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RADIOCHEMISTRY IN EUROPE NEWSLETTER

Issue 35 – July 2006

EDITORIAL COMMENT

Welcome to the thirty fifth Newsletter for Radiochemists in Europe now under the sponsorship of the European Association for Chemical and Molecular Sciences (EuCheMS). The EuCheMS Executive agreed in April that we should now be a Division. So our title is now Division of Nuclear and Radiochemistry. It is now necessary for the Division to be responsible for arranging a conference on nuclear and radiochemistry at least every two years.

Our WebPages can still be found at www.euchems.org/Divisions/NRC although all changes to Division have not yet been made. From the home page the "Future Events" and Radiochemistry newsletters are readily available. Useful Links have also been established, including the Homepage of the Radiochemistry Group of RSC. If any other group would like their website to be linked, please send me the details. With regard to the Future Events conferences in other disciplines, which have or could have a section involving nuclear and radiochemistry and also conferences of interest outside of Europe are

included. It is the WP's aim to communicate and work with a wide range of disciplines and topic areas.

This is your newsletter for radiochemists in Europe. 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 urgently 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. Details of any courses would also be of interest to extend the existing database.

May I remind readers to inform me of any change to their e-mail address?

Providing that information is available I intend to compile this newsletter 4 times per year in March, June, September, 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.

? EUROPEAN ASSOCIATION for CHEMICAL and MOLECULAR SCIENCES

1st European Chemistry Congress

The 1st European Chemistry Congress will be held in Budapest, Hungary from 27 to 31 August 2006. The Congress website is <http://www.euchems-budapest2006.hu> The full programme for the Symposia on "Hot Topics in Nuclear & Radiochemistry" arranged by the Prof. Jan John on behalf of the Division of Nuclear and Radiochemistry should be available soon. It is scheduled to take place on 30 - 31 August 2006. This symposium aims at reviewing the state of the art and outlining the most prospective directions in the field of Nuclear- and Radiochemistry. The invited lectures will cover four of the most dynamic topics in the field, specifically

Chemistry of New Elements (Heinz W. Gäggeler, Switzerland)

Radionuclides in the Environment (Heino Nitsche, Berkeley, USA)

Radiopharmaceuticals (H H Coenen, Jülich, Germany)

Chemistry of the Nuclear Fuel Cycle (Charles Madic, CEA, France)

These lectures will address not only the specialists, they should give a clear picture of the development in this field to the general chemical public.

An additional invited lecture - Teaching of nuclear and radiochemistry in the modern age (Anthony R. Ware, England) - is aimed to trigger discussion on the ways of prevention of the decline of numbers of students in this field, that recently became a global problem. Further selected posters and papers will be presented.

It is not too late to register to attend. For further details and registration visit the Congress website at <http://www.euchems-budapest2006.hu>.

The first meeting of the new Division of Nuclear and Radiochemistry is planned for the afternoon of the 31st August, details of venue etc to follow. As such observers will be welcome. Please let me know by e-mail if you wish to attend.

2nd European Chemistry Congress

This is to let you know that the Italian Chemical Society will be organising the 2nd European Chemistry Congress in Torino on 16-20 September 2008.

Contact: Dr Tony Ware (e-mail: tonyware@compuserve.com)

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? OBITUARY

Dr G.W.A. Newton - always Bill Newton to his colleagues and friends - died suddenly on 4th October 2005 at the age of 76.

Born on 9th November 1928 in Blackburn, Lancashire, Bill Newton did his National Service in the RAF and then went to work for the UK Atomic Energy Authority, first at Springfield in Preston and then at the Windscale power station (as it then was). During this period he took his HND at Preston, and then went to Liverpool Polytechnic to study for the Associateship of the Royal Institute of Chemistry, all on a part-time basis. While he was at Liverpool Ian Campbell from Manchester University came to give a lecture, which Bill attended and which excited him: Campbell was equally impressed with Newton's work and offered him a teaching post in nuclear chemistry at Manchester and the chance to study for a PhD. Bill completed the doctorate, on *The Effects of Radiation on the Surface Properties of Alumina*, in 1964 in the space of only two years, after which Campbell ensured that he was confirmed as a full-time Lecturer in Chemistry at the university. He

was promoted to Senior Lecturer in 1981, and also became a part-time Tutor in the Faculty of Science from 1967 to 1981, taking early retirement from the university in 1988 at the age of 60. He was a long-standing member of the Royal Society of Chemistry and became chairman of the Radiochemical Methods Group twice, and was deeply involved in the series of international conferences on environmental radiochemical analysis. Like many academics who have taken early retirement, Bill Newton continued to do consultancy work after leaving Manchester University.

As well as being a committed teacher with a loyal following of students, Bill Newton was an active researcher in the field of radiochemistry and nuclear chemistry: not surprisingly many of his articles demonstrate his continuing interest in alumina. His research activity continued into retirement, in one case with a remarkable outcome. In 1971 he and colleagues at Harwell and Risley believed they had discovered a new superheavy element with the atomic number 112, but at the time their findings were greeted with scepticism: it

was a source of great satisfaction to him that in 2004 this discovery was after all independently confirmed.

A month before his death Bill submitted to *Archaeometry* an article which he had been invited to write on another aspect of his work. It opens with the words 'In the early 1970s John Riley from the Archaeology Department at Manchester came to see me and asked if we could help with some Roman pottery they had found at several sites in Libya. At the time we were ... sceptical about the possible success of any analyses. However, there was the University Research Reactor that was underused by our group. It was decided to undertake a trial project and Instrumental Neutron Activation Analysis was born at Manchester. Over 6,000 samples were eventually analysed' (covering the ancient world from Roman and Medieval Britain to the Levant, and now deposited at the Manchester Museum). This 'trial project' led to Manchester becoming one of the major British centres for the neutron activation analysis of ancient pottery, ending not with Bill's retirement but with the death of his great friend and collaborator Dr Vin Robinson. An important feature of the Manchester lab's approach was the involvement of large numbers of students, from third-year undergraduates up to post-doctoral level. For many

this unexpected taste of the ancient world had a lasting effect on their lives: indeed.

It had a lasting effect on Bill Newton's life too, as he became increasingly fascinated by the stories ancient pottery could tell. Early in 1989, immediately after retirement, he and his wife Betty had worked on Kay Prag's excavations at Tell Iktanu in Jordan: with Betty in the lead, they thereupon both began going to evening classes and on specialised courses in making pottery, and were still doing so at the time of his death, Bill having meanwhile successfully taken the City and Guilds examinations. He was particularly interested in kilns and glazes, and by the time of his death Bill was no mean potter, with some beautiful and striking works to his credit.

Bill Newton was also a very happy family man. In July 1953 he married Betty Slater: they had four children, seven grandchildren and three great-grandchildren. It was on the way back from a visit to one of the grandchildren that he developed the symptoms of what proved to be a fatal brain haemorrhage.

Bill will be sadly missed by all his many friends and colleagues in the Radiochemistry Group of the Royal Society of Chemistry and the wider scientific community.

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? LABORATORY/BUSINESS PROFILES

None offered in the last few months. Please send copy if you wish your laboratory or business to be featured.

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? CONFERENCE & MEETING REPORTS

Nuclear Waste Management Jan 18th, London UK

The PowerPoint presentations from the Nuclear Waste Management workshop that was held at the Geological Society on the 18th January are now available on website:

<http://www.rsc.org/ScienceAndTechnology/Events/MaterialsNuclearWasteManagementWorkshop.asp>

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? CONFERENCE AND WORKSHOP DETAILS

1st European Chemistry Congress

The 1st European Chemistry Congress will be held in Budapest, Hungary from 27 to 31 August 2006. The Congress website is <http://www.euchems-budapest2006.hu> One of the Special Topics Symposia during the Congress is on "Hot Topics in Nuclear & Radiochemistry" arranged by the WP on Nuclear and Radiochemistry. (For further details see EuCheMS Report earlier in this newsletter.)

10th International Symposium on Environmental Radiochemical Analysis (ERA10)

ERA10 will take place at the Randolph Hotel, Oxford, England from 13th to 15th September 2006. The preliminary scientific programme covers nuclear counting techniques applicable to environmental measurements, the determination of radionuclides in environmental materials (solids and aqueous matrices), the determination of radionuclides in biological samples (Bioassay), the application of radiochemical methods

to environmental studies and quality assurance. Full details, costs and timescale can be found on the symposium website at <http://www.rsc.org/era2006/>

Introduction to Practical Environmental Radiochemistry

The "International Training Centre (ITC) - School for Underground Waste Storage and Disposal" is putting together a course on Practical Environmental Radiochemistry to be held from 18-22 September in Meiringen, Switzerland. Full details of the course are available on the ITC website www.itc-school.org

The eleventh international conference on the Chemistry and Migration Behaviour of Actinides and Fission Products in the Geosphere (MIGRATION 2007)

This will be held August 26 - 31, 2007, in Munich, Germany. The MIGRATION conferences provide an international forum for the timely exchange of scientific information on chemical processes controlling the migration behaviour of actinides and fission products in natural aquifer systems. Experimental investigations and predictive modelling of these processes are the main topics of the conferences. The information generated from the MIGRATION conferences is the basis for the mechanistic understanding of the migration behaviour of long-lived radionuclides in the geosphere, which is essential for the long-term performance assessment of nuclear waste disposal. After 20 years, MIGRATION '07 will get back to the grassroots, where everything started: Twenty years ago - in 1987 - J.I. Kim, at that time professor for radiochemistry at the TU München, Germany, called this conference in Munich into being. It is certainly his outstanding merit that the MIGRATION conferences remained such a successful story over this long time period.

Conference website: <http://www.fzk.de/migration2007>

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NEWS FROM THE INTERNET

Meeting Announcement

UK Long-Term Nuclear Waste Management: Next steps? A meeting to be held at Loughborough University 6 - 7 November 2006

http://www.lboro.ac.uk/departments/cm/news/UK_Long_term_NWM_conf.pdf

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JOB OPPORTUNITIES

Temporary Position for the Nuclear Security Activities (P-2) at IAEA

The incumbent will be a nuclear instrumentation specialist for evaluation, test, purchase, implementation and maintenance of radiation monitoring equipment for the use by Member States for the detection and response to illegal activities involving nuclear and other radioactive materials. To this end he or she will operate a dedicated equipment test laboratory. The incumbent will participate as a lecturer in at least 2 training courses/year covering the use of such detection systems for Member States on the detection and response to illegal activities involving nuclear and other radioactive materials.

The Agency programme on Nuclear Security foresees the deployment of radiation monitoring equipment to prevent, detect, and provide responses to illegal activities involving nuclear and other radioactive materials. This involves equipment specifications, type evaluation and testing, purchase, acceptance testing, installation and maintenance. The incumbent will be in charge of

preparing the required documentation and participate in the conduction of acceptance tests. The incumbent will participate in training courses as a lecturer on the performance and use of detection systems used in the detection and response to events involving nuclear and other radioactive materials. Those interested in the post please contact directly Mr. M. Zendel at m.zendel@iaea.org

Necsa (South African Nuclear Energy Corporation)

Necsa is the premiere Nuclear Institute in South Africa undertaking nuclear R&D under mandate from government. This mandate also includes the advance of Nuclear Science and Technology. The department of Radiochemistry is a multidisciplinary team that carries out its mandate by carrying out R&D on nuclear waste, tracers and radiopharmaceuticals. It has a vacancy in the latter area of Nuclear Technology and Services, Radiochemistry for a Senior Scientist PS3/PS2..
Job Profile

To define and carry out R&D projects in the field of radiolabeled Iodine and Tc-99m molecules in-line with Radiochemistry's radiopharmaceutical R&D program.

To help establish the expertise at Radiochemistry to synthesize and label molecules with PET isotopes and thereafter exploit this capacity in nuclear medicine and in vivo biological imaging.

. Publish peer-reviewed publications in scientific journals of international standard.

. Where necessary carry out these syntheses under GLP.

. Assist in the synthesis of other labeled compounds.

. Organic synthesis of non-radioactive molecules
The candidate is expected to have a MSc/PhD (Chemistry) with 5 years of radiochemical practice.

Experience in the field of radiopharmacy will be viewed an advantage. He/she must be medically fit to register as a Radiation and Chemical worker.

For more info contact Jan Rijn Zeevaart PhD (Delft). Head: Radiochemistry, Necsa
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? AND FINALLY

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IMPORTANT PLEASE send me your email address so that I can inform you when websites have been updated and any other news of immediate interest.

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