American Nuclear Society

Biology and Medicine Division Winter Newsletter

Winter Newsletter December 2009

Special points of interest:

Make plans to be at the BMD special sessions at the ANS Summer Meeting In San Diego, June 2010. The photo below is of a giant panda at the famous San Diego Zoo.

Welcome to the Winter edition of Biology and Medicine Division's newsletter. The following pages provide an overview of the Division's upcoming activities and other areas of potential interest to our members. Please check out our updated website as well. As always, your feedback is greatly appreciated. Opportunities abound for your participation in the Division. We have additional ANS position statements to update this year, paper reviews to be performed, sessions to be organized as well as needed participation in our special sessions. Please let us hear from you!

BMD Executive Committee

http://bmd.ans.org

Chairman's Message

Greetings from your division Chair. Although our last newsletter was completed only a couple of months ago, I wanted to take the opportunity to let everyone know of important developments in the Biology and Medicine Division and the increased visibility that our division is enjoying within the Society. In this newsletter you will see our new two page BMD brochure and the long-term strategic plan just approved by the BMD executive committee and submitted to ANS this month.

Winter Meeting Activities

BMD Program Schedule Highlights: The Biology and Medicine division sponsored a cluster of very successful sessions under the general heading of "Nuclear Analytical Methods for the 21st Century", each session then subtitled with a more specific focus. The entire series was very well attended, due in part to the wide range of topics of vital current interest that were discussed. It was especially gratifying to see the large number of presentations by young scientists and students. The sessions were also international in scope as we hosted presentations by seven scientists working outside the United States (Brazil, Portugal, United Kingdom, Germany, Switzerland, Japan and Austria). See our program report for additional details as well as our plans for the future.

Recognition: The winter meeting was notable also in our recognition of our long-time friend and colleague on the occasion of his retirement. The special session organized for Dr. Rolf Zeisler drew participants from his collaborators from all over the world. Rolf was also recognized at the Society's award luncheon with the Radiation Science and Technology Award for over three decades of service to the field of radiochemical research. Rolf's wife, Dr. Susan Heller-Zeisler was able to attend the luncheon in his honor. The award citation is also reproduced in this newsletter.

Division Chairs meeting with the ANS President: I had the opportunity to attend this meeting along with the other ~20 division chairs on Sunday morning. I was happy to hear discussions by the current ANS President Tom Sanders, the President-Elect Joe Colvin who will take over in June and also by the current ANS Treasurer Eric Loewen who will be on the ballet this spring for President-Elect. While discussing their visions for the Society and areas of specific interest, all three placed non-power nuclear technology high on their lists. Production of radioisotopes and applications to medical diagnostic and therapeutic sciences were repeatedly mentioned. I think this bodes well for our division's continued increase in influence on Society activities.

Electronic Submission of Summaries:

The old COS (Community of Science) hosted summary submission and review procedures are no longer in use. Any existing COS account and password is no longer valid. In order to submit summaries for future ANS meetings or perform peer reviews it will be necessary for you to establish an account with the new ANS system. All reports are that the system, is user-friendly and rather intuitive, but remember to give yourself some extra time to establish the new account. For ANS members this is easily done; the system asks for your ANS Member ID number and your Member Center password. If you have not previously used the Member Center or changed the password, the default is your last name (lower case, no spaces). Of course, since the new system is currently under review and modification, we should expect to encounter bugs along the way. If you have problems with the new system, please communicate directly with the ANS IT webmaster. Good luck!

BMD Program Committee Report

The following report was presented to the BMD Committee of the Whole at the ANS Annual Meeting in Washington D.C. in November, 2009 by our Program Chair, Rolf Zeisler. Note that the Division is extremely active with participation in many topical and national meetings. Our appreciation is due to Rolf for the great job.

Class I Meetings:

BMD and IRD cosponsored the eighth installment of the ANS topical meeting Methods and Applications of Radiochemistry (MARC-VIII) held April 5 - 10, 2009, in Kona, HI. For information please refer to http://altmine.mie.uc.edu/nuclear/marc/viii.shtml. The meeting was attended by about 260 participants from more than 20 countries. Rolf Zeisler (BMD) and Kenan Ünlü (IRD) organized a panel discussion on "Current status, trends, and needs in radiochemical education: the US and abroad". The outcome of this panel was call upon our professional societies to form a coalition that will approach the relevant government agencies with a single voice, a unified strategic plan to reestablish radiochemistry as a viable discipline in the US. The report on this discussion and the contributions have been published in the AIP Proceedings, Volume 1164 (August 2009). The MARC-VIII proceedings are being published in JRNC.

BMD and IRD are cosponsors for the 2010 RPSD, IRD & BMD Joint Topical Las Vegas, NV Palace Station Hotel & Casino April 19-23, 2010.

General Chair: Dr. Anthony E. Hechanova (Research Professor, University of Nevada/ Las Vegas)

Program Chair: Dr. Robert B. Hayes (Principal Engineer, WIPP/Washington TRU Solutions, LLC)

A renewed call for papers was sent out by the Technical Program Chair announcing an extension of the abstract deadline to November 23, 2009. All are being called upon to consider a contribution. Details see http://www.rpsd2010.com

Class III Meetings:

The Divisions of Biology and Medicine (BMD), Isotopes and Radiation (IRD), and Accelerator Applications (AAD) of the American Nuclear Society (ANS) are announcing the second Topical Meeting on Isotopes for Medicine and Industry to be held in conjunction with the 2010 ANS Winter Meeting, Las Vegas, NM, November 7 – 11, 2010. (2010-IMI). Calendar Placement and Preliminary Approval has been obtained from the NPC. The meeting is listed on the ANS web page:

Isotopes for Medicine and Industry

General Chair:

J. David Robertson (University of Missouri Research Reactor Center)

General Co-Chairs:

Mauro Bonardi (Universita degli Studi di Milano, Italy)

Robert W. Atcher (University of New Mexico, Bioscience Div)

Program Chair:

Rolf Zeisler (National Institute of Standards and Technology)

22 colleagues from the US and abroad have agreed to serve on the Technical Program Committee. A draft announcement is provided as an attachment.

Class IV Meetings:

BMD is supporting the CMPWG workshops

BMD has requested and received ANS calendar placement and approval for the 13th International Conference on Modern Trends in Activation Analysis (MTAA-13) to be held March 15–18, 2011 at Texas A&M University, College Station, TX (see attached flyer).

Program Committee Report (continued)

2009 ANS Annual Meeting, Atlanta,, GA, June 14 - 18, 2009 BMD and IRD have cooperated to sponsor sessions on nuclear imaging methods and technology and reactor utilization. The session Neutron Radiography and Neutron Computed Tomography organized by Jack Brenizer, Penn State University, featured 7 invited and contributed papers, the session Nuclear Research Reactors: Utilizations and Applications of Nuclear Methods organized by Kenan Ünlü, PSU, featured 5 paper

BMD sponsored special sessions on Nuclear-Based Imaging for Medical Diagnosis and Therapy organized by Bruce Smith (bruce.smith@utsa.edu), University of Texas San Antonio, TX, and Nicholas Spyrou (N.Spyrou@surrey.ac.uk), University of Surrey, UK had 10 papers scheduled.

2009 ANS Winter Meeting Washington, DC November 15-19, 2009.

BMD and IRD are cosponsoring a special sessions series on Nuclear Analytical Methods for the 21st Century. The following tracks are included in the Winter Meeting Program:

a. Nuclear Analytical Methods for the 21st Century—Solutions for Nuclear Forensics (I/C) organized by IRD's Jack Brenizer PSU, Tue. AM, 6 papers

b. Nuclear Analytical Methods for the 21st Century —Role of Neutron Sources from Nonreactor Facilities (I/C), organized by Sheldon Landsberger UTA, Tue. PM, 7 papers

c. Nuclear Analytical Methods for the 21st Century—Innovations in Activation Analysis: A Session in Honor of Dr. Rolf Zeisler (I), organized by Dennis James, Wed. AM/PM, 12 papers

d. Nuclear Analytical Methods for the 21st Century Panel, organized by Rolf Zeisler, Wed. PM

e. Nuclear Analytical Methods for the 21st Century—Upholding Quality Assurance and Metrology (I), organized by Robert R. Greenberg, NIST, Thu. AM, 4 papers

BMD is cosponsoring AAD session Medical Accelerator Research and Progress, Wed. PM, 3 papers

BMD and CMPWG are cosponsoring the YPC2009 Technical Session Innovations in Medical Physics, organized by Raymond Cao and Wayne Newhauser, Tue. AM, 7 papers

Special thanks to all Session organizers for this very rich program.

2010 ANS Annual Meeting, San Diego, CA, June 13-17, 2010

BMD is sponsoring a Special Session and a Panel Session on Food Irradiation, Session Organizer Joseph Butterweck, AEM. A contact list is being developed.

2010 ANS Winter Meeting, Las Vegas, NV, November 7-11, 2010

BMD, IRD, and AAD are cosponsoring Class III Embedded Topical on Isotopes for Medicine and Indistry (see above)

Invited/Contributed Sessions to be developed.

Respectfully submitted by

Rolf Zeisler

Chair, BMD Program Committee

First Announcement
Isotopes for Medicine and Industry

Embedded Topical Meeting / 2010 ANS Winter Meeting (November 7-11, 2010)

November 8-11, 2010 • Las Vegas, NV

TOPICAL MEETING PURPOSE

The continuing rapid growth of radioisotopes for both medical and industrial applications is of national and international interest. The expanding applications, new research opportunities, and associated production issues surrounding the supply of research, diagnostic, therapeutic, environmental, and industrial radioisotopes will be discussed in an interdisciplinary audience.

CONFERENCE CHAIR

J. David Robertson, University of Missouri-Columbia

CONFERENCE CO-CHAIRS

Robert W. Atcher, Immediate Past President, Society of Nuclear Medicine

Mauro Bonardi, Università degli Studi di Milano

TECHNICAL PROGRAM CHAIR

Rolf Zeisler, National Institute of Standards and Technology

SPONSORS

American Nuclear Society Biology and Medicine Division (BMD), Isotope and Radiation Division (IRD), and Accelerator Applications Division (AAD)

Society of Nuclear Medicine (proposed)

US Department of Energy (proposed)

SUBJECT CATEGORIES

Applications in Nuclear Medicine—Diagnostics · Applications in Nuclear Medicine—Therapeutics · Reactor Production of Medical Isotopes · Cyclotron Production of Biomedical Tracers · Production and Application of Alpha Emitters · Isotopes in Environmental, Industrial and Nuclear Power Applications · Reactor Production of Research and Industrial Isotopes · High Energy Accelerator/Cyclotron Production of Isotopes · Accelerator based production of Mo-99 · Nuclear and Radiochemistry · Radioanalytical Techniques · Distribution and Transportation Issues · R&D and Standards Needs for Future Applications · Quality Assurance and GLP in Radionuclide and Radiopharmaceutical Chemistry · Manpower and Education

Technical Program Committee

Robert W. Atcher (LANL, SNM), Steven R. Biegalski (UT-Austin), Peter Bode (Delft TU), Mauro Bonardi (U Milan), R. Gregory Downing (NIST), Phillip D. Ferguson (ORNL), Samuel E. Glover (CDC), Richard Henkelmann (itg Garching), Rebecca M. Howell (UT-M.D.Anderson), Lin-Wen Hu (MIT), W. Dennis James (TAMU), S. Landsberger (UT-Austin), Stephen P. LaMont (LANL), Suzanne Lapi (WUSTL), Alfred Morgenstern (EC-JRC), Wayne D. Newhauser (UT-M.D.Anderson), F. Meiring Nortier (LANL), J. David Robertson (UM-Columbia), Buck Rogers (WUSTL), Nicholas Spyrou (U Surrey), Kenan Unlu (PSU), Henry VanBrocklin (UCSF, SNM), Rolf Zeisler (NIST)

13th International Conference on Modern Trends in Activation Analysis (MTAA-13)

March 13-18, 2011
Texas A&M University
College Station, TX 77843-3144

With a focus on:

Renewal and revitalization
Education and work force development
Participation by students/young scientists

In keeping with the traditional subject matter of previous MTAA meetings, the scope will include activation analysis methodology, methodological enhancements, applications of activation analysis to the fields of energy, environment, biology and medicine, geology, archaeology, homeland security, etc. However, this conference will broaden the subject matter somewhat in that it will invite and entertain contributed presentations from all areas of nuclear analytical methods as well as competing technologies.

The conference format will also be altered to incorporate additional time for individual and group discussions, web-streaming of selected portions of the program and special evening symposia which focus on topics of exceptional current interest and represent fields of study in which nuclear analytical methods are expected to play an expanded role. Time will be made available for attendees to enjoy socializing with one another in traditional Texas activities including the world's largest Houston Livestock Show and Rodeo.

Three special symposia in a unique meeting format are planned for one evening. Session organizers intend to introduce the topic during the afternoon session via an invited lecture from a recognized leader in the field who will provide a discussion of the state of the topic and the potential for nuclear analytical methods to have an impact in the immediate future. This will be followed, after a buffet meal, by an evening symposium in which several participants will build onto the foundation from the plenary presentation via short 5 to 10 minute talks. Each presenter will further contribute via a poster which will be viewed and discussed following the oral talks. We feel this will allow for maximum attendee interaction in a relaxed setting which will promote new ideas and collaborations. At this early date we are considering symposium topics on Archaeometric Application of Nuclear Analytical Methods, Large Sample Activation Analysis, Border Security/Nuclear Forensics, *In-Vivo* NAA, and Application of Nuclear Technology to Development and Evaluation of Nano-Materials.

Conference organizers will provide incentives to selected potential attendees in the form of travel awards. We anticipate making up to twelve awards to students and another twelve to young scientists who submit applications. Awardees will be expected to participate in the meeting by submission of abstracts and manuscripts to

For more information contact:

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TEXAS A&M UNIVERSITY

AMERICAN NUCLEAR SOCIETY

IAEA
Atoms for Peace: The First Half Century
1957–2007

Rolf Zeisler honored during ANS Winter Meeting

Radiation Science & Technology Award

In recognition of the most outstanding creative application of radiation science and engineering principles.

presented to

Rolf L. Zeisler

In recognition of his leadership in the development and application of nuclear analytical methods to a wide variety of biological and environmental sciences over a period of more tha 30 years.

Former Recipients:

1967 A.J. Tavendale
G.T. Ewan
1968 Robert F. Nystrom
1969 Raymond C. Goertz
1970 No Award Presented
1971 Bernard Manowitz
1972 Powell Richards
1973 Arthur Rupp
1974 Harold Berger
1975 Joseph Silverman
1976 Godfrey Hounsfield
1977 Enzo Ricci
Richard L. Hahn
1978 Charles Artandi
1979 John W. Cleland
1980 William S. Lyon, Jr.
1981 Howard O. Menlove
1982 Russell L. Heath
1983 Harold E. Johns
1984 Robin P. Gardner
1985 John H. Hubbell
1986 No Award Presented
1987 B. Stephen Carpenter
William McLaughlin
1988 Ari Brynjolfsson
1989 Payasada Kotrappa
John C. Dempsey
1990 Martin Berger
1991 No Award Presented
1992 No Award Presented
1993 Allen Brodsky
Shiori Ishino
1994 No Award Presented
1995 No Award Presented
1996 Amares Chatt
1997 No Award Presented
1998 No Award Presented
1999 No Award Presented
2000 Lane A. Bray
2001 Richard G. Helmer
2002 No Award Presented
2003 No Award Presented
2004 George H. Miley
2005 No Award Presented
2006 Gunter H.R. Kegel
2007 No Award Presented
2008 No Award Presented

The Biology and Medicine Division

What is BMD? The Biology and Medicine Division is a professional division of the American Nuclear Society which is involved with all aspects of the utilization of nuclear technology in biological systems, emphasizing agricultural and medical applications.

Who are BMD Members? BMD draws its members from academia, national laboratories, clinical practitioners, analytical facilities and consultants. Our membership is truly international, currently with three of the twelve executive committee members from outside the United States. We therefore present a global view in all our Society activities. We are one of the smallest divisions with under 500 members, so we represent a small community in which everyone has an opportunity to be heard and is encouraged to get involved in division activities.

BMD Technical Specialties are isotope Production, Radiochemistry, BNCT, Development and Application of Nuclear Analytical Methods in the Life Sciences, Food Preservation, Metrology, Computational Medical Physics, Dosimetry, Nuclear Imaging, Nanotechnology for Imaging and Therapy, and Education in Nuclear Science and Engineering.

The Computational Medical Physics Working Group is a multi-society group which operates within ANS jointly under the BMD and MCD divisions. Members are dedicated to the pursuit of better computational tools in medical and health physics applications.

BMD Service to the Membership and ANS

Meetings

Sponsors sessions at two ANS national meeting each year, most with keynote plenary lectures from invited speakers recognized in their technical specialties.
Sponsors the Methods and Applications of Radiochemistry (MARC) conference series every three years, a class I meeting held in Kona, HI.
Sponsors the Modern Trends in Activation Analysis (MTAA) conference series every four years, a class IV meeting held at locations all over the world.
Sponsors the Isotopes in Medicine and Industry conference series as an embedded topical at an ANS national meeting every two years.
Sponsors the Nuclear Analytical Methods in the Life Sciences (NAMLS) conference series every four years, a class IV meeting held in worldwide locations.
Sponsors the Computational Medical Physics Working Group (CMPWG) workshop every two years

Awards

Sponsors the James R. Vogt scholarship award
Sponsored the 2008 International Committee on Activation Analysis Young Scientist Award
Recognized the "best" paper in a Biology and Medicine track at the 2009 ANS Student Conference

ANS Outreach

Position Statement on Food Irradiation
Position Statement on Health Effects of Low Level Radiation
Supports ANS in developing on-line medical dose calculator

More Information

BMD website: http://bmd.ans.org/
CMPWG website: http://cmpwg.ans.org/
ANS website: http://www.ans.org/

Biology and Medicine Division Long Range Plan 2009-2014

Approved December, 2009
by the BMD Executive Committee

1. Mission

The Biology and Medicine Division (BMD) is comprised of a diverse group of professionals from academia, industry, and national laboratories. Members focus on the application and development of nuclear technology for the life sciences, as well as the impact of such technology on society. The BMD Mission is devoted to: (1) Promote uses of radioisotopes and radiation in medical diagnosis, therapy and complex imaging techniques, and in other life science research including neutron, photon, and charged particle applications; (2) Stimulate and promote the creation of specialized materials, equipment and facilities required for the pure and applied research in these areas; and (3) Advance and improve techniques and methodologies using nuclear and atomic radiations in nuclear medicine and other life science research and applications. The include but are not limited to, radiographic imaging, radionuclear tracers, radiopharmaceutical synthesis and radionuclide production, bone and tissue dosimetry, and neutron, photon, and charged–particle applications throughout academic, medical, industrial, and government institutions.

2. Vision

The Vision of the Biology and Medicine Division is to be recognized as the foremost authoritative professional organization on the effects and application of radiation and nuclear-based methods to biomedical and life science research, and especially to be renowned for the vital contribution that the nuclear sciences make to medicine.

3. Objectives

To accomplish its Mission and Vision, the BMD shall:

3.1 Support the overall objectives of the American Nuclear Society and serve the professional needs of the Division membership.

3.2 Hold meetings (including topicals), in accordance with the stated policy of the Society, for the presentation and discussion of professional papers relating to the science and technology of nuclear methods and radiation in biology and medicine.

3.2 Disseminate knowledge and information in the branch of biology and medicine by discussions, communications and the presentation of papers.

3.3 Encourage the formation of closer professional and personal relations among the members.

3.4 Cooperate with other scientific and professional groups having related objectives.

3.5 Develop, support, and maintain benchmarks and standards as appropriate for biological and medical applications of nuclear methods and radiation.

4. Goals

To meet the specified Objectives the BMD shall undertake the following goals:

4.1 With a minimum frequency of once each two years, sponsor a successful topical meeting related to the Mission of the Division. (ANS Goal A)

4.2 For each National meeting of the Society, sponsor at least two sessions and stimulate papers for each.

4.3 With a minimum frequency of once per year, update the Division web site and publish a newsletter of current information for the benefit of Division Members. (ANS Goal B)

4.4 Increase the Division membership by 10% over the term of this plan. (ANS Goal B)

4.5 Provide recurring financial contributions to support student involvement in Society, Division, and related programs.

4.6 Endow the Vogt Scholarship and with it, annually recognize an outstanding student.

4.7 Recognize outstanding industry leaders through the annual presentation of the Radiation Science & Technology Award and developing and co-sponsoring an award recognizing nuclear contributions to medicine.

4.8 Establish and maintain links with other Divisions and Professional Societies that have ties to the mission of the BMD, through the naming of points of contact and identification of partnering opportunities.

4.9 Closely co-operate with the ANS Computational Medical Physics Working Group to strengthen links to and involvement of medical physics professionals.

4.10 During the term of this plan, nominate and elect an active Division member to the Board of Directors.

5. Implementation

The BMD shall accomplish its goals and objectives through an effective complement of division officers, executive committee members, and a committee structure whose capably draws upon its constituency to perform the duties of the division. In addition, the division will implement an annual tactical plan to address what steps need to be taken each year to further the goals of the division.