



Division of Nuclear Chemistry and Technology
American Chemical Society

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

NEWSLETTER
April 2022

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

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FROM THE CHAIR

Nathalie Wall

With the Spring semester nearly completed at the University of Florida, I am ready for summer to catch up on writing and research. A bit of time off to take care of my garden and paint few canvases is also planned.

We had a successful Spring National Meeting with most speakers attending the conference in person. I want to thank again Tara Mastren, program Chair for the spring meeting, for her efforts in organizing this technical program and setting up our social event. The Fall meeting will be held in Chicago, under the theme “Sustainability in a Changing World” and the NUCL division will have 5 exciting symposia. Note that the General Topics in Nuclear Chemistry and Technology and Young Investigators in Nuclear and Radiochemistry sessions are seeking students for presiding during the sessions. Although the abstract deadline has passed, you can contact Gian Surbella if you have a late submission. We are also already looking towards the next Spring meeting in Indianapolis; Tara Mastren is looking forward to receiving your programming ideas.

Program Chair, 2022
NATHALIE WALL
University of Florida
Gainesville, FL 32611
Phone: (352) 846-3300
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

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

Secretary, 2020-2023
AMY HIXON
University of Notre Dame
ahixon@nd.edu

Treasurer, 2022-2024
BRIAN POWELL
Clemson University
bpowell@clemson.edu

Councilors
SILVIA JURISSON, 2022-2024
University of Missouri
jurissons@missouri.edu

GRAHAM F. PEASLEE, 2021-2023
University of Notre Dame
gpeaslee@nd.edu

Alternate Councilors
PAUL BENNY, 2021-2023
JULIE EZOLD, 2021-2023

Members-at-Large, Executive Committee
GLENN FUGATE, 2022-2024
DEBORAH PENCHOFF, 2021-2023

Our councilors, Graham Peaslee and Silvia Jurisson, provide an interesting summary of what their job entails. I encourage you to read this piece and consider this type of service in the future.

This letter also presents a summary report of the ACS-NUCL Strategic Planning Retreat that took place a year ago. Our vision and mission statements were revised, and three goals were defined to enhance our programming, leadership, and the visibility of the division. We will work on making progress on the strategies that were identified. Volunteers wishing to help work on one or multiple tasks can contact me at nathalie.wall@ufl.edu.

In San Diego we also had the pleasure to congratulate in person the 2020 and 2021 nuclear chemistry summer school outstanding students. These students had attended the summer school in a virtual format. I want to take this opportunity to congratulate the NCCSS organizers and teachers for doing an outstanding job under such difficult circumstances. The NCCSS is key to developing the next generation of nuclear chemists and radiochemists.

Cheers!
NAW

COUNCILORS REPORT

Graham Peaslee and Silvia Jurisson

As background, the ACS society is governed by a Council of almost 500 councilors – selected from local sections and from divisions (both technical and non-technical). The Nuclear Division is one of 32 Divisions of the ACS and is large enough to be appointed two council seats – which we select by annual elections. These two seats are currently occupied by Graham Peaslee and Silvia Jurisson. There are also several additional NUCL division members who serve as councilors from Local Sections or as members of ACS committees.

As councilors we get to hear about all the activities of the ACS staff and leadership and try to report back on things that are relevant to NUCL members, and we can also take information from our Division back to the Council at large. For example, when the NUCL Division elected a Diversity officer a couple years ago for the first time, it turns out we were the first Division to do so formally, and we communicated that proudly to the rest of the ACS and now many other divisions have similar elected positions.

As councilors, we also get to serve on ACS standing committees, and we can share what we learn there with the NUCL membership for a few minutes here.

Silvia Jurisson is a member of CEPA (Committee on Economic and Professional Affairs) and its Sub-Committee SMRV (Subcommittee on Marketing, Research and Volunteers). We met virtually as a subcommittee and as a full committee in December and again in March prior to the Spring ACS meeting.

CEPA has 3 subcommittees, one that deals with Career Workshops (SEEP) both at meetings and throughout the year (virtually during the pandemic and this will likely continue in some fashion), one that deals with ACS policies and guides (SPE) that need renewing, updating or sunseting, and one that deals with Career Consultants and various survey results (Salary survey, Member Satisfaction survey) (SMRV).

Several workshops were reviewed over the past 2 years (all were held virtually) for relevance, participation, content, etc. The workshops will continue to be held virtually throughout the year. However, the workshops held during the Spring San Diego meeting were in-person only.

Responses to the Member Satisfaction and Salary & Employment surveys found that

members perceived the 2021 economic outlook was better than that in 2020 based on responses. Improvement in the Chemical Enterprise was observed to be better in 2021 than 2020 by domestic members but not as much so be international members.

Career Consultants held virtual office hours since the pandemic began and have continued with these. The participant surveys show overall satisfaction with the virtual office hours, which include a general presentation by career consultants and also breakout rooms with specific career consultants. One-on-one meetings with career consultants have also continued and feedback has been positive. In 2022, a certified Retirement Coach will be added to the Career Consultants since ~20% of members are retired. The Global Career Consultant Program has been piloted with initial focus on India and China, and in 2022 the plan is to have 8 virtual workshops for them.

Graham Peaslee is a member of the Divisional Activities Committee, and chairs the sub-committee on Grants and Recognition. This Committee coordinates the interests of the 32 Divisions, and tries to work on interdisciplinary initiatives (such as the recent Convergent Research Communities initiative to start a multidisciplinary group in Materials Science), as well as Divisional Awards, and Divisional concerns, such as membership and services provided to members. One area which is little known, but could be quite advantageous for NUCL members is the Divisional Innovative Program Grant – which has an open RFP twice a year, and each Division is eligible for \$12500 per year in these grants – if they have something innovative that they would like to try. There is an online application form and a letter required from the NUCL chair, and anybody with an innovative activity that might be useful to NUCL membership is able to apply. It is not a lot of money, but if it works well for our membership, it is the place to start

and all we need are innovative ideas. Providing food for a conference, or Honoria for speakers at a meeting is not considered innovative, but recent proposals to try new cyber-initiatives during COVID for students and junior scientists have been funded – just not from our Division in the last year. If you have ideas, please do contact one of your councilors and we can help you get an idea started.

We also hear about the ACS meetings – current and future, and for the San Diego meeting this Spring, there are 12,847 total registrants (9,452 in-person = 73.6%, and 3,395 virtual = 26.4%). This is a significant upturn from Atlanta in the Fall and bodes well for the return to Chicago as an ACS meeting site next August for the Fall meeting. Yes, it will be held at the McCormick center in Chicago, but there has been an explosion of new hotels near the McCormick center which allows the ACS to host all the technical meetings in a single convention center, and not scattered over a dozen hotels as well. It will be a hybrid meeting as well – with some online capabilities – but not a perfectly seamless hybrid meeting yet – that is still a way off given the expense. There will be the option to participate virtually, but it won't be uniform among the Divisions.

As always, if any NUCL members have questions or concerns, they should ask or tell us about them. We are here to serve you through our participation in ACS Council meeting and with our membership/participation on committees.

NUCL STRATEGIC PLANNING UPDATE

Deborah Penchoff

The ACS-NUCL Strategic Planning Retreat was held in a virtual format during April 19-22, 2021. The goal of the retreat was to review and refresh the 2015 NUCL strategic plan,

and to develop an actionable plan to begin in 2021. The group revised the division's vision and mission statements, performed a situation analysis of NUCL's environment (including social, technological, economic, and political variables), analyzed threats and opportunities for the division, and developed three goals with specific strategies to be achieved in a determined timeline. Amber Hinkle and Larry Krannich facilitated the sessions, which were attended by Thomas Albrecht-Schonzart, Todd Bredeweg, Tori Forbes, Amy Hixon, Kiel Holliday, Tara Mastren, Kevin McCann, Graham Peaslee, Deborah Penchoff, and Richard Wilson. The three main goals established during the retreat seek to: (1) sponsor consistent, yet diverse programming that fosters excellence in research, teaching, mentoring, and outreach; (2) formalize handoff of information and smooth transition, broaden pool of potential leaders, and communicate with membership more effectively, and (3) expand the visibility of NUCL by partnering and collaborating with national laboratories, industry, and other ACS Divisions. The summary of the ACS-NUCL 2021 strategic plan is shown in Figure 1 (on page 7 of this newsletter). And the revised vision and mission statements are included below.

ACS-NUCL refined vision statement:

“Applying the power of nuclear chemistry and technology to improve people’s lives.”

ACS-NUCL revised mission statement:

“Creating opportunities for our members to share ideas, foster collaborations, advance research, enrich careers, and educate future scientists in nuclear chemistry and technology.”

NUCL FINANCIAL REPORT

Brian Powell

\$147,282.22 Checking balance

\$77,061.18 Saving Balance

Expenses in 2021 are as follows:

Total Expense	Description
\$ 45.00	New Member Commissions
\$ 7,035.00	February Dues Payment
\$ 4,815.00	August Dues Payment
\$ 28,730.86	Dues Paid Directly to Division
\$ 7.66	Interest on Savings or Temporary Cash Investments
\$ 1,065.63	Royalties
\$ (2,000.00)	Non-Meeting Grants and Awards (Support for Actinides 2022 and Coryell Awards)
\$ (1,000.00)	Other (ACS meeting expenses)
\$ (602.78)	Communications (postage, telephone, etc.)
\$ (410.88)	Office Supplies and Operations

Typically, we receive closer to \$15,000 in Dues paid directly to the division. This year we received extra funds. These are being put towards payment of the \$17,000/year expense of the Seaborg Award. We continue to seek more stable funding to support this award and hope to present on a new plan at the Fall 2022 meeting. Other meeting expenses have been typical for previous years. We have continued to support local meetings as requested, typically at a \$500 (external to ACS) or \$1,000 (internal ACS) level.

We are also interviewing investment brokers to discuss investment of our funds to gain something better than the \$7.66 earned in 2021.

NATIONAL MEETING PROGRAMMING

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 has passed. Please contact Gian Surbella (robert.surbella@pnnl.gov) if a need arises on late submissions. The General Topics in

Nuclear Chemistry and Technology and Young Investigators in Nuclear and Radiochemistry sessions are both seeking students who are interested in presiding/being the MC during the session.

- **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*
- **Careers in NUCL at the National Labs**
Organizers: Amy Hixon (ahixon@nd.edu) and Ginger Sigmon (gsigmon@nd.edu).

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. We are looking for volunteers to organize symposia for this meeting. Please contact Tara Mastren (Tara.Mastren@utah.edu) with potential symposia topics or for more information.

- **Young Investigators in Nuclear and Radiochemistry**
- **General Topics in Nuclear Chemistry and Technology**
- **Computational Science Applications in Rare Earth Elements and Actinides**
Organizers: Deborah Penchoff (dpenchof@utk.edu),
- **Data Science and Artificial Intelligence Applications in Nuclear and Radiochemistry**
Organizers: Deborah Penchoff (dpenchof@utk.edu)

NUCLEAR CHEMISTRY SUMMER SCHOOL OUTSTANDING STUDENTS

Lynn Francesconi

During the summer of 2020, four outstanding students were named for the virtual NCSS; two attended the 2022 Spring ACS meeting for recognition

Logan Smith

Logan is presently attending graduate school at UNLV.

Hanalei Lewine

Hanalei is a PhD student in the Analytical, Environmental, and Atmospheric division in the chemistry department at University of

Colorado Boulder. She is planning to study atmospheric chemistry.

Megan Schiferl

Megan graduated with a B.S. in Chemistry and Mathematics from The College of St. Scholastica, in Duluth, MN, in December 2021. After NCSS, she interned for Lawrence Livermore National Lab during the summer of 2021 and she is currently working there as an academic graduate appointee in the nuclear and chemical sciences division. Megan will be attending graduate school starting fall 2022 at either Notre Dame or UC Berkeley, in the Civil and Environmental Engineering and Earth Sciences (CEEES) department or the Nuclear Engineering (NE) department, respectively.

Michael Davern

Michael was an undergraduate student at Wake Forest University and graduated in May 2021. He is now a graduate student at the University of North Carolina at Chapel Hill. His thesis project will revolve around developing Perfluoroalkyl Substances (PFAS) detection methods using Chemical Ionization Mass Spectroscopy. Michael also returned as a TA for the Nuclear Chemistry Summer School virtual program in summer 2021.

During the summer of 2021, two outstanding students were named for the virtual NCSS; both attended the 2022 Spring ACS meeting for recognition.

Alex Hays

Alex is an undergraduate student at Pacific University in Forest Grove, OR, and will graduate in May 2022. Alex is undecided about graduate school at this point in time. She is essentially taking a “gap” year and will be taking courses in fall, 2022 at Pacific University and will be going to work in Australia for a few months in spring of 2023. Alex does a lot of work with her university's outdoors program where she guides rock climbing, hiking, cross country skiing, and mountaineering student-led trips.

Johnathan Phillips

Johnathan is attending Clemson University, majoring in Chemistry in the Honors College. Johnathan will graduate in May 2022, and is presently choosing a graduate program.

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>).

Vision: Applying the power of nuclear chemistry and technology to improve people's lives



Mission: Creating opportunities for our members to share ideas, foster collaborations, advance research, enrich careers, and educate future scientists in nuclear chemistry and technology.

<p>Goal 1: Sponsor consistent, yet diverse programming that fosters excellence in research, teaching, mentoring, and outreach. <i>[Impact, H, Resources, M]</i></p>	<p>Goal 2: Formalize handoff of information and smooth transition, broaden pool of potential leaders, and communicate with membership more effectively. <i>[Impact, H; Resources, M]</i></p>	<p>Goal 3: Expand the visibility of NUCL by partnering and collaborating with national laboratories, industry, and other ACS Divisions. <i>[Impact, H; Resources, L]</i></p>
<p>Strategy 1.1: Expand the young investigators symposium during the Spring 2022 meeting to include a session on mentoring or career development [I, H; R, L/M]</p>	<p>Strategy 2.1: Establish the responsibilities and guidelines of a communications committee that exists for 12 months to work on website overhaul, including a communications officer who serves in perpetuity on the exec committee. [I, H; R, H].</p>	<p>Strategy 3.1: By Spring 2020, establish a venue and fair for the national laboratories, universities with NUCL grad programs for the benefit of NUCL membership and students. [I, H; R, M/L]</p>
<p>Strategy 1.2: Create a programming committee by the Fall 2021 business meeting and charge them with drafting a 3-yr plan by the Spring 2022 business meeting. [I, H; R, M]</p>	<p>Strategy 2.2: Update the nuclear executive committee operations manual with completion targeted by Spring 2020 and transfer update duties over to councilors. [I, H; R, L]</p>	<p>Strategy 3.2 Immediately establish a permanent social media and web presence to communicate with NUCL membership and external stakeholders. [I, H; R, L]</p>
<p>Strategy 1.3: Secure an endowment for the Seaborg Award by the Fall 2022 meeting and establish a new division award for early career members by the Spring 2022 meeting. [I, M; R, H]</p>	<p>Strategy 2.3: Establish the framework by Spring 2022 for a revised succession plan for all NUCL Exec Committee positions. [I, M; R, L]</p>	<p>Strategy 3.3: By Spring 2022, co-sponsor more symposia with other divisions. Actively solicit programming with relevance to new and anticipated funding initiatives. [I, H; R, L/M]</p>
		<p>Strategy 3.4: Update and maintain directory of University research programs and National laboratories involved in NUCL research. [I, H; R, L]</p>

Figure 1: 2021 ACS-NUCL Strategic Plan. [I = impact, R = resources, L = low, M = medium,