



Division of Nuclear Chemistry and Technology
American Chemical Society

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

NEWSLETTER
July 2008

Newsletter Editor: Lætitia Delmau
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Topics

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FROM THE CHAIR – Roy Lacey

I want to use this opportunity to once again thank the DNCT membership and “visitors” that made the Symposia at the New Orleans meeting a big success. I am especially indebted to the many symposium organizers who are clearly responsible for this success.

The DNCT symposia for the 236th National meeting (August 17-21, 2008) is now set and I encourage you to browse the programs for the following symposia, at the ACS website:

Philadelphia, PA, August 17-21, 2008

i) 21st Century Radiochemistry Opportunities: A Symposium Highlighting Nuclear Science Workforce Needs, Organizer: Mark A. Stoyer, N Division, Lawrence Livermore National Laboratory, L-414, Livermore, CA 94550

ii) Frontiers of Nuclear Chemistry Research: A Graduate Student Research Symposium, Organizers: Abigail Bickley, Department of Chemistry, Michigan State University, National Superconducting Cyclotron Laboratory, 1 Cyclotron, East Lansing, MI 48824-1321;

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Program Chair, 2008

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ELLIOT S. PIERCE

Members-at-Large, Executive Committee

ALICE C. MIGNEREY, 2006-2008

DAVID MORISSEY, 2007-2009

Jiangyong Jia, Department of Chemistry, State University of New York at Stony Brook, Stony Brook, NY 11794-3400; Alice C. Mignerey, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD 20742; J. David Robertson, Department of Chemistry and Research Reactor Center, University of Missouri, Columbia, MO 65211; H. Nitsche, University of California, Berkeley, Department of Chemistry, and Lawrence Berkeley National Laboratory, Nuclear Science Division, 1 Cyclotron Road, MS 70R0319, Berkeley, CA 94720-8169; Roy Lacey, Department of Chemistry, State University of New York at Stony Brook, Stony Brook, NY 11794-3400; Romualdo T. de Souza, Department of Chemistry and IUCF, Indiana University, 800 E. Kirkwood Ave., Room C230A, Bloomington, IN 47405-7102; W. Udo Schröder, Department of Chemistry, University of Rochester, 500 Wilson Blvd, Rochester, NY 14627; Sherry Yennello, Department of Chemistry and Cyclotron Institute, Texas A&M University, 3366 TAMUS, College station, TX 77845

iii) Probe Development in Molecular Imaging and Therapy Cosponsored with the Division of Inorganic Chemistry, Organizers: Alan B. Packard, Division of Nuclear Medicine and Department of Radiology, Children's Hospital Boston/Harvard Medical School, 300 Longwood Ave, Boston, MA 02115; Karn Sorasane, Department of Chemistry and Biochemistry, California State University, Fullerton, Fullerton, CA 92834-6866

iv) Research Related to the Environmental Management Mission of the Department of Energy Organizers: Gary P. Halada, Materials Science and Engineering, State University of New York at Stony Brook, Stony Brook, NY 11794-2275; Sue B. Clark, Chemistry Department, Washington State University, Pullman, WA 99164; Jeff Gillow, ARCADIS U.S., Inc, 630 Plaza Drive, Suite 100, Highlands Ranch, CO 80129; Dev

Chidambaram, Environmental Sciences Department, Brookhaven National Laboratory, Bldg. 490A, Upton, NY 11973-5000

v) Symposium Marking the 25th Anniversary of the Nuclear Chemistry Summer Schools, Organizer: W. Frank Kinard, Department of Chemistry and Biochemistry, College of Charleston, 58 Coming Street Room 310, Charleston, SC 29424

vi) Symposium to Honor the Scientific Career of John M. Alexander, Organizers: Roy Lacey, Department of Chemistry, State University of New York at Stony Brook, Stony Brook, NY 11794-3400; Jiangyong Jia, Department of Chemistry, State University of New York at Stony Brook, Stony Brook, NY 11794-3400; Joseph B. Natowitz, Department of Chemistry and Cyclotron Institute, Texas A&M University, College Station, TX 77843

As in New Orleans, the Division will have its business meeting on Monday evening (Aug. 18th), which will be followed by our usual social hour.

I am looking forward to your full participation in Philadelphia and do hope that you will help us celebrate with John Alexander and the 25th anniversary of the founding of the Nuclear Chemistry Summer Schools sponsored by the Department of Energy and the DNCT.

Again, we look forward to your advice, help and especially your participation in the upcoming Fall meeting.

Salt Lake City, UT, March 22-26, 2009

[Atom-at-a-Time Chemistry](#) (Oral symposium #11956.) Sponsored by Division of Nuclear Chemistry & Technology, Organizer: Roger A Henderson, Chemistry, Materials, Earth, DNCT Newsletter, July '08, page - 2

and Life Sciences, LLNL, PO Box 808, L-236,
Livermore, CA 94551

[Nuclear Chemistry Awards Symposium](#)
(Oral symposium #11958) Sponsored by
Division of Nuclear Chemistry & Technology

[Nuclear Forensics](#) (Oral symposium #11957)
Sponsored by Division of Nuclear Chemistry
& Technology, Cosponsored by Division of
Industrial & Engineering Chemistry
Organizers: Glenn A. Fugate, Savannah
River Site, Savannah River National
Laboratory, Building 735A, Aiken, SC 29808;
Judah I Friese, National Security Division,
Pacific Northwest National Laboratory, 902
Battelle BVD PO Box 999, Richland, WA
99352

[Nuclear Method Applications in Nano-
Science](#) (Oral symposium #11960) Sponsored
by Division of Nuclear Chemistry &
Technology, Organizer: John D. Robertson,
Department of Chemistry, University of
Missouri, 125 Chemistry Building,
Columbia, MO 65211

Washington, DC, August 16-20, 2009

Symposia:
NIF/Fusion
GENP/fission
Nuclear reactions

Please do not forget to send Mark Stoyer
(Program Chair 2009) your suggestions for
the 2009 Spring and Fall meetings and Silvia
Jurisson (Program Chair 2010) for the 2010
Spring and Fall meetings.

COUNCILOR'S REPORT

From Steve Yates

Councilors: Steven W. Yates and Elliot S.
Pierce (Emeritus)
Alternate Councilor: Jeff C. Bryan

Philadelphia Meeting, August 2008

The agenda for the ACS Council meeting in
Philadelphia is light. In addition to the
usual election of members to the ACS
Committee on Committees, the Council
Policy Committee, and the Committee on
Nominations & Elections, the Council will
hear reports of the society officers and
committee chairs.

The Council will take another look at the
division funding proposal held over from the
New Orleans meeting and act on one new
petition. This petition, which aims to make
the dues of society affiliates equivalent to
those of regular members, is straightforward
and continues the overhaul of ACS
membership requirements that started with
Council approval of the Petition on
Membership Categories last spring (C&EN,
May 5, page 50). The ACS Board confirmed
these changes, and the full membership of
ACS will vote on them in the fall.

Elliot continues to perform conscientiously
his duties as Division Councilor Emeritus.

SUMMER SCHOOL

From Paul Mantica:

The 2008 ACS Nuclear and Radiochemistry
Summer Schools are underway. Twelve
students were selected to participate at each
of the two site locations, as identified in the
previous newsletter.

Prof. Herb Silber is Site Director at San Jose
State University, and Prof. Frank Kinard is
serving as primary lecturer.

Information on the San Jose program is
available at:

[http://www.cofc.edu/~kinard/NuclearSummer
School/NSSHhomepage.htm](http://www.cofc.edu/~kinard/NuclearSummerSchool/NSSHhomepage.htm)

Dr. Richard Ferrieri serves as Site Director
at Brookhaven National Laboratory. The

lecture assignments are divided weekly among visiting instructors.

The 2008 lecturer lineup includes Sheldon Landesberger (U. Texas), Dave Robertson (U. Missouri), Jiangyong Jia (SUNY Stony Brook), Paul Karol (Carnegie Mellon) and Ken Czerwinski (U. Nevada - Las Vegas). The BNL program is available for viewing at: <http://www.bnl.gov/ncss>

We anticipate accepting applications for the 2009 ACS Nuclear and Radiochemistry Summer School program beginning in November 2008. Please direct any questions on the summer schools to:
Alumni Directory

In preparation for the Summer School symposium at the ACS National Meeting in Philadelphia, and updated list of Summer School Alumni has been posted on the DNCT website:
<http://www.cofc.edu/~nuclear/NuclearSummerSchoolClassList.htm>

If you have updated information to include on the alumni list, please contact either myself (mantica@msu.edu) or Frank Kinard (kinardf@cofc.edu). Any questions regarding the Summer School program should be directed to:

Paul Mantica
National Director, ACS Nuclear and Radiochemistry Summer Schools
Michigan State University
East Lansing, MI 48824
Phone 517-333-6456
FAX 517-353-5967
email mantica@msu.edu

ANNOUNCEMENTS

From Donivan Porterfield:

Membership in the Division

For those wanting to suggest Division membership to a colleague or student there is a revised membership form available on the Division web page (top right hand corner). As a reminder, Affiliate Members of the Division don't require ACS membership. The cost of Division membership is especially attractive for graduate student members of the ACS at only \$10.

SERMACS and WRM 2008

Programming of interest to Division members is planned for two Fall 2008 regional meetings. Please check the listed web sites for further information and abstract deadlines.

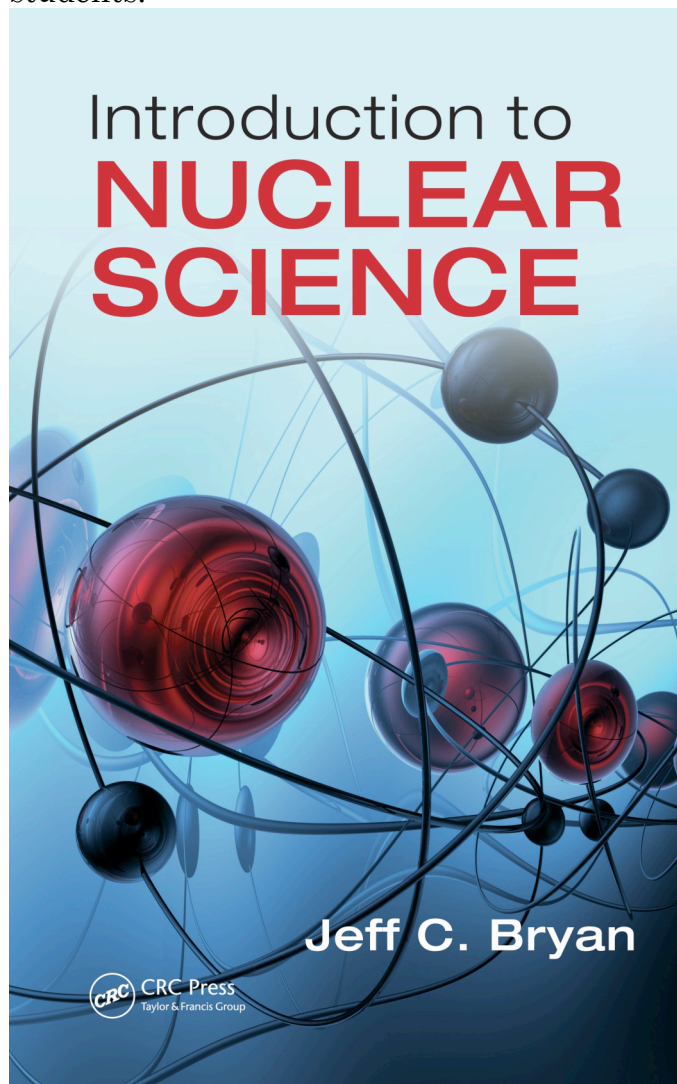
ACS Western Regional Meeting
<http://membership.acs.org/w/WRM2008>
Las Vegas, NV - September 24-27, 2008 (Wed-Sat)
- Forensics, Nuclear, Homeland Security
- Nuclear Fuel Cycle Chemistry
- Radionuclides, Speciation, Fate, Transport

ACS Southeastern Regional Meeting
<http://www.sermacs2008.org/>
Nashville, TN - November 12-15, 2008 (Wed-Sat)
- Radiochemical Separations in Nuclear, Environmental, and Medicinal Chemistry;
organized by Glenn Fugate (SRNL) and Dale Ensor (Tenn. Tech Univ.)

BOOK

DNCT Member and Alternate Councilor Jeff C. Bryan (Univ. of Wisconsin – La Crosse) has written an introductory textbook for nuclear chemistry and physics. "Introduction to Nuclear Science" (ISBN: 9781420061642) is published by CRC and is available through crcpress.com and amazon.com. The textbook is designed for students with only very modest backgrounds in science, and could be used at the sophomore level or by anyone with some

college education. As such it tries to reach a much broader audience than conventional nuclear chemistry texts, and thereby can be part of the Division's educational outreach efforts. The text covers applied topics such as nuclear power, weapons and waste, as well as applications of nuclear science in medicine. It is an outgrowth of Jeff's six years of teaching nuclear chemistry and radiation physics classes to Nuclear Medicine Technology and Radiation Therapy students.



ISEC

International Solvent Extraction Conference:
ISEC 2008
“Solvent Extraction – Fundamentals to
Industrial Applications”

Tucson, Arizona, USA, 15-19 September
2008

North American industry has employed major solvent-extraction processes to support a wide range of operations including but not limited to chemical, metallurgical and nuclear applications. In recognition of these activities, ISEC 1977 and ISEC 1984 were hosted in Toronto, Canada and Denver, Colorado, USA.

After 24 years, it is fitting that the experts in solvent-extraction reconvene once again on this continent for the 18th International Solvent Extraction Conference, to be held in Tucson, Arizona from September 15 to 19, 2008. ISEC is the premier meeting of solvent extraction experts, bringing together scientists, engineers, operators and vendors from around the globe. The ISEC 2008 program will emphasize fundamentals to industrial applications of solvent extraction, particularly how this broad spectrum of activities is interconnected and has led to the implementation of novel processes.

Technical Sessions

Five plenary sessions will highlight topics of broad interest and current importance. A featured topic of this ISEC will be SX applications in nuclear fuel cycles.

The program will include both oral and poster presentations, with sessions anticipated in the following areas:

- Fundamentals: including interfacial phenomena; solution chemistry; thermodynamics; kinetics; molecular modeling and dynamics; chemical recognition; spectroscopy; and X-ray and neutron scattering. Chair: Gérard Cote. Co-chair: Susana Ortiz

- Novel Reagents, Materials, and Techniques: including nanotechnology; ionic liquids; supercritical extraction; aqueous

biphasic systems; micellar systems; liquid membranes; polymer inclusion membranes; solvent impregnated resins; solid-phase extractants; hollow fibers; synthesis; phase transfer catalysis; and advances in extractants, diluents, and modifiers. Chair: Peter A. Tasker. Co-chair: David Robinson

- Nuclear Fuel Reprocessing: including actinide/lanthanide separation; developments in UREX, PUREX, TRUEX, DIAMEX, and other processes; fission product separation; new extractants and aqueous reagents; selective stripping; actinide purification; solvent cleanup; radiation effects; reprocessing-specific flowsheet development and equipment design. Chair: Terry A. Todd. Co-chair: Pascal Baron

- Hydrometallurgy and Metals Extraction: including Cu, Mn, Co, Ni, Zn, Mo, V, and other metals; non-nuclear applications of uranium; precious metals; lanthanides; synergistic systems; flow-sheet development and pilot-plant studies; plant experience and commissioning; and environmental aspects. Chair: Kathryn C. Sole, Co-chair: Michael J. Virnig.

- Analytical and Preparative Applications: including, but not limited to, on-line monitoring; environmental monitoring; preconcentration; extraction chromatography/ solvent-impregnated resins; centrifugal partition chromatography; extractive scintillators; membrane electrodes; and ITES. Chair: Mark L. Dietz, Co-chair: E. Philip Horwitz.

- Biotechnology, Pharmaceuticals, Life-Science Products, and Organic Products. Chair: T. Alan Hatton.

- Process Chemistry and Engineering; including process economics, flowsheet development; process and equipment simulation and modeling; equipment engineering and design; plant experience;

cruds, emulsions, entrainment, and coalescence phenomena; instrumentation, on-line analysis, process control, and automation. Chair: Gordon M. Ritcey, Co-chair: Peter M. Cole.

- CONTACT DETAILS: For further information please visit the ISEC 2008 website: www.isec2008.org or contact: Dawn M. Long, Administrative Secretary, Syracuse University at: isec2008@ecs.syr.edu