



Division of Nuclear Chemistry and Technology
American Chemical Society

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STEVEN W. YATES, 2004-2006

NEWSLETTER OCTOBER 2005

Newsletter Editor: Lætitia Delmau
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Topics

- > CHAIR'S REPORT
 - Recap from Washington, DC
 - Selection of Nuclear Summer School Director
 - Congratulations
 - Closing Statement
- > UPCOMING PROGRAMMING
- > FUTURE ACS NATIONAL MEETINGS
- > FUNDING!
- > COUNCILORS' REPORT
- > REPORT ON DNCT NUCLEAR CHEMISTRY
SUMMER SCHOOL
- > SERMACS 2006
- > JOB OPENING
- > DNCT ELECTIONS
- > CALL FOR PAPERS

CHAIR'S REPORT – Kim Thomas

RECAP OF WASHINGTON, DC

The Washington, DC meeting was a real success. Two symposia were particularly well-attended--Applied Modeling and Computations in Nuclear Science, organized by a committee headed by Tom Semkov and Nuclear Forensics, organized by Martine Duff, Ken Moody, and Stephan Vogt. The organizers are to be commended for such successful symposia that had several "standing room only" sessions. The scheduling also seemed to work well in that the Nuclear Forensics symposium was coordinated with an Analytical Division symposium on Sensors and Instrumentation for Counterterrorism: Detection of NUC/RAD Materials.

SELECTION OF NUCLEAR SUMMER SCHOOL DIRECTOR

It is with great pleasure that the Executive Committee announces the selection of Paul Mantica as the new Director of the Nuclear Chemistry Summer Schools. Paul will begin the transition to the Directorship over the course of the next year while Sue Clark and Ken Nash complete the last session of the current program with next summer's class. Meanwhile, Paul will be working diligently to prepare the new proposal for the next cycle of summer schools. Watch our next Newsletter for a "feature" article on the Summer Schools!

CONGRATULATIONS

We are pleased to announce that Steven Yates will receive the 2006 Glenn T. Seaborg Award at the Spring meeting in Atlanta.

CLOSING STATEMENT

As I prepare my last Newsletter submission as Division Chair, I want to thank all the members of the Executive Committee, especially past chair Dave Morrissey and our secretary, Frank Kinard. Their willingness to tutor and guide me through some of the trickier aspects of being a Division and Program Chair. They have set high standards and I intend to follow their example in assisting Dave and Heino as much as I can.

UPCOMING PROGRAMMING

PACIFICHEM 2005 to be held in Honolulu, HI December 15-20. Please contact Suresh Srivastava for details.

Don't forget to send Heino Nitsche your suggestions for our 2007 meetings in Chicago and Boston.

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 2006: J. David Robertson (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, S. Shaw Lane, East Lansing, MI 48824, mantica@msu.edu

Susan Lever, Department of chemistry, University of Missouri, 601 South College Avenue, Columbia, MO 65211
LeverS@missouri.edu

Archaeological Chemistry: Analytical Techniques and Archaeological Interpretation

Mike Glascock, University of Missouri Research Reactor Center, Research park, Columbia, MO 65211, glascockM@missouri.edu

Nuclear Chemistry in Context
Co-sponsored with the Division of Chemical Education

Steve Keller, University of Missouri, KellerS@missouri.edu

21st Century Radiochemistry Opportunities: A Symposium Highlighting Nuclear Science Workforce Needs

Mark Stoyer, Lawrence Livermore National Laboratory, mastoyer@llnl.gov

Contemporary Frontiers in Nuclear Structure.

(Seaborg Award Symposium)

Paul Garrett, University of Guelph,
pgarrett@physics.uoguelph.ca.

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

f Element Separations

sponsored by I&EC, co-sponsored by DNCT
(see paragraph at the end of the Newsletter)

Ken Nash (knash@wsu.edu), Dale Ensor and Bill Crooks.

30 years of Projectile Fragmentation

David Morrissey (morrissey@nscl.msu.edu)

Analytical Chemistry in Nuclear Technology

Charles Coleman, SRNL, Aiken, SC
(charles02.coleman@srnl.doe.gov) and Dave Hobart (dhobart@lanl.gov)

Investing in the Future: Radiochemistry Education Award Program

Craig Williamson, South Carolina Universities Research and Education Foundation, 07-1 Wall Street, Clemson, SC 29631, wrcraig@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

Chemistry of Imaging Agents

Silvia Jurisson, University of Missouri, 601 South College Avenue, Columbia, MO 65211,
JurissonS@missouri.edu
Martin W. Brechbiel, NIH
martinwb@mail.nih.gov

Program Chair for 2007: Heino Nitsche
(hnitsche@lbl.gov)

Chicago, IL, March 25 – 29, 2007

Fast automated radiochemistry separations in fundamental and applied nuclear chemistry

Dr. Dawn Shaughnessy (LLNL),
shaughnessy2@llnl.gov, and Dr. Ralf Sudowe (LBNL), RSudowe@lbl.gov

Boston, MA, August 19 – 23, 2007

Nuclear Structure and Reactions in the Era of Radioactive Beams

Dr. Larry Phair (LBNL), LWPhair@lbl.gov, and Prof. Romualdo T. de Souza (Indiana U.)
desouza@indiana.edu

FUNDING!

The division received \$5,000 for an Innovative Projects Fund Grant for Divisional Enhancement from the Divisional Activities Committee to help support our Archaeological Chemistry symposium in Atlanta.

COUNCILORS' REPORT- Joe Peterson
Councilors: Joseph R. Peterson and Elliot S. Pierce (Emeritus)
Alternate Councilor: Silvia Jurisson

The ACS Council in Washington, DC elected five persons to serve on the Committee on

Committees (ConC), five persons to serve on the Council Policy Committee (CPC), and five persons to serve on the Committee on Nominations and Elections (N&E). Following usual practice, Council heard reports from all the officers and then from the elected committees, standing committees, and some of the other committees.

Council was informed the John W. Kozarich had withdrawn as a candidate for 2006 President-Elect, leaving George E. Heinze and Catherine T. Hunt as the two candidates for the fall 2005 ACS national election. As of Aug. 30th the DC national meeting had attracted 13,040 registrants. The 2006 national meeting registration fee of \$305 was announced. I informed Council that as of July 31st, total ACS membership was 155,567, which was 282 higher than that at the end of July 2004. The one new petition requesting annexation of four unassigned counties in New Mexico by the Central New Mexico section was approved, and thus eleven ACS members currently residing in this northern part of the state should experience improved services. The Committee on Constitution and Bylaws presented Charter Bylaws templates for new local sections and International Chemical Sciences chapters. Both were approved without dissension.

The Council discussion topic for this meeting centered around an examination and evaluation of the proposed Vision Hypothesis: ACS is the premier professional organization for molecular scientists and engineers and is the world's leading facilitator for the creation of information, networking, and knowledge that molecular scientists and engineers need to increase the breadth and pace of scientific discovery, and thereby improve the quality of human life. Based on the most frequent themes (diversity, young people, governance,

multidisciplinarity, globalization, and outreach) recorded from the DC meeting attendees, Councilors engaged in a thoughtful, yet lively exchange of their vision of the Society's long-term future.

Joe continues his Society service as Chair of the Membership Affairs Committee (MAC), a member of the Insurance Trust Board, Chair of the Editorial Advisory Board of CHEMISTRY, and a member of the Board-Council Policy Committee Governance Review Task Force. Councilor Emeritus Elliot Pierce attended the Sunday night Executive Committee meeting and confirmed his availability for limited tasks in the DC area and his continuing heartfelt enthusiasm for the division.

REPORT ON DNCT NUCLEAR CHEMISTRY SUMMER SCHOOL – Ken Nash and Sue Clark

The ACS Summer Schools in Nuclear and Radiochemistry, funded by the U.S. Department of Energy Office of Basic Energy Sciences and held at San Jose State University (21st year) and Brookhaven National Lab (16th year) successfully marshalled 24 undergraduate students through an exploration of the theory and practice of nuclear and radiochemistry. The course includes both lecture and laboratory work on the fundamentals and applications, and features the broad participation of a number of DNCT members as either instructors or guest lecturers and the usual complement of educational and recreational field trips. A week long symposium emphasizing nuclear medicine was conducted as a part of the program. This year the DOE/ACS/DNCT summer school received a record number of applicants – 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. The overall grade point average for all applicants was 3.5. The 24 students who completed the school, selected by a committee of DNCT members, had an average grade point average of 3.8. There were 9 Seniors, 13 Juniors, and 2 Sophomores, 16 Chemistry majors, 5 Physics majors, and 3 students with double majors in Chemistry/Biology/Chemical Engineering/Physics in various combinations. The outstanding students, selected by the instructors based on their performance were Robin Johnson, Illinois Wesleyan University (Brookhaven) and Brooke Gardner, Middlebury College (San Jose State). Each will be invited to the Spring ACS meeting in Atlanta to be honored at the DNCT business meeting.

The Summer Schools are only successful because of the commitment and leadership that is exercised by the people involved. At BNL, these people are Dr. Kathy Kolsky, Site Director, and Profs. Daeg Brenner and Roy Lacey, Lead Instructors. Under Kathy's leadership, the Summer School at BNL has undergone curriculum reform to create a very strong program. In addition, BNL has recently renovated lecture and laboratory space for the Summer School. At SJSU, Prof. Herb Silber is the Site Director and Frank Kinard is the Lead Instructor. The Radiation Center at SJSU is also an excellent facility for the Summer School. If you have an opportunity to thank them for their efforts, please do so, as their considerable contributions are crucial to the success of the program. If you have a desire to get more involved, please let us know – good volunteer help is hard to come by. In addition, we now rely very heavily on the DNCT Treasurer, Leonard Mausner, to make sure that the bills are paid. The increases in funding that we have received over the past four years from DOE (primarily for student stipends) have placed an additional load on the DNCT Treasurer, and all of us involved in the

Summer Schools appreciate Leonard's willingness to accept the extra work. Finally, we must note that the current contract for the Summer School will be up for renewal in 2006. Following a search conducted under the auspices of the DNCT, the next Director of the Summer School has been named. Paul Mantica will take on this responsibility starting in March 2007. We are working with Paul on the transition toward the creation of the renewal proposal.

We will soon begin the information dissemination process for the 2006 Summer Schools. For additional information about the Summer Schools, please contact Prof. Sue Clark (Phone: 509-335-1411; FAX: 509-335-8867; email: s_clark@wsu.edu) or Prof. Ken Nash (Phone: 509-335-2654 ; FAX: 509-335-8867; email: knash@wsu.edu), National co-Directors, Department of Chemistry, Washington State University, Pullman, WA 99164-4630. Please note that the application deadline will be February 1, 2006, so spread the word and encourage qualified undergraduates to apply. Applications and other information can be found at <http://www.cofc.edu/~nuclear/nukess.html>

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/>

OPENING

Dep^t of Nuclear Engineering, U.C. Berkeley ***Radiation Detection and Nuclear*** ***Chemistry***

The Department of Nuclear Engineering at the University of California, Berkeley (www.nuc.berkeley.edu) seeks a PhD in nuclear engineering or related discipline to fill a tenure-track position in radiation detection, applied nuclear physics or nuclear chemistry at the Assistant Professor level starting July 1, 2006. Candidates should have a doctorate in Nuclear Engineering, Nuclear Chemistry, or a related specialty. Substantive specialization might include: radiation detection, applied nuclear physics or nuclear chemistry relevant to nuclear forensics and attribution, portal monitoring, environmental radiochemistry, imaging, and fission and fusion power fuel cycles. The research should preferably have an experimental focus, with strong linkages to modeling analysis. Candidates will also have demonstrated the potential for excellence in teaching lecture and laboratory courses in fundamental aspects of low energy nuclear physics and/or nuclear chemistry. It will also be helpful for candidates to be capable of teaching occasional courses in reactor physics and radioactive waste management.

A curriculum vita, a select subset of publications, a letter articulating the applicant's interest in and qualifications for this position, and the names of three reviewers, should be postmarked by January 2, 2006. Candidates should refer potential reviewers to the UC Berkeley Statement of Confidentiality found at:

<http://apo.chance.berkeley.edu/evalltr.html>.

Late applications cannot be considered. The applicant should request their reviewers to forward letters directly to the address below to arrive before February 1, 2006. These letters will not be requested directly by the department. Applications should be sent to:

Chair, NE Search Committee

c/o Anita Bailey

Department of Nuclear Engineering

University of California

Berkeley, CA 94720-1730

The University of California is an Equal Opportunity Affirmative Action Employer.

DNCT ELECTIONS

By now, you must have received material and ballots for the election of Division Officers for 2006. The candidates are listed below with a very abridged biography. *All ballots must be received by **November 7, 2005***

Thank you for your participation in this important Division activity.

Candidates for Vice-Chair Elect (Chair 2008)

ROMUALDO T. DE SOUZA, Dept. of Chemistry and Indiana University Cyclotron Facility, Indiana University, Bloomington desouza@indiana.edu; b. 1963; A.B. in Chemistry from Washington University in St. Louis, 1983; Ph.D. in Nuclear Chemistry from University of Rochester 1988; National Superconducting Cyclotron Laboratory Fellow, Michigan State University, 1988-1991; Indiana University: Asst. Prof. 1991-1997; Assoc. Prof. 1997-2002; Full Prof. 2002-present; Adjunct Prof. of Physics 2003-present.

ROY A. LACEY, Dept. of Chemistry, University at Stony Brook, Stony Brook NY Roy.Lacey@Stonybrook.edu; Ph.D. in chemical physics (SUNY Stony Brook, 1987);

Research Fellow, Centre d'Etudes Nucléaires de Saclay, Saclay, France (1988-1989); Research Fellow, Centre National de la Recherche Scientifique (CNRS) at GANIL, Caen, France (1989-1990); Research Fellow, National Superconducting Cyclotron Laboratory (NSCL), Michigan State University, East Lansing, MI 48824 (1990-1991); Assistant Professor, Department of Chemistry SUNY Stony Brook (1991-1994); Associate Professor, Department of Chemistry SUNY Stony Brook (1994-2001); Professor, Department of Chemistry SUNY Stony Brook (2001 – present).

Candidates for Alternate Councilor (2006 – 2008)

JEFF C. BRYAN, Department of Chemistry, University of Wisconsin – La Crosse, (bryan.jeff@uwlax.edu). A.B. Chemistry, University of California, Berkeley, 1982; Ph.D., Inorganic Chemistry, University of Washington, 1988; Postdoctoral Research Associate, University of Auckland, 1988-1989; Postdoctoral Fellow and Staff Member, Los Alamos National Laboratory, 1989-1994; Research Staff Member, Oak Ridge National Laboratory, 1994-2002; Assistant Professor, University of Wisconsin – La Crosse, 2002-present.

ARDEN DOUGAN, Proliferation and Terrorism Prevention Program, Lawrence Livermore National Laboratory (LLNL). dougan1@llnl.gov. B.S. in chemistry, Purdue University, 1976, M.S. and Ph.D. nuclear chemistry, University of Rochester, 1978, 1981. Postdoctoral Research Staff Member, LLNL, 1981-83, Staff Member, LLNL (1983-present).

Candidates for Member-At-Large Executive Committee (2006 – 2008)

ALICE C. MIGNEREY, B.S., 1971, University of Rochester; Ph.D., 1975, University of

Rochester; Postdoctoral Fellow, University of Rochester, 1975-76; Postdoctoral Research Associate, Argonne National Laboratory, 1976-1979; University of Maryland: Assistant Professor, 1979-1984; Associate Professor, 1984-1989; Professor 1989 – present mignerey@wam.umd.edu; Program Officer for Nuclear Physics at the National Science Foundation 1998-2001

GRAHAM F. PEASLEE, Hope College (peaslee@hope.edu) A.B. in Chemistry from Princeton University, 1981; Ph.D. in Chemical Physics from State University of New York – Stony Brook, 1987. Post-doctoral Fellow, Nuclear Science Division, Lawrence Berkeley Laboratory 1988-1990; Post-doctoral Fellow, National Superconducting Cyclotron Laboratory, Michigan State University, 1990-1993. Hope College, Department of Chemistry and Department of Geological and Environmental Sciences: Assistant Prof/ Associate Prof 1993-present. Director, Hope College Ion Beam Analysis Laboratory, 2004-present.

CALL FOR PAPERS

Separations of the f-Elements

232nd National Meeting of the ACS

San Francisco, CA September 10 – 14, 2006

Sponsored by the SS&T Subdivision of the I&EC Division, Co-sponsored by the DNCT

Abstracts featuring traditional and emerging techniques for the separation of f elements are invited for this symposium. Papers will include basic research and applications development, and range from trace analytical scale to full process scale. Areas of special interest are: Solid phase extractants, Liquid-liquid extractions, Advanced Fuel Processing (including non-aqueous methods) Development of analytical procedures, and Frontier areas of investigation

Organized by Dale D. Ensor, Ken Nash, and Bill Crooks

<http://www.acs.org/meetings/abstract/abinfo.html>