



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

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

Chair, 2005  
Program Chair, 2005  
**KIMBERLY W. THOMAS**  
Chemistry Division, Mail Stop J515  
Los Alamos National Laboratory  
Los Alamos, NM 87545  
Phone: (505) 667-4457  
[kwthomas@lanl.gov](mailto:kwthomas@lanl.gov)

Vice-Chair, 2005  
Program Chair, 2006  
**J. DAVID ROBERTSON**  
Department of Chemistry  
University of Missouri  
Columbia, MO 65211-0001  
Phone: (573) 882-2240  
[robertsonjo@missouri.edu](mailto:robertsonjo@missouri.edu)

Vice-Chair Elect, 2005  
Program Chair, 2007  
**HEINO NITSCHKE**  
Department of Chemistry  
University of California at Berkeley  
Berkeley, CA 94720-1460  
Phone: (510) 486-5615  
[hnitsche@lbl.gov](mailto:hnitsche@lbl.gov)

Secretary, 2005-2007  
**W. FRANK KINARD**  
Dept. of Chemistry and Biochemistry  
College of Charleston  
Charleston, SC 29424  
Phone: (843) 953-5587  
[kinardf@cofc.edu](mailto:kinardf@cofc.edu)

Treasurer, 2005-2007  
**LEONARD MAUSNER**  
Medical Department  
Brookhaven National Laboratory  
Upton, NY 11973  
Phone: (631) 344-4457  
[lmausner@bnl.gov](mailto:lmausner@bnl.gov)

Councilor  
**JOSEPH R. PETERSON**, 2005-2007  
[joepete@utk.edu](mailto:joepete@utk.edu)

Alternate Councilor  
**SILVIA JURISSON**, 2003-2005

Division Councilor Emeritus  
**ELLIOT S. PIERCE**

Members-at-Large, Executive  
Committee  
**DAEG S. BRENNER**, 2003-2005  
**STEVEN W. YATES**, 2004-2006

## **NEWSLETTER**

### **APRIL 2005**

*Newsletter Editors: Paul Mantica & Lætitia Delmau*  
*Email: [dncnews@nscl.msu.edu](mailto:dncnews@nscl.msu.edu)*

### **Topics**

- > **SAN DIEGO ACS MEETING REPORTS**
- > **FUTURE ACS NATIONAL MEETINGS**
- > **NEWS FROM NSAC**
- > **SUMMER SCHOOL NEWS**
- > **SERMACS 2006**

### **SAN DIEGO ACS MEETING**

**Chair's Report** – Kim W. Thomas

#### **TECHNICAL PROGRAM**

We had a very successful meeting in San Diego and it was a pleasure seeing so many of you there. One-hundred and five papers were scheduled to be presented and by my reckoning, we had very few "no-shows". As always at the Spring meeting, the Glenn T. Seaborg Award Symposium honors the award recipient who this year was Luciano Moretto from UC-Berkeley and Lawrence Berkeley Laboratory. His bio is available on the DCNT website for those of you who missed the earlier announcement. Larry Phair did an superb job of organizing this award symposium that covered three full days. Chuck Coleman and crew organized the 3-day symposium on Analytical Chemistry in Nuclear Technology which has become something of a spring meeting tradition as well. We rounded out the program with a symposium on Transport Behavior of Actinides and Fission Products organized by Anne Kersting and one on Radioisotope Production Techniques and Applications organized by Wolfgang Runde. And, as always, we had a session on Additional Aspects of Nuclear and Radiochemistry."

## EXECUTIVE COMMITTEE

The Executive Committee met on Sunday evening and covered several important items. One good news item is that we elected to hold our Division dues constant for the coming year. We discussed current and future programming, heard reports from the Councilor, Secretary, and Treasurer, and decided that the Division would not continue as a dues-paying member of the Biotechnology Secretariat. The major portion of the meeting then concentrated on two subjects: Nuclear Education and the Summer Schools and the Seaborg Award.

## SUMMER SCHOOLS

Sue Clark and Ken Nash gave a summary of the 2005 student recruitment and selection process and reviewed the 2004 summer schools. The schools are seeing a good number of applications and the quality of applicants seems to be increasing now that a stipend is offered.

A new Director of the Summer Schools needs to be selected, ideally, by August 2005 so he or she can begin the preparation of the next 5-yr proposal submission for our summer schools due in Sept 2006. A separate call for applications for the new Director is being prepared and will be circulated to our membership as well as to other applicable venues. The Director needs to have, perhaps above all, a passion for the summer schools and undergraduate education. Ideally, he or she would also have an entrepreneurial spirit, experience in preparing proposals, previous experience with DOE Office of Science programs and personnel. And money can't be a driver since there is only minimal support for this position in the current program.

Sherry Yennello began the Nuclear Education discussion with her perspective on the "NSAC Report on Education in Nuclear Science" that has recently been published (11/04). Sherry was a member of the subcommittee that produced the report and she gave us some insights into the drivers and the objectives of this effort. One of the specific recommendations made was for the "establishment of a third nuclear chemistry summer school, modeled largely after the existing two." This was a satisfying recognition by the physics community of the important role we chemists play in the field of nuclear science. Unfortunately there were no commitments for funding another school by NSAC and Lester Morss, the Heavy Element Chemistry Program Manager for DOE, whose program currently supports our two existing schools had previously given us a heads up that it isn't likely that the DOE Office of Science would be able to support a third school--all of which leads us to conclude that if there were to be a third school, it would be up to the proponents of this endeavor to identify a funding source. Our current funding for the two schools is \$424k.

## SEABORG AWARD

Sponsorship for the Glenn T. Seaborg Award in Nuclear Chemistry has been an ongoing struggle for the Division for quite a few years now. Unfortunately we have not been able to raise the \$300-plus dollars needed to endow an ACS National award. At this meeting we had to decide whether to continue this award under the Division's sponsorship or whether to discontinue the award altogether. The executive committee was unanimous that the award be continued. Dave Morrissey presented a draft letter from the Division to the ACS

Awards Committee proposing that the Division assume ownership and responsibility for this award. This means the DCNT would provide funds for the award,

the travel support for the awardee, and the annual ACS management fee of ~\$1200. All together this represents an annual cost on the order of \$6000 to the Division. The Executive Committee voted in favor of this proposal and authorized this letter to be sent.

## BUSINESS MEETING

The Business meeting on Monday covered many of the items from the Executive meeting with a couple of enjoyable additions.

### *Student Awards*

The Coryell Award was present to Greg Pang, University of California-Berkeley who was working with Heino Nitsche. Greg presented a poster of his work at the Division Social and made quite an impression on all of us.

The outstanding students from each site of the 2004 Summer Schools were recognized--Jill Pinter from Hope College at BNL and Jason Seifter from Reed College at San Jose State. Congratulations to these outstanding individuals!

## UPCOMING PROGRAMMING

Programming for Washington, DC is being finalized; by the time you read this newsletter, all abstracts should have been submitted.

Suresh Srivastava discussed the 6 DCNT symposia included in the upcoming PACIFICHEM 2005 to be held in Honolulu, HI December 15-20.

Atlanta and San Francisco (2006) are taking shape--Dave Robertson is soliciting your participation as a symposium organizer for these meetings;

...and Heino Nitsche would love to hear from you for our 2007 meetings in Chicago and Boston.

## ACS PRESIDENTIAL AGENDA: Enterprise 2015

During the year 2005, ACS President Bill Carroll is leading a Society-wide effort to develop scenarios of how the chemical enterprise-education, industry and government--will change in the next ten years. The goal is to understand how we can help our current and future members adapt to these changes and take advantage of the opportunities they offer. To that end, there were several symposia on this topic at the San Diego ACS National Meeting. For more information go to [www.chemistry.org](http://www.chemistry.org) and search for Enterprise 2015

Or

<http://chemistry.org/chemistryenterprise2015.html>

Your help is needed: given that the Division has assumed financial responsibility for the Seaborg Award and given that, at least for the next year, our dues remain constant, it is increasingly important that we solicit new division members. The ACS itself is struggling with how to attract and maintain relevancy for the next generation of chemists. We, too, need to advertise the benefits of joining our Division, especially to students and recent graduates. We are a central repository of nuclear and radiochemical expertise with cross-disciplinary connections from medicine to physics to nuclear energy to waste management to education to international security and homeland defense. I am convinced the professional connections and interactions afforded by membership in our Division and participation in our varied symposia are of tremendous value to the career development of anyone in our field.

Therefore, I encourage you to become an active recruiter for the Division!

### **Councilor's Report – Joe Peterson**

The ACS Council in San Diego chose Catherine T. Hunt, leader of technology partnerships at Rohm and Haas, and John W. Kozarich, chairman and president of ActivX Biosciences, to be two candidates for 2006 President-Elect. They join George E. Heinze, who was certified as a petition candidate in this Fall 2005 election.

Following usual practice, Council heard reports from all the officers and then from the elected committees, standing committees, and some of the other committees. The Committee on Committees (ConC) proposed that a new, Other Committee of Council be established, named the Committee on Ethics. Its stated charge is to coordinate the ethics-related activities of the Society, serve as an educational resource and clearinghouse, but not as an adjudication body, for ACS members seeking guidance on ethics issues; raise awareness of ethics issues through meeting programming and columns/editorials; review recognition opportunities for acknowledging ethical behavior; and to develop and oversee such other ethics-related activities as will serve ACS members and promote the Society's standards of ethical conduct within the profession of chemistry and its related disciplines. Council debated the issue, defeated a motion to assign the proposed duties to an existing subcommittee of the Committee on Economic and Professional Affairs (CEPA), and then voted to establish the new committee. Council voted to set member dues for 2006 at the fully escalated rate of \$127, based on the 2.94% change in the CPI (rounded up to the nearest dollar). It was announced that the ACS Board had voted to reduce the temporary assessment on

2006 dues to \$5 from the previously scheduled \$6. Such action was made possible by the Society's ending 2004 with a net contribution from operations of \$5.1 million. One additional petition, concerning the procedures and timing for multi-candidate and required run-off elections, was up for consideration only, but was withdrawn by the Committee on Nominations and Election (N&E).

As of March 15th the San Diego meeting had attracted 15,385 registrants, including 4160 students, 1624 exhibitors, and 601 guests. Membership in the ACS stood at 158,127 at year-end 2004, less than a 1% decrease from the previous year. More than 13,000 new members were added to the file in 2004.

Council held a 30-min. discussion on President Carroll's Enterprise 2015 theme, focusing on where our students will come from in the next 10 years and where they will go. Many speakers complimented President Carroll for choosing to focus on the future of the chemical enterprise, so that we can better plan and prepare to meet its challenges and take advantage of its opportunities.

Joe serves as Chair of the Membership Affairs Committee (MAC), a member of the Insurance Trust Board, and Chair of the Editorial Advisory Board of CHEMISTRY. Councilor Emeritus Elliot Pierce reports that he is available for limited tasks in the DC area and confirms his continuing heartfelt enthusiasm for the division.

### **FUTURE ACS NATIONAL MEETINGS**

Divisional members who would like to organize a symposium at an upcoming ACS National Meeting should contact the appropriate program chair.

Program Chair for 2005: Kim W. Thomas  
([kwthomas@lanl.gov](mailto:kwthomas@lanl.gov))

Washington, DC, August 28-Sept. 1, 2005

***Applied Modeling and Computations in  
Nuclear Chemistry***

[http://www.cofc.edu/~nuclear/2005Washington  
ComputationSymposium.pdf](http://www.cofc.edu/~nuclear/2005WashingtonComputationSymposium.pdf)

Thomas M Semkow, Wadsworth Center, New  
York State Department of Health and SUNY,  
PO Box 509, Albany, NY 12201,  
[tms15@health.state.ny.us](mailto:tms15@health.state.ny.us)

***Low-Activity Waste Issues***

John Wiley, Board on Radioactive Waste  
Management, The National Academies  
500 5th Street, NW, 6th Floor  
Washington, DC 20001, [jwiley@nas.edu](mailto:jwiley@nas.edu)

***Nuclear Forensics***

Ken Moody, Analytical and Nuclear  
Chemistry Division, Lawrence Livermore  
National Laboratory, 7000 East Ave.,  
Livermore, CA 94550, [moody3@llnl.gov](mailto:moody3@llnl.gov)

Martine Duff, Savannah River Technology  
Center, Westinghouse Savannah River  
Company, Aiken, SC 29808,  
[martine.duff@srs.gov](mailto:martine.duff@srs.gov)

Program Chair for 2006: J. David Robertson  
([robertsonjo@missouri.edu](mailto:robertsonjo@missouri.edu))

Atlanta, GA, March 26 – 30, 2006

***Meeting the diverse needs of the 21st  
century nuclear science workforce:  
A symposium by graduate student  
researchers in nuclear chemistry***

Paul Mantica, Michigan State University  
Department of Chemistry and National  
Superconducting Cyclotron Lab, S. Shaw  
Lane, East Lansing, MI 48824,  
[mantica@msu.edu](mailto:mantica@msu.edu)

Susan Lever, Department of chemistry,  
University of Missouri, 601 South College  
Avenue, Columbia, MO 65211  
[LeverS@missouri.edu](mailto:LeverS@missouri.edu)

***Archaeological Chemistry: Analytical  
Techniques and Archaeological  
Interpretation***

Mike Glascock, University of Missouri  
Research Reactor Center, University of  
Missouri, Research park, Columbia, MO  
65211, [glascockM@missouri.edu](mailto:glascockM@missouri.edu)

***Nuclear Chemistry in Context***

Co-sponsored with the Division of Chemical  
Education  
Contact: Yet to be determined

San Francisco, CA, Sept. 10 – 14, 2006

Additional or modified topics are encouraged!

***Investing in the Future: Radiochemistry  
Education Award Program***

Craig Williamson, South Carolina  
Universities Research and Education  
Foundation, 07-1 Wall Street, Clemson, SC  
29631, [wcraig@clemson.edu](mailto:wcraig@clemson.edu)

***Radioisotopes for Microbatteries and  
MEMS***

Amy Duwel, Charles Stark Draper  
Laboratory, Inc., 555 Wilson Boulevard, Suite  
501, Arlington, VA 22209,  
[ADuwel@draper.com](mailto:ADuwel@draper.com)

## *Chemistry of Imaging Agents*

Silvia Jurisson, University of Missouri, 601  
South College Avenue, Columbia, MO 65211,  
[JurissonS@missouri.edu](mailto:JurissonS@missouri.edu)

### **REPORT ON NSAC ACTIVITIES**

A special meeting of the Nuclear Science Advisory Committee was held on March 11, 2005 in light of the unexpected large cut to the DoE nuclear physics budget put forth in the President's mid-February submission of the FY06 budget. The President set the FY06 budget a level 8.4% below that in the FY05 budget and continuation at the reduced (constant dollar) level until 2011. It is important to realize that such a large cut in the budget and continued flat funding would have a dramatic effect on our community. Also, there are no additional funds for major construction during this period.

Dr. Ray Orbach, the head of the DoE Office of Science, sent a charge to NSAC noting that the present guidelines set forth in the 2002 Nuclear Physics Long Range Plan cannot be accommodated with the President's budget and requesting guidance on how to provide for the best scientific program within the constrained budget. Dr. Orbach opened the meeting with his perspective on the situation and with his request that the charge be answered by the end of June. Denis Kovar from the Nuclear Physics Division presented specific information on the DoE FY05 budget, while Brad Keister, Joseph Dehmer, and Michael Turner each presented their perspective on the NSF budget. The NSF budget situation is not so severe but NSF funded researchers will clearly be effected by any curtailment of operations at DoE facilities. In addition, Joel Perriott from the Office of Science and Technology and Michael Holland from the Office of Management and

Budget presented some of their ideas on the rationale behind the President's budget and on the relative importance of various national themes underlying the budgeted funds.

NSAC decided to form a subcommittee chaired by Robert Tribble (Texas A&M) and containing twenty-two members to provide a response to the charge. The DoE and NSAC recognize that there is not enough time to go through the traditional Long Range planning process, however, there have been a number of reviews of various aspects of the nuclear physics program during the last couple of years which provide a substantial amount of information. The subcommittee plans to collect information on the current situation at the national laboratories (costs, running time, etc.) and then to work rapidly to provide a report to NSAC in mid-June.

NSAC also received a second charge to form a new committee called NuSAG for neutrino science advisory group. This group has been asked to review the status of three classes of next-generation neutrino experiments. The charge requests a report by July of this year but the subcommittee was not formed yet.

More information including the actual charges to NSAC can be found on the website:

<http://www.sc.doe.gov/henp/np/nsac/nsac.html>

It is traditional for some fraction of the NSAC members to be replaced each year but in the present difficult circumstances the terms of the 2004 committee were extended for six months. The Division's Executive Committee asked me to stay on NSAC at their meeting in San Diego. Thus, there are four members of the Nuclear Chemistry and Technology division on NSAC at the moment, Ani Aprahamian, Roy Lacy, Alice Mignery, and myself. Both Alice and Ani are on the subcommittee to make recommendations on the budget situation. I strongly urge all

members of our division to contact any of the members of NSAC for information or to express their opinion on how to deal with the budget situation.

## SUMMER SCHOOL NEWS

For additional information regarding the ACS Summer Schools in Nuclear Chemistry, please contact the Prof. Sue Clark, National Director of the Summer Schools in Nuclear and Radiochemistry, Department of Chemistry, Washington State University, Pullman, WA 99164-4630; Phone: 509-335-1411; F A X: 509-335-8867; email:[sclark@wsu.edu](mailto:sclark@wsu.edu)

With an extension of the application date to March 1, the DOE/ACS/DNCT summer school received a record number of applicants this year – 84 by the March 1 deadline – to fill the available 24 slots at the two sites. Applications were received from all over the country, from small four-year colleges and major universities. We even received a few inquiries from Canada. The applicant pool had an overall grade point average of 3.5. As is standard procedure, a committee of experts, numbered among your colleagues in DNCT, were asked to provide input on the qualifications of the applicants and to rank them as to their ability to handle the rigors of this intensive 6 week program. There was a surprising degree of agreement among the panel members, greatly simplifying the invitation process. Only a very small fraction of our top 24 candidates declined the offer to participate in the summer school. With the assistance of this panel, the following roster of attendees at the summer school have been invited and accepted the opportunity to learn something more about nuclear and radiochemistry

The overall grade point averages for the selected group was 3.8 both overall and in the

sciences. This group includes 8 Seniors, 14 Juniors, and 2 Sophomores, 14 Chemistry majors, 5 Physics majors, 1 Biochemistry major, 1 Chemical Engineering major, and 3 students with double majors. Because the available pool of applicants included a large number of candidates abundantly qualified, many will be asked to reapply to the Summer school again next year.

Operating this summer school is an effort requiring a moderate commitment of largely volunteer time and it could not be conducted without the efforts of a significant support network. We must acknowledge the able assistance of Ms. Lori Bruce, who handles the organization of much for work for the summer school; the review panel members, Paul Mantica, Heino Nitsche, Silvia Jurisson and Annie Kersting who provide valuable guidance for the selection of the most qualified applicants; the site coordinators Herb Silber at SJSU, and Suresh Srivastava at BNL and the lead instructors at each site Frank Kinard at SJSU and Kathy Kolsky at BNL who ensure that the experience is both valuable and entertaining for the students at both sites; the guest instructors and distinguished visitors at both sites who help put real faces on the nuclear and radiochemistry establishment for the students; past Treasurer Sherry Yennello and present Treasurer Leonard Mausner for their able management of the not-insignificant budget associated with the summer school; to the American Chemical Society for providing its endorsement and sanction for this program; and most importantly to the Department of Energy, Offices of Science and Biological and Environmental Research, Heavy Elements and Nuclear Medicine programs for providing the financial support for keeping the summer school a viable operation into its 21st year.

**Brookhaven site:**

Landon Clark, Austin Peay State University, Tennessee	Junior	Physics
Tamis Dudo, Clark University, Massachusetts	Junior	Chemistry
Narek Gharibyan, University of California, Berkeley	Sophomore	Chemistry
Robin Johnson, Illinois Wesleyan University, Illinois	Junior	Physics
Andrew (Pettus) Kincannon, University of Arkansas	Sophomore	Chem E/Physics
Kaitlyn Morse, Alfred University, New York	Junior	Biology /Chemistry
Amy Ratliff, Radford University, Virginia	Senior	Chemistry
Wes Reid, Long Island University, New York	Senior	Chemistry
Allen Ricks, Cal State Chico, California	Junior	Chemistry
Jennifer Schafer, Colorado State University, Colorado	Senior	Chemistry
Sarah Steinhardt, Washington University, St. Louis	Junior	Chemistry
Beverly Weatherspoon, University of Idaho, Idaho	Junior	Chem E
Alternate, Haley Finley-Jones, Northern Arizona	Junior	Chemistry

**San Jose State Site:**

Jamie Antonelli, University of Dallas, Irving, Texas	Senior	Physics
Ming Yang Bi, Washington University, St. Louis	Junior	Chemistry
Brienne Bottenus, Washington State University	Junior	Chemistry
Brooke Gardner, Middlebury College, Vermont	Junior	Biochemistry
Jason Henline, University of Utah	Senior	Physics
Zachary Kohley, Hillsdale College, Michigan	Junior	Chemistry
Jonathan Langdon, SUNY Stony Brook, New York	Junior	Physics
Cullen Matthews, University of Central Arkansas	Senior	Chemistry
Joshua McCormick, Carthage College, Wisconsin	Senior	Chemistry/Physics
Rory Pruitt, Huntington College, Alabama	Senior	Chemistry
Tyler Reese, Mansfield University, Pennsylvania	Junior	Chemistry
Angela Soemo, Truman State University, Missouri	Junior	Chemistry
Alternate, Stephanie Sydlik, Carnegie Mellon, PA	Sophomore	Chemistry

**SERMACS 2006**

Programming of interest to Division members is being organized by David Hobbs (David.Hobbs@srs.gov) for the 2006 ACS Southeast Regional Meeting (SERMACS 2006). SERMACS 2006 will be held in Augusta, Georgia on November 1-4, 2006 (Fri. - Sat.). Two of the planned symposia are "Recent Developments in Nuclear Fuel Cycle Processing" and "Radiochemical Separations in Nuclear Technology". These should be of specific interest to Division members at

Savannah River but should also be of interest to many other members in the US and abroad. For more information on these two or other planned symposia please contact David or for general information see the SERMACS 2006 web site:

<http://www.sermacs2006.org/>