



**Division of Nuclear Chemistry and Technology**  
*American Chemical Society*

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

Program Chair, 2022  
**NATHALIE WALL**  
University of Florida  
Gainesville, FL 32611  
Phone: (352) 846-3300  
[nathalie.wall@ufl.edu](mailto:nathalie.wall@ufl.edu)

Chair Elect, 2022  
Program Chair, 2023  
**RICHARD WILSON**  
Argonne National Lab  
Lemont, IL 60439  
Phone: (630) 252-1288  
[rewilson@anl.gov](mailto:rewilson@anl.gov)

Vice Chair, 2022  
Chair Elect, 2023  
Program Chair, 2024  
**JUSTIN WALENSKY**  
University of Missouri  
Columbia, MO 65211  
Phone: (573) 882-0608  
[walenskyj@missouri.edu](mailto:walenskyj@missouri.edu)

Secretary, 2020-2023  
**AMY HIXON**  
University of Notre Dame  
[ahixon@nd.edu](mailto:ahixon@nd.edu)

Treasurer, 2019-2021  
**BRIAN POWELL**  
Clemson University  
[bpowell@clemson.edu](mailto:bpowell@clemson.edu)

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University of Missouri  
[jurissons@missouri.edu](mailto:jurissons@missouri.edu)

**GRAHAM F. PEASLEE**, 2021-2023  
University of Notre Dame  
[gpeaslee@nd.edu](mailto:gpeaslee@nd.edu)

Alternate Councilors  
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**GLENN FUGATE**, 2022-2024  
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## NEWSLETTER JANUARY 2022

*Newsletter Editor: Andrew Klose*  
*Email: [andrew.m.klose@gmail.com](mailto:andrew.m.klose@gmail.com)*

### Topics

- > FROM THE PAST CHAIR
- > FROM THE CHAIR
- > UPCOMING PROGRAMMING
- > ADDITIONAL CONFERENCES
- > NUCLEAR CHEMISTRY SUMMER SCHOOL
- > AWARDS NOMINATIONS COMMITTEE
- > JOB AND CONFERENCE ADVERTISEMENTS
- > ACS BOOK ON RARE EARTH ELEMENTS PUBLISHED

### FROM THE PAST CHAIR

*Thomas Albrecht-Schönzart*

As the past Program Chair, it is my pleasure to introduce our newly elected officers of the NUCL division. Nathalie Wall will be taking over as Program Chair for 2022. So, you are in capable hands. Thus far ACS seems to be trending toward in-person meetings without regard to the current pandemic. We may get to all see each other quite soon in San Diego.

### FROM THE CHAIR

*Nathalie Wall*

Facing this new year, I am personally looking forward to leaving 2021 behind in the dust and look at a brighter future. I would like to warningly thank my predecessors Tori Forbes and Thomas Albrecht-Schönzart, who had the unusual task of keeping up with the division business during the pandemic. I look forward to serving the ACS NUCL division as 2022 Chair. I want specifically to implement tools to develop a better communication between the junior scientists of our division and the more seasoned generation.

I would like to congratulate our newly elected officers: Justin Walensky is the 2022 division Vice Chair, Brian Powell will continue his awesome job as Treasurer (2022-2024), Silvia Jurisson will continue her remarkable councilor activities (2022-2024), and Glenn Fugate is now Member-at-Large (2022-2024). I also would like to congratulate Carolyn J. Anderson, the recipient of this year Seaborg Award.

I hope to see you face-to-face in San Diego for the ACS spring national meeting. We have an exciting meeting ahead of us after so many months of distance communication. Please keep in mind that advance COVID vaccination is required for all ACS Spring attendees and face masks will be obligatory during the meeting. Make sure you check the ACS safety plan

(<https://www.acs.org/content/acs/en/meetings/acs-meetings/registration/attendee-safety-plan.html>). We have a total of 118 accepted papers, in the following symposia: Artificial Intelligence Applications in Nuclear and Radiochemistry; Computational Science Applications in Nuclear and Radiochemistry; General Topics in Nuclear and Radiochemistry; Production and Applications of Radioisotopes; Seaborg Award Symposium in honor of Carolyn J. Anderson; and Young Investigators in Nuclear and Radiochemistry. I want to thank Tara Mastren, the program Chair for the spring meeting for her efforts in organizing this technical program.

We are also planning for the Fall meeting in Chicago. The symposia include General Topics in Nuclear Chemistry and Technology, Young Investigators in Nuclear and Radiochemistry, Environmental Radiochemistry Macromolecular, Supramolecular, and Solid-State Structural Chemistry of Actinides, Computational Methods for Lanthanides and Actinides, Artificial Intelligence Applications in Nuclear and Radiochemistry. We need help with organizing the first two symposia (General Topics and Young Investigators). I

strongly encourage young investigators (post-doc, assistant professor, and national laboratory junior scientists) to contact Gian Surbella, Program Chair for the Fall meeting to offer their assistance in arranging these two symposia.

I am excited to work with all the current and future NUCL members in making 2022 a great year for the division.

Cheers!

## NATIONAL MEETING PROGRAMMING

### SPRING 2022 – San Diego, CA

**March 20 - 24**

*Theme: Bonding Through Chemistry*

The 263rd ACS National Meeting & Exposition will be held March 20-24, 2022 in San Diego, CA. Please contact Tara Mastren (Tara.Mastren@utah.edu) if you have any questions.

ACS Spring 2022 will be a vaccination-required meeting for ALL attendees, exhibitors, vendors, and ACS staff who plan to attend the in-person meeting in San Diego, CA. All individuals will need to be fully vaccinated by March 6, 2022, 14 days from the start of ACS Spring 2022. Acceptable proof of vaccination will be required. All attendees are expected to comply with all health and safety guidelines. Failure to adhere to the requirements could lead to removal from the venue or other disciplinary action.

- **Young Investigators in Nuclear and Radiochemistry**

*Organizers: Sarah Finkeldei*

*(sfinkeld@uci.edu) and*

*Cory Windorff (windorff@nmsu.edu)*

- **General Topics in Nuclear Chemistry and Technology**  
*Organizers: Thibaut Lécivain (Thibaut.Lecrivain@inl.gov), Vasileios Anagnostopoulos (Vasileios.Anagnos@ucf.edu) and Luke Sadergaski (sadergaskilr@ornl.gov)*
- **Production and Application of Radioisotopes**  
*Organizers: Justin Griswold (griswoldjr@ornl.gov) and Jonathan Burns (burnsjon@uab.edu)*
- **Artificial Intelligence Applications in Nuclear and Radiochemistry**  
*Organizers: Deborah Penchoff (dpenchof@utk.edu), and Charles C. Peterson (cpeterson@oarc.ucla.edu)*
- **Computational Methods for Lanthanides and Actinides**  
*Organizers: Deborah Penchoff (dpenchof@utk.edu), Charles C. Peterson (cpeterson@oarc.ucla.edu) and Theresa Windus (twindus@iastate.edu)*
- **Seaborg Award Symposium in honor of Carolyn J. Anderson**  
*Organizers: Robert Mach (rmach@pennmedicine.upenn.edu) and Silvia Jurisson (JurissonS@missouri.edu)*

**FALL 2022 – Chicago, IL**  
**August 21 - 25**

*Theme: Sustainability in a Changing World*

The 264th ACS National Meeting & Exposition will be held August 21 - 25, 2022 in Chicago, IL and online. The abstract deadline is March 14, 2022. Please contact Gian Surbella ([robert.surbella@pnnl.gov](mailto:robert.surbella@pnnl.gov)) if you have an interest in organizing/presiding over the General Topics or Young Investigator

sessions, or if you have any questions.

- **Young Investigators in Nuclear and Radiochemistry**
- **General Topics in Nuclear Chemistry and Technology**
- **Environmental Radiochemistry**  
*Organizers: Amy Hixon (ahixon@nd.edu) and Nicole DiBlasi (nicole.dibiasi@kit.edu)*
- **Macromolecular, Supramolecular, and Solid-State Structural Chemistry of Actinides**  
*Organizers: Korey Carter (korey-carter@uiowa.edu) and Tori Forbes (tori-forbes@uiowa.edu)*
- **Computational Methods of Lanthanides and Actinides**  
*Organizers: Theresa Windus, (twindus@iastate.edu), Deborah Penchoff (dpenchof@utk.edu), and Charles C. Peterson, (cpeterson@oarc.ucla.edu). Cross-listed with: PHYS, COMP, and INOR*
- **Artificial Intelligence Applications in Nuclear and Radiochemistry**  
*Organizers: Theresa Windus, (twindus@iastate.edu), Deborah Penchoff (dpenchof@utk.edu), and Charles C. Peterson, (cpeterson@oarc.ucla.edu). Cross-listed with: PHYS, COMP, and INOR*

**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. Please contact Tara Mastren ([Tara.Mastren@utah.edu](mailto:Tara.Mastren@utah.edu)) If you have any questions or programming ideas.

## ADDITIONAL CONFERENCES

**Plutonium Futures – The Science** is a topical conference that provides an international forum for the presentation and discussion of current research on physical and chemical properties of plutonium and other actinide elements. **Plutonium Futures 2022** will be held 26 – 29 September 2022 in Avignon, France. Abstract submission is now open; a flyer with additional information is attached at the end of this Newsletter.

### 2022 NUCLEAR CHEMISTRY SUMMER SCHOOL

*Lynn Francesconi*

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 13, 2022 – July 24, 2022) in Nuclear and Radiochemistry in either California at San Jose State University or New York at Brookhaven National Laboratory. 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. 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, transcripts and two letters of recommendation is February 1, 2022. 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 sponsored program, please do not hesitate to contact me at [Lfrances@hunter.cuny.edu](mailto:Lfrances@hunter.cuny.edu).

Funding for this program is provided by the Department of Energy.

### AWARDS NOMINATIONS COMMITTEE OF NUCL

*Thomas Albrecht-Schmitt*

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

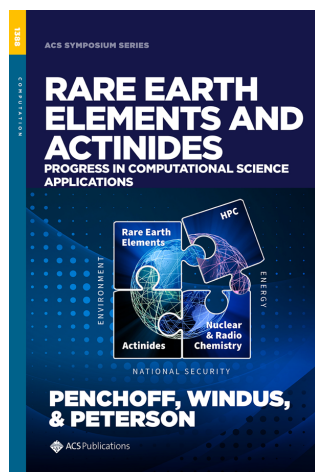
[www.nucl-acs.org/?page\\_id=89](http://www.nucl-acs.org/?page_id=89)

Additional information on ACS Fellows Program is available at:

[www.acs.org/content/acs/en/funding-and-awards/fellows.html](https://www.acs.org/content/acs/en/funding-and-awards/fellows.html)

The nomination deadline is expected to be the first week of April 2022.

## ACS BOOK ON RARE EARTH ELEMENTS AND ACTINIDES PUBLISHED



The book [\*Rare Earth Elements and Actinides: Progress in Computational Science Applications\*](#) is now available online. This book was inspired by computational sessions organized in ACS-NUCL since 2018. These sessions often were cross listed with other divisions, and

involved multidisciplinary topics and presenters including computer scientists, data scientists and artificial intelligence (AI) experts, and computational chemists, amongst others. The book presents topics at the intersection of computational science fields and modeling of REEs and actinides in various applications of interest in radiochemistry. This book was edited by Deborah Penchoff and Charles Peterson from ACS-NUCL, and Theresa Windus from ACS-PHYS and ACS-COMP. Deborah Penchoff is the Associate Director of the Innovative Computing Laboratory and is a faculty member in the Department of Nuclear Engineering at the University of Tennessee. Theresa Windus is a Distinguished Professor and Liberal Arts and Sciences, Dean's Professor in the Department of Chemistry at Iowa State University, and a scientist in the Critical Materials Institute in Ames Laboratory. Charles Peterson is a Senior High-Performance Computing (HPC) expert

in the Office of Advanced Research Computing at the University of California, Los Angeles. The editors indicated that “they are optimistic that the book can be a resource to help bridge the gap between those who develop tools to enable HPC modeling of REEs and actinides and those who focus on modeling these systems”. They also pointed out that “HPC can accelerate computational modeling of REEs and actinides; however, the software needed to model these elements has not advanced as fast as hardware for the latest supercomputers, which created a hardware-software ecosystem that is out of balance. Developing efficient solutions to model these systems requires multidisciplinary expertise including computer science, scientific computing, data science and AI, computational chemistry, chemical theory, and radiochemical design.” The book is organized in three parts: (I) Rare Earth Elements and Actinides: History and Global Challenges, (II) Advances in Supercomputing and Methods Development, and (III) Applications in Surface Science, Ligand Design, Binding Analysis, and Covalency. Many ACS-NUCL members contributed to this book. Members of other ACS divisions and non-ACS members who participated in the NUCL sessions also contributed chapters.

The editors welcome discussion and are happy to address questions from the community. Please, address communication to the book's Editor in Chief, Deborah Penchoff ([dpenchof@utk.edu](mailto:dpenchof@utk.edu)).



## NUCLEAR ENGINEERING FACULTY POSITION

The **Department of Nuclear Engineering at the University of Tennessee, Knoxville (UTK)** is seeking applications to fill a tenure-track faculty position at the Assistant or Associate Professor level starting August 1, 2022. Duties will include teaching undergraduate and graduate courses in nuclear engineering-related subjects, generating externally funded research, advising graduate students, writing scholarly journal articles, and providing service to the department, college, university, and community. Applicants should be able to contribute to existing courses and research activities in nuclear engineering, as well as to develop new avenues of research and teaching. Strong candidates with a background in radiochemistry and isotope production will be considered. This faculty position is aligned with the department's strategic initiative to grow in the area radiochemistry/isotopes to expand graduate student training opportunities to align with national needs in nuclear medicine, expand nuclear power generation, protect against external nuclear threats, stockpile stewardship, and/or manage nuclear wastes. Preference will be given to candidates who have demonstrated research success that complements existing University of Tennessee strengths 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.

### Qualifications

Applicants must have a doctorate in Nuclear Engineering or a closely related field by the effective date of appointment. Strong candidates with a background in radiochemistry and isotope production will be considered. This faculty position is aligned with the department's strategic initiative to grow in the area radiochemistry/isotopes to expand graduate student training opportunities to align with national needs in nuclear medicine, expand nuclear power generation, protect against external nuclear threats, stockpile stewardship, and/or manage nuclear wastes. Preference will be given to candidates who have demonstrated research success that complements existing University of Tennessee strengths, with the vision to develop collaborative research activities, and are committed to high-quality undergraduate and graduate student education.

Visit <https://apply.interfolio.com/97413> to apply.

## PHYSICIST STAFF SCIENTIST/ENGINEER

The [Nuclear Science Division](#) (NSD) at the **Lawrence Berkeley National Laboratory** (LBNL) invites applications for a Career-Track/Career Staff Scientist position from outstanding scientists to conduct original experimental research with emphasis on the properties and structure of heavy nuclei. An initial focus is the development of an exciting research program exploiting recent advances in instrumentation and capabilities at the 88-Inch Cyclotron. The appointment level will depend on qualifications and experience. The successful candidate will join the [Heavy Element Research Group](#) and will have significant responsibilities in all aspects of the group's activities, playing a leadership role in executing the experimental program and helping develop new directions for the group. They will be heavily involved in the training of students and post-docs. Measuring the properties of the heaviest elements to establish the limits of their existence and their structure is a major activity in nuclear science and an important part of the LBNL [Low-Energy Nuclear Physics Program](#). The program also includes major ongoing activities to investigate the structure of nuclei far from beta stability and to carry out nuclear data evaluation and measurements for basic and the applied nuclear science communities. We develop, construct, and utilize advanced instrumentation for this work including the gamma-ray tracking arrays GRETINA and GRETA, and the heavy element mass separators BGS and FIONA. Research is carried out locally at the 88-Inch Cyclotron (LBNL's high-intensity stable-beam accelerator), at the Argonne ATLAS/CARIBU facility, and at the rare-isotope beam facilities FRIB at Michigan State University, the Rare Isotope Beam Factory (RIBF) at RIKEN, and the ISAC Facility at TRIUMF.

### Specific Responsibilities

- Conduct original research on the properties of heavy nuclei.
- Provide technical leadership to conceptualize, design, set-up, and perform nuclear science experiments using the Berkeley Gas-filled Separator and associated instrumentation at the 88-Inch Cyclotron, such as FIONA.
- Establish collaborations to exploit unique research opportunities on the science of heavy nuclei.
- Independently solve complex problems using ingenuity, creativity, and advanced scientific principles.
- Publish papers, reports, and act as Principal Investigator on new proposals and projects.
- Provide supervision of more junior colleagues including post-docs and graduate students.
- Make oral presentations of original work to Division and Lab Management as well as the broader scientific community.

### Required Qualifications:

- Several years of relevant research and or professional experience (combined) beyond the customary highest degree (PhD) appropriate in nuclear physics or related field.
- Demonstrated ability to work independently within a research environment.
- Extensive knowledge of nuclear science, especially in the area of low-energy nuclear physics (structure and reactions).
- Skilled at analysis of data from nuclear physics experiments.
- Demonstrated productivity in terms of peer-reviewed publications and scientific presentations.
- Ability to interact professionally with staff within the Division, Laboratory and at other laboratories; including Scientists and Engineers.
- Strong written and oral communication skills.

Visit <https://lbl.referrals.selectminds.com/jobs/physicist-staff-scientist-engineer-4511> to apply. Applications received by 28 February 2022 will receive full consideration.

## ELECTRO CHEMICAL ENGINEERING POSTDOCTORAL RESEARCHER

**Argonne National Laboratory** is looking for a postdoctoral researcher. The Postdoctoral Appointee will be part of a team conducting applied R&D for the development of high-temperature electrochemical processes in molten salt electrolytes, including the pyrochemical treatment of used nuclear fuel, with the goal of recovering purified products for use in advanced reactors.

As a part of this work, you will:

- Apply and improve pyroprocess operations such as electrorefining and oxide reduction at engineering- and pilot-scales in various systems to support industrialization.
- Conduct standard electrochemical measurements (cyclic voltammetry, electrochemical impedance spectroscopy, polarization tests, etc.) and innovative experiments in molten salt electrolytes to advance the technical understanding of processes occurring in molten salt and molten salt chemistry.
- Assess and improve process efficiency, monitoring, and product quality and recovery to optimize cell design and operating conditions.
- Communicate effectively with supervisors, peers, and Laboratory management through status updates, technical research reports, project presentations, and other regular channels.

### Position Requirements

- Skill in devising and performing experiments to acquire data, using and maintaining research equipment, compiling, evaluating, and reporting test results.
- Experience in electrochemistry, electrochemical engineering, or nuclear engineering.
- Knowledge of fundamental thermodynamics and kinetics.
- Experience with high-temperature molten salt systems, actinide chemistry, or materials science is desired, but not mandatory.
- Strong interpersonal, written, and oral communication skills.
- Ability to model Argonne's Core Values: Impact, Safety, Respect, Integrity, and Teamwork.
- U.S. citizenship is required for this position.

This level of knowledge is typically achieved through a formal education in chemical engineering, materials science, nuclear engineering, or related field at the PhD degree level with zero to three years of experience or equivalent in the scientific application of this knowledge and practical laboratory experience.

To apply, visit:

[https://argonne.wd1.myworkdayjobs.com/en-US/Argonne\\_Careers/job/Argonne-National-Laboratory/Pyroprocess-Engineering-Postdoctoral-Researcher\\_411711](https://argonne.wd1.myworkdayjobs.com/en-US/Argonne_Careers/job/Argonne-National-Laboratory/Pyroprocess-Engineering-Postdoctoral-Researcher_411711)



## STAFF SCIENTIST/ENGINEER

*This position will be filled at either the Scientist 1 or 2 level depending on the skills of the selected candidate. Additional job responsibilities (outlined below) will be assigned if the candidate is hired at the higher level.*

Los Alamos National Laboratory is looking for an exceptional Scientist to join our Weapons Production directorate. Our diverse workforce enjoys a collegial work environment focused on creative problem solving, where everyone's opinions and ideas are considered.

The Advanced Recovery and Integrated Extraction System (ARIES) program (AMPP-3) in the Actinide Material Processing & Power (AMPP) Division in the Weapons Directorate is tasked with the disposition of 34 metric tons of surplus nuclear material to meet the Nation's nuclear non-proliferation and national security objectives. The ARIES mission includes the disassembly of surplus items, conversion and stabilization of plutonium metal to oxide, processing of the oxide to meet specifications, physical and chemical characterization of the oxide, and packaging of the oxide for transportation or storage. Characterization examines physical properties including particle size, surface area and bulk and tapped densities, and chemical properties including moisture content and quantification of elements of interest. It also supports Nondestructive Assay of plutonium, uranium, and other actinide material components produced and packaged during the ARIES process. This is your chance to make a real difference while working on important research directly impacting national security.

### **Scientist 1 (\$85,400 - \$139,600)**

You will provide technical support as the process engineer, assisting improving measurement, maintaining measurement control, troubleshooting and maintenance of equipment, and development of new measurement methodologies or systems. You will be responsible for assisting operations as needed to maintain equipment and ensure the operability of instruments to meet ARIES product needs. This role requires complex manipulation in a glovebox and open hood and handling of special nuclear materials. In this role, you will be interacting with multiple organizations to ensure compliance with Conduct of Operations, Conduct of Engineering, Conduct of Maintenance, Quality, and Safety Management programs. Specific tasks include procedure development, instruction and training of technicians, process improvement, and developing solutions for program needs.

### **Scientist 2 (\$94,100 - \$155,700)**

In addition to the roles and responsibilities of a Scientist 1: You will ensure programmatic objectives are met by participation in planning and identification of challenges. You will develop and validate new methods and installation of associated equipment to address identified challenges. You will participate in the development of resource-loaded schedules to successfully complete program milestones, and balance multiple projects while ensuring process functions at required rate.

To apply, visit: <https://lanl.jobs/los-alamos-nm/science-and-engineering-scientist-12/2662D9A6E45F48728EA2BAADFCB36C77/job/>



**San Jose  
State  
University**

**San Jose, CA**

**Brookhaven  
National  
Laboratory**

**Long Island, NY**

# **EARN CASH & COLLEGE CREDIT**

The US Department of Energy (DOE) and Division of Nuclear Chemistry & Technology of the American Chemical Society (ACS) are sponsoring two INTENSIVE six-week Summer Schools in Nuclear & Radiochemistry for undergraduates. Funding is provided by the US Department of Energy.

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.

## **DOE & ACS Nuclear & Radiochemistry Undergraduate Summer Schools**

**June 13, 2022  
through  
July 24, 2022**

**Fellowships  
include a  
\$4000 stipend,**  
all tuition and fees, transportation to and from the Summer School location, housing, books, and laboratory supplies. Transferable college credit will be 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).

**Completed  
applications  
must be received  
no later than  
February 1, 2022.**

Each Summer School is limited to 12 students. Announcement of awards will be made in early March 2022.



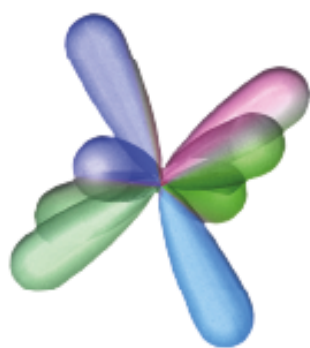
For more information, contact:  
**Prof. Lynn C. Francesconi, Director**

Nuclear & Radiochemistry Summer Schools  
Department of Chemistry  
Hunter College of the City University of New York  
New York, NY 10065

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

**Online application forms are available**  
at [https://www.nucl-acs.org/?page\\_id=1731](https://www.nucl-acs.org/?page_id=1731)





# PLUTONIUM FUTURES

## THE SCIENCE

26-29 September 2022  
AVIGNON (France)

**Plutonium Futures – The Science** is a topical conference that provides an international forum for the presentation and discussion of current research on physical and chemical properties of plutonium and other actinide elements

**Plutonium Futures 2022** is the 11<sup>th</sup> edition in the series of acclaimed international conferences initiated by Los Alamos and Lawrence Livermore National Laboratories  
**The 2022 conference will be held in the Popes' Palace conference center of Avignon**

## KEY DATES

**ABSTRACTS SUBMISSION:**  
**from November 2021 to March 2022**  
*Acceptance of abstracts: May 2022*

**REGISTRATION:**  
**from February to August 2022**  
*Early booking: until June 2022*

## TOPICS

Condensed Matter Physics • Surface Science & Corrosion • Metallurgy & Materials Science  
Compounds • Complexes & Coordination Chemistry • Detection & Analysis • Nuclear Fuel Cycle • Environmental Behaviour & Chemistry • Solution & Gas-phase Chemistry

### Local Organizing Committee

Philippe Guilbaud (CEA), Dominique Guillaumont (CEA), François Delaunay (CEA), François Jollet (CEA), Christelle Tamain (CEA), Thomas Dumas (CEA), Carole Valot (CEA), Christophe Jegou (CEA), Matthieu Virot (CEA/ICSM).

### Program Committee

Corwin Booth (LBNL), Horst Geckeis (KIT), John Gibson (LBNL), Krzysztof Gofryk (INL), Robert J. Hanrahan Jr. (NNSA), Matthew Higginson (AWE), David Hobart (Florida State University), Stepan Kalmykov (LMSU), Rudy Konings (JRC), Alexander Landa (LLNL), Klaus Luetzenkirchen (JRC), Philippe Moisy (CEA), Benoit Oudot (CEA), Paul Roussel (AWE), Tarik Saleh (LANL), David Shuh (LBNL), Richard Wilson (ANL), Ping Yang (LANL), Mavrik Zavarin (LLNL).

### International Advisory Committee

Scott Bazley (AWE), Hervé Bernard (CEA), Kerri Blobaum (LLNL), Roberto Caciuffo (JRC), Hervé Chollet (CEA), David Clark (LANL), Vladimir Dremov (RFNC-VNIITF), Rodney C. Ewing (Stanford University), Thomas Fanghänel (JRC), Franz Freibert (LANL), David Geeson (AWE), Yoshinori Haga (JAEA), Ladislav Havela (Charles University – Prague), Siegfried Hecker (Stanford University), Gerrit van der Laan (Diamond Light Source Ltd), Gerry Lander (ILL), Jun Li (Tsinghua University), Scott McCall (LLNL), Boris Nadykto (VNIIEF), Alexander V. Petrovtsev (RFNC-VNIITF), Lidia F. Timofeeva (VNIINM), Tim Tinsley (NNL).



[www.pufutures2022.org](http://www.pufutures2022.org)



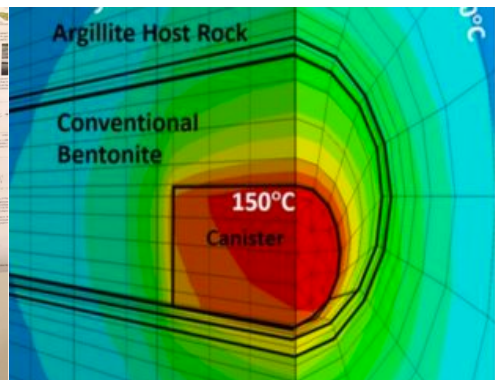
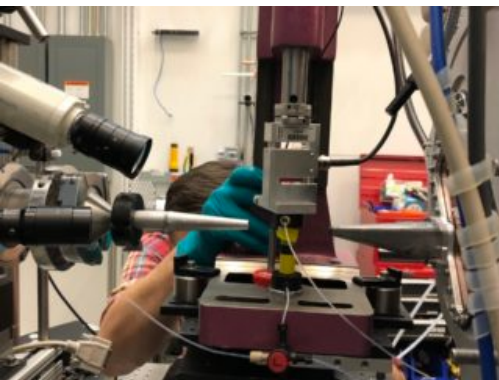
[contact@pufutures2022.org](mailto:contact@pufutures2022.org)

Please register to the mailing list if you would like to receive regular news.

**Without this subscription, you will not receive any information on this event**

Organised by





## INGENUITY Next-Gen Workforce Internship for Nuclear Waste Disposal Berkeley Lab — Summer 2022

Berkeley Lab (near UC Berkeley) is a world premier research institution where scientists are solving some of the world's most challenging environmental and energy problems. We are committed to developing a diverse, talented workforce of next-generation scientists.

The INGENUITY program is looking for bright, curious students who will spend Summer 2022 engaging in exciting research projects to address the global challenge of geologic disposal of nuclear waste. Internship projects can range from using artificial intelligence to simulate radionuclide migration in the subsurface to conducting experiments in a lab to understand the behavior of water in clay barriers. We are interested in students from earth, environmental and/or geosciences, as well as computational sciences, nuclear engineering, and other related disciplines

### Other Key Info

**Award Amount:** \$8,400 plus travel supplement if > 50 miles from Berkeley Lab

**Application Deadline:** January 31, 2022

**Program Dates:** June-Aug 2022 (9-10 weeks)

### **Eligibility:**

- Community college students (must be 2<sup>nd</sup> year and above)
- Undergrads (must be sophomore and above)
- Post-baccalaureates (must have received Bachelors no later than June 2020)
- Masters and PhD students

**To learn more:** [go.lbl.gov/ingenuity](https://go.lbl.gov/ingenuity)

**Contact:** Sandy Chin, [schin@lbl.gov](mailto:schin@lbl.gov), and  
Lizz Mahoney, [ejmahoney@lbl.gov](mailto:ejmahoney@lbl.gov)





The [Horizon-broadening Isotope Production Pipeline Opportunities \(HIPPO\) collaboration](#), sponsored by the Department of Energy's [Isotope Program](#), exists to expose students to the different activities that are required to provide the nation with radioisotopes needed for science and other applications. We are committed to bringing a diverse group of students to sites involved in research and production of isotopes across the country. Participation in this program will be limited to students enrolled full-time in a bachelor's degree program at an accredited institution of higher education.

Minimum participation in this program will be one year, starting in or about May 2022. As a part of this collaboration, undergraduate students will be expected to work on isotope production-related research projects during the school year, under the in-person or remote supervision of a research mentor of HIPPO. Undergraduate students will be paid for this research work (\$15/h, 10 h/week during the semester, 40 h/week during the summer), so they need to be eligible to work in the US.

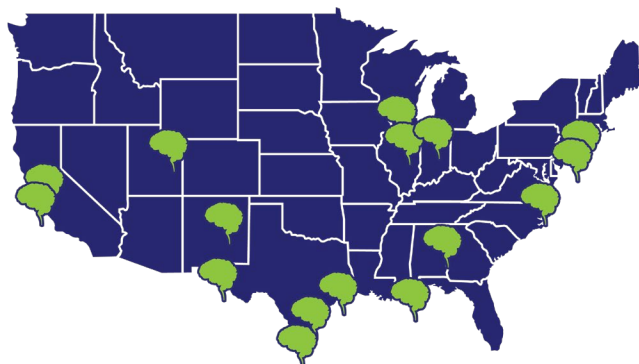
They will have the opportunity to participate at one of the weeklong HIPPO campuses (remotely or in person) and will be expected to take part in the one week summer workshop at a DOE National Lab Isotope Production site. Travel expenses will be covered for these opportunities. This will require applying for a badge from the national lab, which will mean sharing citizenship information, etc. with the laboratory management. The HIPPO experience will provide students with new lab skills, networking opportunities and open up exciting new career paths in nuclear and radiochemistry.

Undergraduate researcher applications are now open at [this link](#). The deadline for full consideration is February 15, 2022.

Graduate researcher application announcement to follow.

Questions: Contact [hippo@tamu.edu](mailto:hippo@tamu.edu)

#### HORIZON-BROADENING ISOTOPE PRODUCTION PIPELINE OPPORTUNITIES

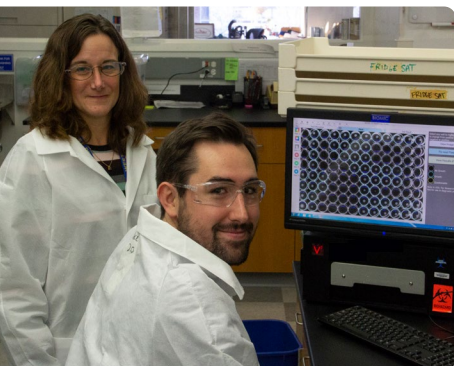




# APHL-CDC Fellowship Programs

## Jump Start Your Career!

The [Association of Public Health Laboratories \(APHL\)](#) and the [US Centers for Disease Control and Prevention \(CDC\)](#) are seeking applicants who are interested in starting an exciting new career in laboratory science while working collaboratively with industry leaders and developing professional networks. These experiential laboratory fellowships provide training to post-bachelors, -masters and -doctoral scientists in preparation for impactful careers in public health laboratories.



**“It has been a unique and valuable experience to be able to see both the lab side and the epidemiology response side to an outbreak investigation.”**

— Abby Hoffman, MS  
Antimicrobial Resistance Laboratory Fellow



**Apply by  
Feb. 28  
2022!**



### What are public health laboratories?

Public health laboratories are highly specialized public-sector laboratories that monitor and detect a range of health threats, such as genetic disorders in newborns, infectious diseases, environmental hazards and biological terrorist agents and more.

**Learn more about public health laboratories**



### What will my fellowship look like?

Fellowships run one to two years and have flexible summer start dates. Each fellow is trained in nine public health laboratory core competencies and works on unique program-specific projects.

**Learn more about the fellowship program**



### What are the program benefits?

- Competitive stipend
- Health insurance allowance
- Relocation reimbursement
- Professional development fund
- APHL student membership

**Find more program benefits on the next page**



### What do I need to apply?

All applications will need:

- Undergraduate and/or graduate transcripts
- Three (3) letters of recommendation
- Resume/CV
- Personal narrative
- Proof of US citizenship or permanent residency

**Find program-specific criteria on the next page**

**Learn more about the  
APHL-CDC Fellowship Program:**  
[www.aphl.org/fellowships](http://www.aphl.org/fellowships)

**Follow Us! #APHLFellows**

