

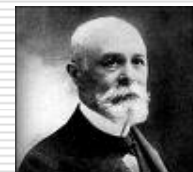
# Radiochemistry Group

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**The Radiochemistry Group within the Royal Society of Chemistry exists to promote, educate, practice and collaborate in the chemistry of radioisotopes**

# Relaunch in 2004

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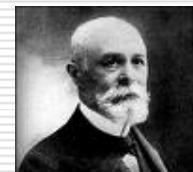


- Group consciously set about to realign itself and relaunch three years ago
  - Were we in the right place in the RSC structure
    - Could have been in ESEF instead of Analytical Division
    - Decided to remain where we were
  - Need to be better placed to represent all chemists (scientists?) working with radioisotopes
  - Not everyone doing 'chemistry' with radioisotopes thinks of themselves as a chemist
  - Members of other learned Societies
  - Areas that we cover, e.g. nuclear medicine and nuclear waste disposal are cross-disciplinary issues
  - Group name – was it right?
    - Decided to change it to a broader one
  - Originally called 'Radiochemical Methods Group'



# Relaunch - What to do?

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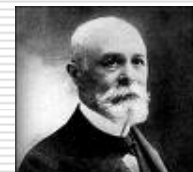


- Joint meetings
  - Local groups
  - Other interest groups/sections
  - Other Learned Societies
- This has led to an increase in membership
  - Particularly in areas previously under-represented
  - Picking up people who are not in the RSC
- Thanks to Dr Jon Martin who initiated this process



# Working Objectives

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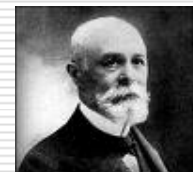


- Encourage, assist and extend the knowledge and study of radiochemistry
- Provide an opportunity for Group members to increase their knowledge and to enhance their professional capacity
  - Holding meetings and supporting members to attend
- Support networking, and the exchange and dissemination of information
- Assist in the public understanding of the social, educational and economic importance of radiochemistry
  - Essays on the web
- Co-operate with Division of Nuclear and Radiochemistry in EuCheMS



# Mission Statement

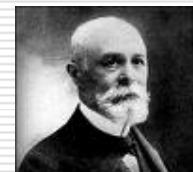
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- Support all areas of chemistry using radioisotopes including:
  - Environmental behaviour of natural and anthropogenic radioisotopes
  - Medical and pharmaceutical uses in imaging and therapy
  - Application as tracers of natural phenomena
  - Coordination chemistry of radioactive elements
  - Production, standardisation and use of radioisotopes
  - Analytical measurement and application of radioisotopes
  - Regulating handling and disposal of radioisotopes
  - Waste management and remediation of contaminated land
  - Nuclear energy production
  - Safeguards in the non-proliferation of nuclear materials



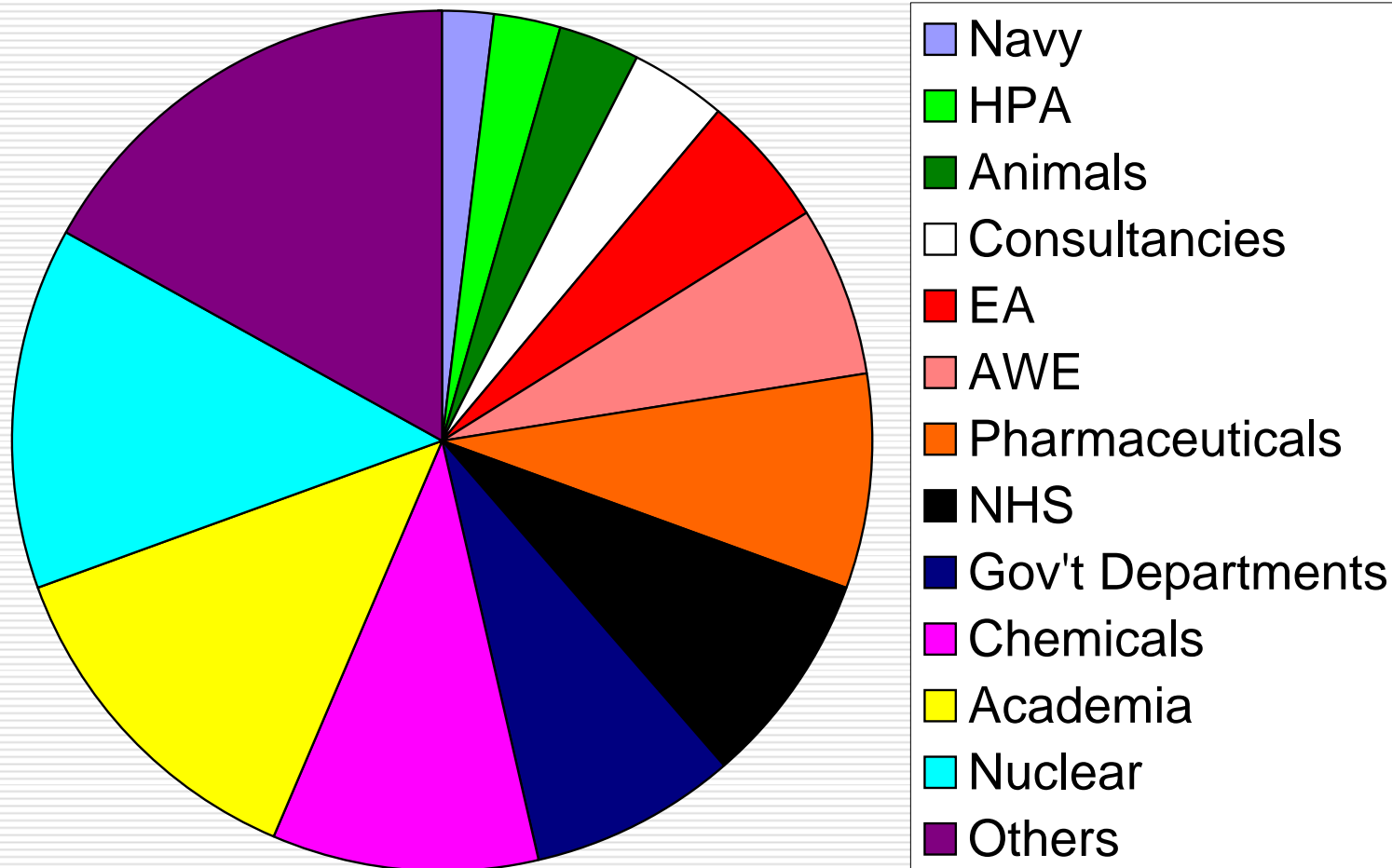
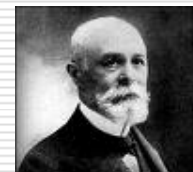
# Membership



- 274 at present
  - Distributed across the country:
    - London 9
    - Surrey, Middlesex, Bucks, Berks & Herts 30
    - South (Kent to Wilts) 26
    - West (Cornwall to Gloucester) 33
    - Wales 5
    - Midlands 39
    - East (Essex to Lincoln) 13
    - North West 48
    - North East 5
    - Scotland 32
    - Ireland & Northern Ireland 3
    - France 4
    - Other (USA, Canada, Japan, HK & Saudi) 26



# Members Organisations



# Committee

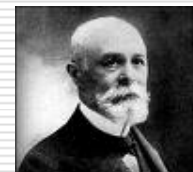


- Dr David Wilkinson Astra Zeneca R&D Charnwood
- Dr Kinson Leonard Cefas, Lowestoft
- Dr Katherine Morris Institute of Geological Sciences, University of Leeds
- Dr Tony Ware Retired Analytical Chemist
- Dr Linda Ashton Atkins
- Prof Phil Blower Division of Imaging Sciences, King's College London
- Dr Nick Evans Department of Chemistry, Loughborough University
- Dr Terry Gingell DSTL Gosport
- Dr Miranda Keith-Roach Earth, Ocean and Environmental Sci., Univ. of Plymouth
- Dr Samantha King Nuclear Decommissioning Authority, Harwell
- Prof Francis Livens School of Chemistry, University of Manchester
- Mr Rob Storrie Amersham Health
- Dr John Thornback Consultant
- Dr Phil Warwick Geosciences Advisory Unit, So'ton Oceanography Centre
- Mr Paul Thompson Atomic Weapons Establishment, Aldermaston
- Prof Susan Parry Imperial College, London
- Dr Peter Wood Nuclear Decommissioning Authority, Harwell



# Topics of Past Meetings

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- ERA Symposia (Environmental Radiochemical Analysis)
  - Large international conference every 4 years
- Young Researchers Competition
  - Every 2 years
- One-Day Meetings
  - Radiopharmacy education
  - Radiochemistry in Nuclear Clean Up
  - Medical Uses of Radioisotopes
  - Radiochemistry in Homeland Security
  - Radionuclide Therapy: Chemistry and Applications
  - Future Nuclear Technologies
  - Recent Advances in PET Chemistry
  - Radiochemistry and Radioactively Contaminated Land
- Speakers from UK and abroad (USA, Germany...)
- Support for Liquid Scintillation Counting Workshops



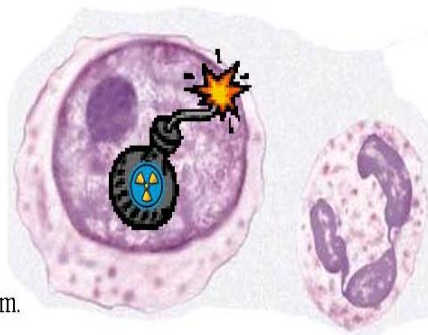
# Previous Meeting



Royal Society of Chemistry  
Radiochemistry Group  
One-Day Meeting

## Radionuclide Therapy: Chemistry and Applications

25<sup>th</sup> September 2007, 10.00 a.m. – 5.00 p.m.  
Gassiot House, St Thomas' Hospital,  
London



Targeted radionuclide therapy is a successful but under-used cancer treatment modality, offering opportunities for design and synthesis of agents incorporating radionuclides from all parts of the periodic table. The aim of this meeting is to bring chemists and radiobiologists together with practitioners of radionuclide therapy including physicians, radiopharmacists and medical physicists to enhance interdisciplinary awareness and identify areas for chemical development that will widen the clinical use and improve efficacy of radionuclide therapy.

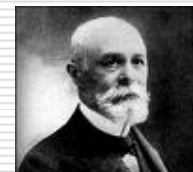
### Confirmed Speakers

- Prof Mike Zalutsky** (Duke University, North Carolina, USA)
- Prof Steve Mather** (Cancer Research UK, London, UK)
- Prof Val Lewington** (Royal Marsden Hospital, Sutton, UK)
- Dr John Buscombe** (Royal Free Hospital, London, UK)
- Prof Alan Perkins** (University of Nottingham, UK)
- Prof Jon Dilworth** (University of Oxford, UK)
- Dr Kim Orchard** (Southampton General Hospital, UK)
- Prof Rob Mairs** (Beatson Institute, Glasgow, UK)



# Future Meetings/Events

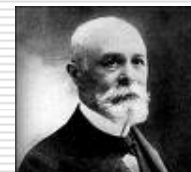
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- 21<sup>st</sup> Nov 2007 Actinide Materials Science (Manchester)
- 13<sup>th</sup> Feb 2008 Radioactive Waste Disposal (Birmingham)
- 16<sup>th</sup> Apr 2008 Young Researchers Competition (London)
- May 2008 Joint with BNMS
- Summer 2008 Tritium Radioanalytical Chemistry
- Nov 2008 Radiochemistry at RSC Careers Fair
- Spring 2009 Advances in PET Chemistry
- Autumn 2010 ERA Symposium



# Next Meeting



## ACTINIDE MATERIALS SCIENCE

A Joint Meeting of the Radiochemistry and Process Technology Groups

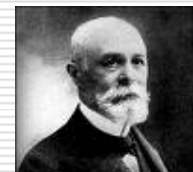
21<sup>st</sup> November 2007

Chancellor's Conference Centre, University of Manchester

8.30-9.05	<i>Registration and Coffee</i>
9.05-9.10	<i>Opening Remarks</i>
9.10-9.50	<b>Gerry Lander</b> (ITU, Karlsruhe & ILL, Grenoble) <i>Condensed Matter Physics of the Actinides- Expecting the Unexpected</i>
9.50-10.30	<b>Paul Roussel</b> (AWE, Aldermaston) <i>Actinide Metals</i>
10.30-11.10	<b>Christine Brown</b> (Nexia) <i>Actinide Processing for MOX Fabrication</i>
11.10-11.30	<i>Break</i>
11.30-12.10	<b>Clive Walker</b> (ITU, Karlsruhe) <i>Behaviour of LWR Fuel under Irradiation</i>
12.10-12.50	<b>Robin Grimes</b> (Imperial College) <i>Modelling Actinide Materials</i>
12.50-1.40	<i>Lunch</i>
1.40-1.55	<i>Annual General Meeting of the Radiochemistry Group</i>
1.55-2.25	<b>Bill Newton Lecture</b>
2.25-3.05	<b>Neil Hyatt</b> (Sheffield) <i>Actinide Wasteforms</i>
3.05-3.25	<i>Break</i>
3.25-4.15	<b>Ron Brown</b> (Dstl Porton Down) <i>Depleted Uranium in Anti-Tank Munitions</i>
4.15-4.55	<b>Dominic Rhodes</b> (Nexia) <i>Applications of Tomography in the Nuclear Industry</i>
4.55-5.00	<i>Closing Remarks</i>

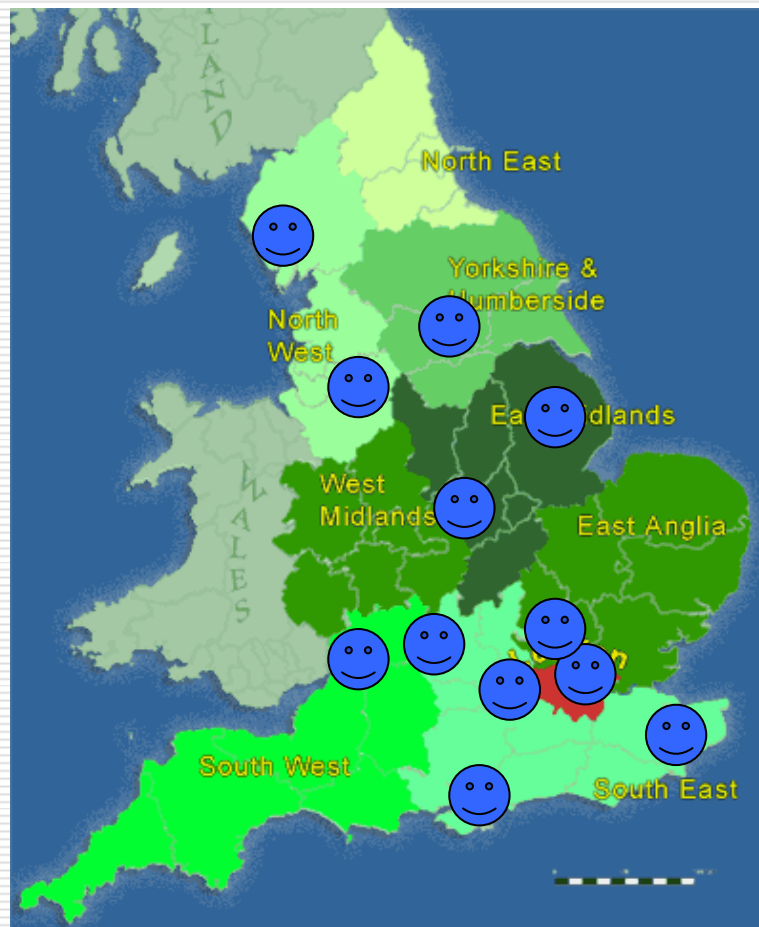


# Venues

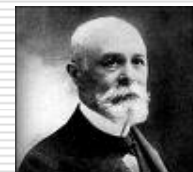


In last 4 years held meetings in:

- Aldermaston
- Gosport
- Leeds
- Lincoln
- London
- Loughborough
- Maidstone
- Manchester
- Oldbury
- Oxford
- Sellafield
- Teddington



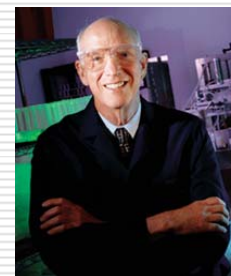
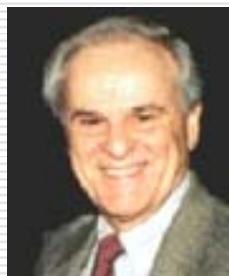
# Awards



## □ Becquerel Medal

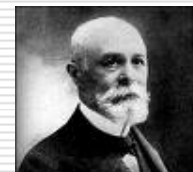
■ Inaugurated in 1996 to mark 100<sup>th</sup> anniversary of discovery of radioactivity

- *1996 Alfie Maddock (UK)*
- *1998 Gerhard Stöcklin (Germany)*
- *2000 Greg Choppin (USA)*
- *2002 Peter Warwick (UK)*
- *2004 Phil Horwitz (USA)*
- *2006 John Jones (UK)*



# Awards

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## □ Bill Newton Medal

- Biennial award of £500 plus medal for a recent outstanding contribution to radiochemistry
- Nominations relating to the research, teaching or advancement of radiochemistry are all eligible
- Recipient is required to give a lecture at a Radiochemistry Group sponsored meeting

- 2007 Dr Nick Bryan



# Young Researchers

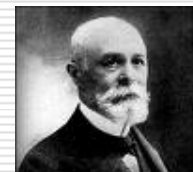


- A biennial presentation competition
- Winners:
  - 1990 M.R. James BNFL Sellafield
  - 1992 D. Nacapricha Liverpool JM University
  - 1995 Diana Thompson Imperial College
  - 1997 Karen Verrall Loughborough University
  - 1998 Joanna Renshaw Manchester University
  - 1999 Ferozan Ibrahimi Imperial College
  - 2000 M.A. Carroll Imperial College
  - 2001 Sean Jarman H.M.S. Sultan
  - 2002 Abigail Lloyd Imperial College
  - 2004 Toby Jeffery Hammersmith Imanet
  - 2006 Stuart Aldridge Loughborough University



# Bursaries

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- Student bursaries are available to attend national and international conferences
  - Around 4 per year are awarded
  - Up to £500
  
- All our one-day meetings are free to students



# Essays

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- Discovery of Radioactivity
- Radon
- After the Discovery of the Nucleus
- Alpha, Beta and Gamma Radioactivity
- Half-lives
- Radioisotopes in Medicine
- Radioactivity in the Environment
- The Nuclear Fuel Cycle
- Radioactivity in Food
- Depleted Uranium



# Others

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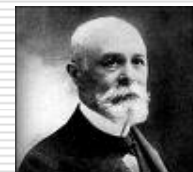


- The Group produces a regular newsletter
  - Available at:
  - <http://www.rsc.org/radiochemistry>
  
- Host Newsletter for Radiochemists in Europe



# Future Challenges

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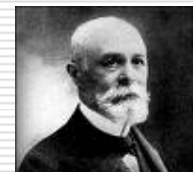


- Education!
- Joint meetings
  - Other interest groups
  - Other learned societies
- Increase membership
  - Especially amongst non-RSC members
  - Links with similar groups in Europe and further afield
- Liaise better with the RSC centrally on issues raised in the press



# Join Now

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Only £5 a year!!

