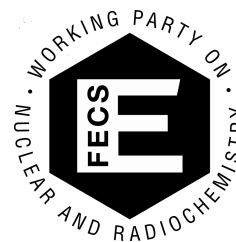


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RADIOCHEMISTRY IN EUROPE NEWSLETTER

Issue 19 – August 2001

EDITORIAL COMMENT

Welcome to the nineteenth Newsletter for Radiochemists in Europe now under the sponsorship of the Federation of European Chemical Societies (FECS). At present the Radiochemical Methods Group of the Analytical Division of the Royal Society of Chemistry (UK) is acting as the secretariat and covering the expenses of me as Secretary/Chairman hence the address at the heading of this newsletter along with the logo for the FECS Working Party.

By now I hope that many of you are reading this newsletter from our web page (<http://www.rsc.org/pdf/andiv/europenews.pdf>) which can be accessed direct. The newsletter is also available through the website of The WP on Nuclear and Radiochemistry of FECS, namely <http://www.chemsoc.org/networks/enc/fecs/fecsradiochemistry.htm> This website now established has connections to "Future Events" called nuclear and radiochemical activities in Europe, IUPAC Commission on Radiochemistry and Nuclear Techniques and the Homepage of the Radiochemical Methods Group of RSC. The link with the Radiochemical Methods Group, <http://www.rsc.org/lap/rsccom/dab/ana011.htm> will also allow you to gain access to the website for the next International Conference on Environmental Radiochemical Analysis. This conference has now received sponsorship from FECS and will allow for

online registration and abstracts. Are there any other links that we should make? Please let me know.

All those for whom I have an e-mail address will have been informed of its posting by e-mail. There is no intention to charge a subscription for those receiving the newsletter by e-mail or visiting the web page at this time.

The Future Events now appears in HTML format and can be found direct at <http://www.rsc.org/lap/rsccom/dab/ana011events.htm> or through the FECS WP or RCMG Homepage. (This page on the website is being updated each month).

Articles, reports on meetings, laboratory profiles, courses, positions vacant, redundant equipment and any other item you feel may be of interest to other radiochemists are still required. Also the early announcement of dates for meetings and conferences is important to avoid the possibility of organising two at the same time on similar topics within Europe.

Providing that information is available I intend to compile this newsletter 4 times per year in March, June, October and December/January. Please send information in good time for inclusion that is by the end of the month prior to publication. **Editor: Dr. Tony Ware (e-mail: tonyware@compuserve.com)**

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•EUROPEAN RADIOCHEMISTS ASSOCIATION.

Aims and Objectives

The objective of the association is to extend and improve communications between radiochemists in Europe through a newsletter. This will be achieved through aims, which include

1. Establishing a liaison person within each country (or group).
2. Exchanging with each of the other liaison persons details of the activities of their own group during the current and subsequent years,
3. Setting up a diary of relevant International Events to avoid duplication of dates and hence improve attendance
4. Exchanging details of specialist equipment, facilities and methodology.

•FEDERATION OF EUROPEAN CHEMICAL SOCIETIES

The web page for the Working Party on Nuclear and Radiochemistry has now been established. You can see it on <http://www.chemsoc.org/networks/enc/fecs/fecsradiochemistry.htm> . It is currently linked to the Royal Society of Chemistry webpages for the Newsletter and Future Events. It also has links to the IUPAC Commission on Radiochemistry and Nuclear Techniques and will shortly have a connection to IAEA Future Events.

The WP is progressing on its activity to review training courses for radiochemists in Europe and will be preparing a report later this year for discussion by the WP at its meeting in 2002. The meeting is expected to be held during the ERA2002 in Kent, UK. Any comments on the topic of training of radiochemists should be sent to Dr Tony Ware.

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· CONFERENCE REPORT

1st European Workshop on the analysis of Thorium in Workplace Materials, Mol, Belgium March 27-28, 2001

The Health & Safety Laboratory, UK is running an EU sponsored network dealing with the measurement of Thorium (at low levels) in workplace materials - welding rods, sands, turbine components etc. The network was set up following concerns in the UK that measurement methods were not up to scratch and this was confirmed by a small inter laboratory trial conducted in the early 1990's by NPL in the UK.

The network has essentially conducted three interlaboratory trials on a European-wide basis. The first two trials concentrated on prepared Thorium solutions (in equilibrium/ not in equilibrium). The final round included two solid matrices, a sand and a Thorium containing ore to evaluate sample preparation/dissolution procedures. Radiochemical techniques as well as ICP-MS and ICP-AES were used in the trial. The trials suggest that with care good results can be obtained on solutions by all the techniques. Sample dissolution remains a big problem for solid matrices. It is hoped to continue with a new

network next year (hopefully sponsored again by the EU) to look again at sample dissolution issues and to maybe produce one or more relevant CRM materials for quality control purposes.

A further aim of the network was to hold a workshop, which took place at Mol, Belgium on 27-28 May. A book of 39 abstracts presented orally at the workshop can be found on the web. Details of the 39 oral presentations can be found by contacting Léon Vandeveldel Tel:+32-14-33 32 00, Fax:+32-14-32 07 55 E-mail:leon.vandevelde@sckcen.be The website is www.sckcen.be

The workshop covered the work of the network and associated items concerned with the regulation, measurement and health effects associated with workplace exposure to Thorium. It is planned to produce a special issue of the RPD journal to cover this workshop (end of 2001). At this stage most of the abstracts in the attached book have been submitted as full papers.

**(Owen Butler, Tel:+44 (0)114 2892695
owen.butler@hsl.gov.uk)**

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· REPORT FROM POLISH CHEMICAL SOCIETY

The Jubilee Annual Meeting of the Polish Chemical Society took place in September 2000 in Lod . Almost 1200 chemists participated in this event. During the opening ceremony, Professors Jean-Pierre Majoral (Toulouse, France) and Aleksander Zamojski (Warsaw) became Honorary Members of the PCS. This year the Annual Meeting of the Polish Chemical Society will be held in Katowice City starting on Monday, September 9th 2001. Information on this event is available on the web site: www.ptchem.us.edu.pl

During the year the Branches of the Polish Chemical Society have discussed the proposition made by the President of the Gesellschaft Deutscher Chemiker, on modification of the role and structure of the Federation of European Chemical Societies. Professor Erker proposed to organise All-European Chemical Conferences organised under the joint patronage of National Chemical Societies. The common observation

during these discussions was that the Federation of European Societies is actually the best form of co-operation between Societies in Europe.

Museum of Maxis Sklodowska-Curie

The Polish Chemical Society is the only scientific society in Poland, which manages a museum. It is dedicated to Marie Sklodowska-Curie. The Museum occupies the first floor in house where she was born. Potential visitors will find it in Warsaw's Old City (16 Freta Street). Every year it hosts about ten thousand visitors. Permanent exhibition shows life and work of this famous scientist. Many temporary displays are also exhibited. In the same house the main office of the PCS is located.

**(Jerzy Konarski, President of the RCS.
ptchem@chemix.ch.pw.edu.pl)**

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· CONFERENCE AND WORKSHOP DETAILS

14th Radiochemical Conference organised in the Czech Republic (or formerly in Czechoslovakia) will strive to bring the 40 year tradition of providing a fruitful and well attended platform for contacts between experts working in both basic and applied research to the third millennium. Similarly to the former meetings, the scope of the conference will cover all aspects of nuclear- and radiochemistry. However, at this conference an attempt to demonstrate the contributions of our branch to other fields of science, research, and to the everyday life of people is planned to be made. More details may be found at the conference home page at <http://www.fjfi.cvut.cz/radchem>.

(Jan John, RadChem 2002 Organising Committee chairmancal University in Prague, john@br.fjfi.cvut.cz)

This is to draw your attention to the fact that the **Seventh International Symposium "Natural Radiation Environment, NRE-VII"** is to be held in Greece between 20-24 May 2002. The Second Announcement for NRE VII, together with other useful information is now available at the web site : <http://nrevii.nuclear.ntua.gr/>

For those of you who have been participants in any of the previous NRE symposia in North America or Europe you will know that an NRE symposium is a premier event in which the most recent advances in natural radiation studies are presented and discussed. For those of you coming for the first time we can assure you that it will be an excellent and enjoyable symposium. The venue in Greece we have chosen is on the island of Rhodes.

9th International Symposium on Environmental Radiochemical Analysis, 17-20 Sept 2002, Kent, England, UK. As indicated earlier this symposium has now received sponsorship from FECS. This conference is the 9th in a series of well attended Symposia and will concentrate on the details of analytical procedures. The organisers expect it to be complimentary to the Monaco Conference and are in communication with those organisers to minimise overlap.

Further details will appear on the symposium website <http://www.rsc.org/lap/confs/radiochem2002.htm>

Contact: Mrs C Pickering, Department of Chemistry, Loughborough University, Loughborough, Leics. LE11 3TU. Tel and Fax: 01509 222750 Email: C.Pickering@lboro.ac.uk

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•NEWS FROM THE INTERNET

The Society of Radiopharmaceutical Chemistry and Biology

Radiopharmaceutical chemistry since its inception has addressed the issue of molecular chemistry. Radiopharmaceuticals are unique in their ability to monitor low capacity sites such as receptors and enzymes. Moreover, given the high specific activity of radioligands and the high sensitivity of external detection of radiation, measurements can be made, based on the tracer principle, without disturbing the biochemical system. With the recent completion of the structural sequence of the genome, the discussion now turns to what role molecular imaging can play in applying this genetic information to phenotypic alterations in chemistry in the body. These phenotypes, i.e., measurable attributes such as a change in enzyme activity or a change in receptor concentration compared with normal levels, are characteristic of an individual and should yield important information in studying the effects of therapy. Given that the phenotypic expression product is a key to the progression of the disease, this has been and will remain the target for radiotracer studies. In addition, the use of therapeutic radionuclides is an important endeavour of radiopharmaceutical chemistry, and research in this area must be preserved. In order to maintain this distinction between radiopharmaceuticals and contrast media supporting molecular imaging technologies, a society that supports research and

training efforts in radiopharmaceutical chemistry is needed.

The Founding Committee has voted to form such a Society and to name Nuclear Medicine and Biology as its official Journal. Elsevier would make the journal available as full text on its soon to be launched MedicineDirect Platform to all SRCB members. As part of MedicineDirect, Nucl Med Biol's website will include a wide range of features and increased functionality, such as: Custom home page, Links from article references to abstracts where available, Select multiple articles to view together from a table of contents, E-mail abstracts to colleagues, View related articles, View other articles by the same author, View other articles that cite this article, Medline database on the site, fully searchable and browseable, Review articles highlighted as a separate section, searchable and browseable, General journal information (logos and links for the society, editorial board, aims & scope, related sites, etc.), Extremely Powerful Search and Alerts. Further details from Michael Welch, Ph.D., President SRCB, Mallinckrodt Institute of Radiology, 510 S. Kingshighway, St. Louis, MO 63110. welchm@mir.wustl.edu

The articles of the Society state that "The Society is a multidisciplinary professional organisation dedicated to the advancement of excellence in education and research in radiopharmaceutical chemistry. The organisation has been formed to foster meetings for the

purpose of communicating and discussing information about radiopharmaceuticals as they apply to the better understanding and control of biological phenomenon, both normal and pathological; to disseminate information concerning radiopharmaceutical chemistry by sponsoring scientific and professional publications; to strive to improve the welfare of mankind by maintaining and advancing the highest possible standards of education, research and the practice of radiopharmaceutical chemistry; and, to address in a timely manner socio-economic issues and government relations that may significantly affect the quality of education, research and clinical practice in radiopharmaceutical chemistry.

(Editorial Comment. Some of these aims are reminiscent of our aims listed on page one of our newsletter. I understand the annual fee will be \$150 (including journal) and \$75 for students)

Death of Dr Richard M Lambrecht Dr. Richard M. Lambrecht dedicated almost 35 years of his life to research in the field of radionuclide production and radiopharmaceuticals for biomedical purposes. He died in peace on July 22nd in Yale, assisted by his lovely daughter Curtis and several good friends. He suffered since some years of a pancreatic cancer. His scientific production was wide and covered a wide range of radioisotopes and compounds of nuclear medicine interest. In particular, his work in the team of Prof. Alfred P. Wolf (deceased 1999) and Prof. Joanna Fowler (present team leader) at BNL, Upton, New York, USA, led in 1975 to the first "electrophilic addition" synthesis of 2-FDG, FDG, 2-[F-18]fluoro-deoxy-D-glucose by [F-18]fluorine obtained by irradiation by deuterons on neon target. FDG is produced today by a completely different synthesis (developed by Hamacher and co-workers in Gulch), based on "nucleophilic substitution" with "high specific activity" [F-18]fluoride on mannose triflate, in presence of phase transfer catalyst (Kriptofix [2.2.2.] or tetrabutylammonium salts), nevertheless the pioneering work of BNL team was fundamental in FDG discovery. Today, FDG is a radiopharmaceutical of widespread diffusion for PET diagnosis of cerebral and oncological diseases. I consider the first FDG synthesis as a milestone in the history of humanity. Any Radiochemist must know his papers published on *Radiochimica Acta*, *Journal of Applied Radiation and Isotopes*, *Journal of Radioanalytical and Nuclear Chemistry*. Dick has been more than a "master" in radiochemistry for me and a whole generation of radiochemists, he was a "real friend". I received the bad news by Thomas Ruth (TRIUMF) and Leonard Wiebe (University of Alberta, co-editor of JARI). A special issue of JARI dedicated to Dick is going to be published. The email address of Curt is Curtis.Lambrecht@Yale.edu

(Mauro Bonardi, Italy)

Finland 1ST in Europe to OK Permanent Nuclear Waste Disposal Study

On May 23, 2001 Finland took an important step toward securing long term, underground storage of high level nuclear waste, when the Finnish Parliament approved a plan to build a test facility in Olkiluoto, Eurajoki on the country's west coast. If all goes according to schedule, it could be expanded into a larger, permanent disposal site.

Radwaste Listserver If you wish to subscribe to the Radwaste Listserver visit the website <http://listserv@romulus.ehs.uiuc.edu/cgi-bin/lwgate/RADWASTE>

For full text and graphics visit: <http://ens-news.com/ens/may2001/2001L-05-23-04.html>

Graduate Studies in Radiopharmaceutical Sciences

The University of New Mexico, College of Pharmacy is seeking pharmacy and/or science graduates who wish to enrol in a unique program of postgraduate studies in the pharmaceutical sciences with a concentration in radiopharmacy. The program consists of didactic coursework, clinical and basic research, and a variety of projects in the small-scale preparation and quality control of radiopharmaceuticals as well as research and product development. This education program leads to the Master of Science degree and qualifies graduates as radiopharmaceutical scientists; Pharmacy graduates completing this program will also become radiopharmacists. There are opportunities for stipend support. Information is available at http://hsc.unm.edu/pharmacy/Radiopharmacy_Main.htm or may be requested by contacting Susan Quintana at susanq@mail.unm.edu

(Ed. Comment. This is the type of specialist course, which I hope the WP on Nuclear and Radiochemistry of FECS may consider for Europe.)

Vacancy at National Physical Laboratory, UK NPL

have a new vacancy for a physicist in their Radioactivity Metrology Group. The job description can be viewed at either of these websites; <http://www.npl.co.uk/npl/vacancies/vacancies/specific/CIRM-2001-004.html> OR

<http://physicsweb.org/jobs/2694>

Most of you are chemists, but please pass this information to anyone you feel might be interested.

(Simon Jerome, simon.jerome@npl.co.uk)

Chair in Physical Chemistry at Nice, France

A position of Physical Chemistry Professor is open at Nice University (France) from October 1st 2002. The applicant should be able to teach in French, courses of Physical Chemistry at the first and secondary levels in thermodynamics, and elementary atomic structure. Until now, the main activities of our Laboratory (Radiochemistry and Radioecology) were gamma nuclear spectroscopy using radiochemical methods and radioecology and metrology of fission and transuranic

nuclides. A candidate interested in this position should be active in the field of applied radiochemistry (involving only radionuclides at the tracer scale) or theoretical radiochemistry.

Collaborations with French or foreign universities to apply this program are possible. Interested people may contact me at the following postal or e-mail addresses.

Gerard Ardisson, Professor, Laboratoire de Radiochimie et Radioécologie, Université de Nice Sophia-Antipolis
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e-mail :Gerard.Ardisson@unice.fr Web:
<http://www.unice.fr/Radiochimie/>

PhD candidate in radioanalytical techniques

A graduate is required to carry out studies on the "Détermination Des Emetteurs Beta Purs Dans Des Melanges Complexes Des Radionucléides. The work to start in Nov. 2001 at Bourse by Ecole des Mines de Nantes. Work to be performed at SUBATECH Laboratory

I interested send your CV to Prof. Bernd Grambow, Head of Radiochemistry Group, SUBATECH, Ecole des Mines de Nantes, 4 rue Alfred Kastler, 44307 Nantes

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•NEWS FROM SCIENTIFIC LITERATURE

Chemical Thermodynamics of Neptunium & Plutonium by Robert J. Lemire (Chairman) Jean Fuger, Heino Nitsche, Paul Potter, Malcolm H. Rand, Jan Rydberg, Kastriot Spahiu, James C. Sullivan, William J. Ullman, Pierre Vitorge, Hans Wanner is now available edited by OECD Nuclear Energy Agency, Data Bank Issy-les-Moulineaux (France). Details can be found at one of the following websites

<http://www.nea.fr/html/dbtdb/cgi-bin/tbdbdocproc.cgi?redir=yes&displaydoc=../news/news.html&defitle=News> OR
<http://www.nea.fr/html/dbtdb/cgi-bin/tbdbdocproc.cgi?displaydoc=../news/./pubs/publications.html> OR

<http://www.elsevier.nl/inca/publications/store/6/2/1/9/2/5/index.htm>

(Pierre Vitorg) _____

New Publications

1. The new Encyclopaedia of Analytical Chemistry of Wiley includes in the 14th volume a section on Nuclear methods in analytical chemistry (edited by myself, Zeev Alfassi) and a section on Radiochemical methods in analytical chemistry (edited by R.J. Rosenberg)
2. A book on Non-destructive elemental analysis, which is mainly on nuclear methods and edited, by Zeev Alfassi is published now by Blackwell publishing house.

(Zeev B. Alfassi, alfassi@bgumail.bgu.ac.il)

· **AND FINALLY** Items for inclusion in future issues of the Radiochemistry in Europe Newsletter are welcome.

Please send information to your Liaison Person or myself Dr Tony Ware, Avoncastle, South Lane, Sutton Valence, Maidstone, Kent ME17 3AZ, UK. Tel: +44 (0)1622 842627, e-mail:tonyware@compuserve.com

IMPORTANT PLEASE send me your e-mail address so that I can inform you when websites have been updated.

For LIST OF CURRENT LIAISON PERSONS see next page

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