivalent) degree in Chemistry, Biochemistry, or related discipline. A strong research program that can attract graduate and undergraduate students is essential. Postdoctoral research experience is a plus. Candidates should have an outstanding record of scholarly publications commensurate with their career trajectory. The potential to obtain external funding is necessary for junior rank and a history of such funding required for more senior candidates; and competence in a variety of methods and tools for university teaching, including technology.

Responsibilities include establishing a rigorous research program, teaching undergraduate and graduate courses in areas related to the candidates scholarly and research interests, advising students and supervising graduate and undergraduate student research.

The committee will begin reviewing applications on November 20, 2022. The search will remain open until the position is filled.

For directions on how to apply, please visit: www.cuny.edu/employment.

A complete application includes a cover letter, curriculum vitae, publication list, statement of research plans (not to exceed eight pages) statement of teaching philosophy (not to exceed two pages), and a statement describing commitment and plans to increase diversity and inclusivity in the discipline (not to exceed one page). Applicants must provide the names and contact information of three individuals who will provide letters of recommendations.

Please direct questions to Professor Lynn C. Francesconi, Lfrances@hunter.cuny.edu.

The City University of New York is an EEO/AA/Vet/Disability Employer.



The newly renovated laboratory space for the Radiochemistry Faculty at Hunter College is comprised of two laboratories. One lab is for Radiochemistry, shown in this picture, with four fume hoods, a glove box and lab benches and cabinets/shelving for storage. There are lab services available. This space can be customized for the faculty member's research.



These pictures show the second lab space that comprises the Hunter College Radiochemistry Faculty laboratory. This space has one fume hood and bench space and cabinets/shelving for storage. This lab is equipped with laboratory services and can be customized for the specific research of the Faculty member.

Assistant Professor

Radiochemistry

The University of Alabama at Birmingham

The Department of Chemistry at the University of Alabama at Birmingham (UAB) seeks candidates for a tenure-track faculty position at the anticipated rank of Assistant Professor. Candidates with demonstrated research expertise in the area of radiochemistry are encouraged to apply.

We seek applications who demonstrate a commitment to teaching excellence at both the undergraduate and graduate levels to a diverse student body, and the expectation of establishing or continuing an outstanding, externally funded research program. The College of Arts and Sciences (CAS) treasures the rich diversity of our student body, and we are committed to their success. Members of the CAS community are expected to reflect our value for inclusive excellence in both our work and learning environment as well as in our efforts to serve and engage the community.

UAB is a comprehensive Tier 1 research university and medical center with more than 22,000 students. UAB is ranked in the top 20 among public universities in the US in terms of federal research funding and is the major teaching-research university in Alabama. UAB offers exceptional undergraduate, graduate, and professional programs that prepare students to be the preeminent scholars and societal leaders of the future. UAB ranks in the top ten nationally for student diversity. UAB is ranked as the top young university in the US and the no. 12 young university worldwide in The Times (UK) Higher Education rankings. Spanning more than 100 city blocks, UAB is the state of Alabama's largest single employer with 23,000 employees and has an annual state-wide economic impact exceeding \$7.15 billion.

UAB has outstanding core facilities in the molecular sciences (including EM, MS, and X-ray), engineering, nanoscience, imaging (both preclinical and clinical), informatics, as well as translational and clinical research. The Department of Chemistry is home to the Central Alabama High Field NMR Facility. The UAB Cyclotron Facility is housed in the School of Medicine and produces radiopharmaceuticals and radioisotopes for medical imaging and other studies. Research space and equipment is available for radiochemistry work. UAB houses a state-of-the-art small animal PET/CT imaging facility for translational research.

The UAB Chemistry Department offers B.S. (ACS-Approved), M.S., and Ph.D. degrees, and has major research interests in drug discovery, structural biochemistry, bioinorganic and biophysical chemistry, nanoscience, and polymer/advanced materials. UAB is dedicating significant resources towards its science infrastructure in the next few years, with Phase I of a new Science and Engineering Complex (S&EC) opening in 2023. Phase I of the S&EC includes newly designed organic chemistry teaching laboratories. A future phase of the S&EC will include a new wing that will house the remainder of the Chemistry Department.

Candidates for this position must have a Ph.D. degree in Chemistry or a closely related discipline, with postdoctoral or equivalent experience. Qualified applicants should upload the following application materials: 1) a cover letter indicating their interest, 2) a detailed curriculum vita, 3) a description of research plans, 4) a statement on their teaching experience and philosophy, and 5) arrange to have a minimum of three letters of reference sent in support of their application. The anticipated start date is Fall 2023, pending budgetary and administrative approval. Salary is commensurate with years of training and experience.

Application materials may be submitted to Chair, Radiochemistry Search Committee, at <https://uab.peopleadmin.com/postings/16486>. Review of applications will begin on November 1, 2022 and continue until the position is filled.

UAB is an Equal Opportunity/Affirmative Action Employer committed to fostering a diverse, equitable and family-friendly environment in which all faculty and staff can excel and achieve work/life balance irrespective of, race, national origin, age, genetic or family medical history, gender, faith, gender identity and expression as well as sexual orientation. UAB also encourages applications from individuals with disabilities and veterans.

A pre-employment background investigation is performed on candidates selected for employment.

ANNOUNCEMENT



TICKLE COLLEGE OF ENGINEERING FACULTY POSITION AVAILABLE

The Tickle College of Engineering (TCE) at the University of Tennessee, Knoxville (UTK) is seeking applications to fill a faculty position at the Full Professor level starting August 1, 2023. This is the first of three hires to bolster UTK's strength in the development and use of radioisotopes in all related fields, such as radiochemistry, isotope production, chemical modification of isotopes with biologically active molecules, pharmacology, and toxicology. Preference will be given to candidates with demonstrated research success in one or more of these areas with the vision to develop collaborative research activities, are committed to high-quality undergraduate and graduate student education, and possesses the ability to contribute in meaningful ways to the diversity and intercultural goals of the University.

The radioisotopes cluster hire aligns well with the current initiatives at Oak Ridge National Laboratory (ORNL) and UT-Oak Ridge Innovation Institute (UT-ORII). At ORNL, \$158M has recently been appropriated to construct a Stable Isotope Production and Research Center as well as a Radioisotope Processing Facility to expand domestic production of critical isotopes vital to the mission of many federal agencies, such as NIH, NASA, DoD, ODNI, NIST, DHS, NNSA, NSF, and others. The selected candidate will choose which TCE department they will join and partake in hiring two additional Professors at the Assistant and Associate levels. The long-term plan for this cluster hire includes 1) development of new radiochemistry labs including the incorporation of the nuclear engineering fast neutron flux facility and LINAC laboratories for radioisotope research and potential production, 2) development of enhanced radioisotope curriculum and establishment of a summer school in collaboration with partners at ORNL and UT-ORII, 3) expand partnerships with local hospitals, veterinary centers, and/or businesses with interests in isotope use and research, 4) establishment of transformational campus-based research center(s), and 5) identification of funding sources and development of plans for a charged-particle accelerator.

Applicants must have a doctorate degree in a related field and relevant experience to be hired as a Full Professor. Applicants must be able to contribute to existing courses in the chosen TCE department, advise/train graduate students in the production and/or use of radioisotopes, provide service to the university and community, contribute to current research activities in radioisotopes, and develop new avenues of research and teaching. Applications should be submitted electronically at apply.interfolio.com/113636. Applications should include (1) a curriculum vitae, (2) a select subset of publications, (3) a research statement outlining previous and future directions, including a vision statement for a transformational research center at UTK, (4) a teaching and mentoring statement, (5) a statement of how the applicant will support diversity and inclusion at UTK, (6) a letter articulating the applicant's interest in and qualifications for this position, and (7) the names of three to five references with at least one from a previous trainee. Applications will be reviewed continuously, but those received by January 31, 2023 will receive priority. Any additional questions may be sent to Dr. Eric Lukosi (search committee chair) at elukosi@utk.edu.

The University of Tennessee Tickle College of Engineering has the fastest growing PhD program among the Top 40 public colleges of engineering and is ranked 32nd amongst public institutions in 2022. The departments of TCE are nationally recognized, with a US News ranking of 6 for nuclear engineering, 29 for mechanical, aerospace, and biomedical engineering, 48 for chemical and biomolecular engineering, and 58 for biomedical engineering among public institutions. The TCE recently opened a new \$129M building that house 23 new nuclear engineering laboratories, which includes a radiochemical teaching and research

ANNOUNCEMENT



laboratory suite that will be available to the successful candidate. UTK has close collaborations with ORNL and Y-12 and is located close to the beautiful Smoky Mountains. The TCE is committed to cultivating work/life balance and a family-friendly work environment for faculty, staff, and students.

The Knoxville campus of the University of Tennessee is seeking candidates who have the ability to contribute in meaningful ways to the diversity and intercultural goals of the University. All qualified applicants will receive equal consideration for employment and admission without regard to race, color, national origin, religion, sex, pregnancy, marital status, sexual orientation, gender identity, age, physical or mental disability, genetic information, veteran status, and parental status, or any other characteristic protected by federal or state law. In accordance with the requirements of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990, the University of Tennessee affirmatively states that it does not discriminate on the basis of race, sex, or disability in its education programs and activities, and this policy extends to employment by the university. Inquiries and charges of violation of Title VI (race, color, and national origin), Title IX (sex), Section 504 (disability), the ADA (disability), the Age Discrimination in Employment Act (age), sexual orientation, or veteran status should be directed to the Office of Equity and Diversity, 1840 Melrose Avenue, Knoxville, TN 37996-3560, telephone 865-974-2498. Requests for accommodation of a disability should be directed to the ADA Coordinator at the Office of Equity and Diversity.