

RSC NEWS

JULY 2011 www.rsc.org



International Year of
CHEMISTRY
2011

The Global Experiment

UK SCHOOLS GET INVOLVED IN THE WORLD'S BIGGEST CHEMISTRY EXPERIMENT, TESTING THE ACIDITY OF LOCAL WATER SUPPLIES

RSC | Advancing the
Chemical Sciences

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WINNERS
2011
p8



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DIVISION
ROUNDUP
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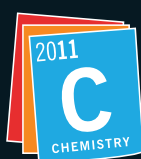




◀ West Yorkshire Analytical Services (pictured left) and Aberdeen Scientific Services are among the latest new members of the RSC partnership programme. The programme is open to all organisations, whether academic or industrial, who are keen to build a stronger relationship with the RSC, be involved in chemistry outreach, support continuing professional development for staff, network with other organisations and support RSC ChemNet, the programme for post-16 chemistry students.

With the addition of West Yorkshire Analytical Services and Aberdeen Scientific Services, the Partnership Programme now comprises 20 members and the RSC is keen to see this number continue to grow. For further details about joining the programme, visit the website. www.rsc.org/partners

Or email Andrew Scott for more information. scotta@rsc.org



International Year of
CHEMISTRY
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▲ Our Children on Water, the RSC's unique international art exhibition, opens in London this month, featuring 40 pieces of artwork produced by schoolchildren from across Europe and Africa. *Water: Friend Not Foe* is the title of both of these pictures by Grace Vetch (left) and Imogen Reed (right) from King's High School for Girls in Warwick. The pictures will be on display at the exhibition when it opens at the Chemistry Centre on 18 July. Admission is free and there is no need to book. On page 6 of this issue of *RSC News*, King's High School chemistry teacher Andrew Grist explains why his class took part in the project and the importance of finding novel ways to inspire chemistry pupils. To find out more about the exhibition, view the diary listing on page 27 or visit the website. www.rsc.org/ourchildren



▲ Don't panic! The RSC's own interpretation of Pan-Galactic Gargle Blasters, the fictional cocktails from Douglas Adams' *Hitchhiker's Guide to the Galaxy*, were served to guests at the Chemistry Centre in May. The extra-terrestrial refreshments were created as part of the RSC's Science on The Silver Screen event. Whilst the audience didn't find the answer to 'life, the universe and everything', they were treated to an informative talk by journalist and author Michael Hanlon who explored some of the science behind the science fiction classic. The evening finished with a special screening of the 2005 film adaptation.

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Cover image: Pupils from Trinity School, Croydon, and Oasis Academy, Shirley Park, collect water samples outside Buckingham Palace for the Global Experiment.



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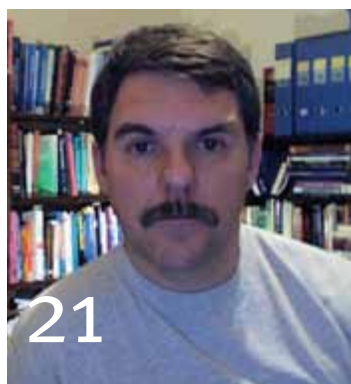
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snapshot

A look at the latest news from around the world

Lobbying for science in Northern Ireland



RSC President David Phillips speaks to Northern Ireland Members of the Legislative Assembly (MLAs), John McCallister MLA and Tom Elliott MLA

RSC engages with politicians at inaugural Science and the Northern Ireland Assembly event

Members from across the scientific community gathered in Stormont on 6 June at the inaugural Science and the Northern Ireland Assembly event, organised by the RSC and co-sponsored by the Campaign for Science and Engineering (CaSE). Following on from the success of similar events at the Scottish and Welsh Assemblies, several MLAs had the opportunity to meet scientists, academics, industrialists and many others to discuss the best way to advance the sciences in the country.

RSC President David Phillips spoke about the need for Northern Ireland to build on its growing high-tech industry and strong manufacturing base to lead the way in Europe on renewable energy.

"The expansion of Northern Ireland's Science Park and its high-tech sector is one of the nation's greatest success stories," Phillips told the audience.

Lagan Valley MLA Basil McCrea warned in his concluding remarks

that the scientific community should ensure they lobby their representatives on key issues and not get into the trap of "always speaking to each other, rather than the politicians".

McCrea, who studied chemical engineering at the University of Birmingham, said he was confident an All Party Group on science and engineering would be set up and has received support from other MLAs to make this happen.

RSC parliamentary affairs adviser Stephen Benn also seized the opportunity to speak to First Minister Peter Robinson at Belfast City airport to emphasise the need for a chief scientific adviser. This would mean Northern Ireland follows in the footsteps of the Welsh Assembly, who appointed John Harries to this role in Cardiff last May.

It is important the RSC capitalises on the success of the Stormont event and ensures we enter into a new era for science policy in Northern Ireland.

IN BRIEF

INSPIRATION FOR SCHOOLS

RSC President David Phillips will be providing inspiring talks for school children as part of a new initiative organised by the Education and Employers Taskforce. Speakers for Schools is a network of people who offer their time to talk to children in state schools across the UK about their lives and careers. Government ministers, including Prime Minister David Cameron, as well as broadcasters such as Jon Snow and scientists are among the speakers.

BBC Business Editor Robert Peston, who is leading the initiative, said: "We aim to create a pool of speakers who are keen to share their expertise and experience with young people, free of charge. We want to make it easy for state schools in all parts of the country, especially those operating in challenging circumstances, to draw upon this pool of knowledge and talent."

www.speakers4schools.org



Upgrading the Chemistry Centre

Work is now underway at the RSC's Chemistry Centre at Burlington House, London, to improve facilities for members and visitors.

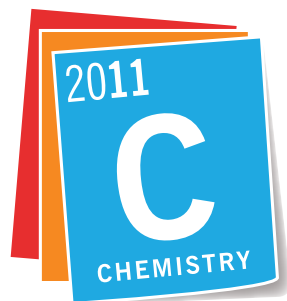
The project, the second phase of developments at the Chemistry Centre, aims to create a more exciting and inviting space for our members and the public. The image above shows an artist's impression of the planned new reception area, which will see the replacement of the front desk and a brand new waiting area created for visitors. Lighting will be upgraded and extra toilet facilities will be installed.

We will also be restoring some of the Grade II listed building's outstanding original features including the old stone floor.

Integrated audio-visual facilities will be installed in the Science Room, adding greater flexibility for exciting public events held at the Chemistry Centre throughout the year.

The work is expected to last until the end of September. Although we will try to keep disruption to a minimum, RSC members visiting Burlington House should expect some disruption such as noise. Groups wishing to book meeting rooms during the summer should also be aware that access will be reduced during this period. For any queries about access during the refurbishment, please contact the Hospitality Team.

BHRooms@rsc.org



International Year of CHEMISTRY 2011

International Year of CHEMISTRY 2011

www.chemistry2011.org

UK schools join world's biggest chemistry experiment



Gavin Barwell MP joined pupils from Trinity School, Croydon, and Oasis Academy, Shirley Park, to test the pH of local water on 22 June.

Using lesson plans provided by the RSC, pupils from across the UK performed similar experiments, on the same day, with their own water supplies as part of the Global Experiment. The International Year of Chemistry initiative will see the UK results fed into a global database providing a picture of the planet's pH levels. RSC President David Phillips said: "This remarkable initiative will demonstrate the enjoyment that can be gained from practical experimentation; also it will show that no one is too young to take part in science."

The event attracted significant media attention including the BBC's flagship magazine programme *The One Show* on the eve of the experiment, as well as several BBC radio programmes and local newspapers.

www.rsc.org/globalexperiment



At the Chemistry Centre last month, Richard Allan, Chief Scientist at Scottish Water, discussed the challenges we face in securing freshwater supplies at a global level. Watch the video on *The Reaction*.

http://thereaction.net/events/y2011/Water_Sustainability.aspx

Heroines of chemistry celebrated in Paris

The RSC helped celebrate the remarkable achievements of women in science at the headquarters of the Organisation for Economic Cooperation and Development (OECD) in Paris in June. "Marie Curie's work opened the way for nuclear physics and radiotherapy. Dorothy Hodgkin opened the way to X-ray crystallography studies of biomolecules," explained OECD Secretary General Angel Gurría in her opening speech. "Without them, our world would have been definitely different, and not for the better."

The event was rounded off by a musical homage to Marie Curie from Italian chemist and pianist Davide Di Censo.



IYC 2011 EVENTS



Chemical Magic: A Lecture For Sixth Form Students

5 July at 14:00, Nottingham (see page 23)

The Nuclear Debate

7 July at 18:00, the Chemistry Centre (see page 26)

Water Quality: How Clean is Clean?

11 July at 10:00, Uxbridge (see page 26)

Why Do Chemists Want to Make New Molecules?

14 July at 18:00, Nottingham (see page 23)

Our Children On Water

18-29 July, the Chemistry Centre (see page 27)



Photo: Keith Morgan

Bang go the Borders

Michael Moore MP, Secretary of State for Scotland, joined the RSC at the Bang go the Borders school science festival in May. The RSC was at the festival, in St Mary's Primary School in Melrose, to promote IYC2011 with information about the Global Experiment and exciting activities for children including 'Racing Raisins', which demonstrates how irregular surfaces on the raisins hold carbon dioxide, affecting its buoyancy in water.

Celebrating the role of gold

For IYC2011, the World Gold Council and the RSC have teamed up to develop a unique microsite offering free access to some of the RSC's best gold-related publications until the end of 2011. There is a spread of historical and cutting edge papers, spanning catalysis, nanotechnology and novel materials.

www.rsc.org/gold100

onetoone

Take advantage of a wide range of member services

From Affiliate to Fellow, the RSC provides four levels of membership to support chemists from the start to the end of their careers. Find out what each one means and whether it's time for you to upgrade your membership.

Membership of the RSC provides support to every type of chemical scientist at every stage of their career from undergraduate study through to retirement. It is important to ensure that you are in the correct category of membership, as your level of membership says a lot about you, your level of qualification and extent of your experience.

■ Affiliate

If you are an Affiliate member of the RSC, this means that you do not currently hold a qualification recognised or accredited by the RSC. This may be because you are working towards gaining a recognised or accredited degree, or your qualifications are in another area altogether. However if you do have qualifications in chemical science, you are probably eligible to upgrade your membership to Associate or Member and



Different membership levels reflect different stages of your chemistry career progresses

start getting the professional recognition you deserve.

■ Associate

Being an Associate Member of the RSC entitles you to use the designatory letters AMRSC. These denote that you are a qualified member of the UK's professional body for the chemical sciences. By becoming an Associate Member of the RSC you have

demonstrated a commitment to advancing the chemical sciences and maintaining high standards of competence and ethical behaviour, and this will reassure prospective employers that you are not just qualified in the subject but have committed to begin building a long-term successful career.

However, if you received your first degree (or equivalent qualification) in chemical science more than three years ago, it might be time to upgrade to become a full Member of the RSC.

■ Member

The main category of RSC membership carries the designatory letters MRSC, which are awarded once you have spent at least three years developing key skills through professional activity after obtaining your first degree in chemistry (or equivalent qualification). This could be by working in a lab, either as a professional or a graduate student, by teaching, or doing any job that requires you to develop your key skills as a chemistry graduate.

■ Fellow

Being a Fellow of the RSC means two things. Firstly, that you have developed your career and now hold, or have held, a position of senior responsibility for at least five years. And secondly, that you have made substantial career progression in any field which involves or promotes the advancement or wider application of chemical science.

This is the most senior category of membership; it recognises that you have made a significant contribution towards advancing the chemical sciences.

Are you eligible for CChem?

Are you an MRSC or FRSC? If so, you may be eligible to apply for Chartered Chemist (CChem) status. CChem is a mark of professional competence and inspires public confidence and trust in science and scientists. The CChem award defines excellence in the practice of the chemical sciences and shows that you are able to make a critical contribution to the success of your organisation, business or institution. To find out more about the routes to CChem email cchem@rsc.org

Upgrading is easy

There is no charge for upgrading to AMRSC or MRSC until you renew your membership at the end of the year. For details go to the membership webpage and click on 'Upgrade my Membership'.

www.rsc.org/membership

► MORE INFORMATION

For more information go to www.rsc.org/membership telephone 01223 432141 or email membership@rsc.org



Did you know?

Members with an income below £12,500 per annum and retired members are able to pay a reduced subscription rate of £65.00. Grants are available from the Benevolent Fund for members (and also spouses, children and other dependents). There are criteria for eligibility for financial support but the Fund also provides advice and support on issues such as housing, debt advice and state benefits.

Members who are over the age of 50, are fully retired and have had five years of membership may pay a reduced rate of £65.00.

You can set up a Direct Debit to pay your membership annually or by monthly instalments.

Associate and Affiliate members who upgrade to full Member do not pay the full fee for MRSC for five years. The subscription rate increases from 60% of the full rate in the first year in annual increments of 10%.

profile

A closer look at our members and their interests

60
seconds
with...

Andrew Grist

Inspiring chemistry pupils with art

OUR CHILDREN ON WATER

The RSC's unique art exhibition, organised as part of the International Year of Chemistry, explores the theme of water, drawing attention to the role of chemists in industry and academia in providing safe and clean water around the world.

Two pupils from King's High School, Warwick will have their artwork exhibited alongside 38 other striking images produced by pupils from the UK, Germany, South Africa, Czech Republic, Ethiopia, Kenya, Italy and Spain as part of Our Children on Water. The exhibition, which is free to attend, will open at the Chemistry Centre, London, on Monday 18 July until Friday 29 July. After this time, the exhibition will tour Europe, heading to Frankfurt in August, Prague in September, Rome in October and Barcelona in November. See the diary on page 27 for more details.

www.rsc.org/ourchildren



ANDREW GRIST

Andrew Grist is Teacher in Charge of Chemistry at Kings High School, Warwick, an Independent Day School for Girls aged 11-18 years.

Andrew has been teaching for 16 years and held his current position for the last four years. He completed his PhD in 1992 at the University of Leicester, where he also gained his PGCE.

“I'd always wanted the opportunity to work with the less obvious departments and to show the cross-curricular nature of chemistry”

Q What led you to take part in the Our Children On Water project?

A The project was a collaboration with the art department. I had always wanted the opportunity to work with the less obvious departments to show the cross-curricular nature of chemistry and relate it to everyday experiences. The Head of Art was also keen.

We chose Year 7 because this group had no exam work so it was a good group to experiment with. They were provided with a range of quite specialised apparatus which was more inspiring compared to the usual old beaker or test tube.

The girls are a little young to make all the links behind the importance of the project, but they enjoyed the challenge.

Q Two of your pupils have had their artwork selected for the final exhibition – what does the school think about their work going on tour around Europe?

A It is a big achievement to have work displayed internationally and the school is very proud of the achievements of these girls.

We're proud of all of the pupils and the manner in which they approach their work; it is to the girls' credit at King's High School that you can guarantee that a number of them will volunteer and put themselves out in their free time to attempt almost any activity which enhances their learning.

Q How important is it to link chemistry with everyday life?

A I feel it is crucial to relate the chemistry to everyday experiences and although the syllabi sometimes restricts this we do activities in lunchtimes like chemistry quizzes to extend the girls' knowledge. When studying the production of ethanol or quarrying limestone it is as important to put the science in context as it is when thinking about the impact of palm oil. For some girls relating ideas to cosmetics can capture their interest, but I find relating optical isomerism to spearmint and caraway or exploring the issues surrounding drug design and thalidomide can also have a big impact on their enthusiasm. We constantly make the links to everyday experience as a means of galvanising the students.

Q Have you taught any other novel or unusual chemistry lessons?

A I have taught pupils from age 11 to 70 and taught chemistry to hairdressers. I believe everyone has a latent interest in chemistry and must believe they can do it. I spent a few years teaching in further education and as well as the usual A-level classes I taught students who had enrolled on beauty therapy and hairdressing courses. As part of the course they had to have some knowledge of the science involved in their vocation. We looked at prepared cosmetic creams and studied the chemical ingredients – I am pleased to say they soon realised aqua was water on the ingredients list. I also taught them about parabens, we did steam distillation and isolated some essential oils used in aromatherapy. They were very enthusiastic.

AWARD WINNERS 2011

The RSC Awards recognise excellent work in all branches of the chemical sciences from researchers across the world

Analytical Division

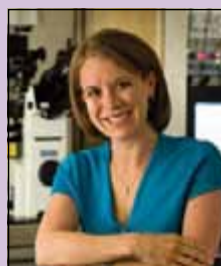
The Analytical Division provides a forum for analytical chemists to exchange information and ideas. It organises meetings and, via the Analytical Chemistry Trust Fund, finances studentships, awards, lectureships and more.



Distinguished Service Award

Dr Janet Warren
CChem MRSC

Retired, formerly Glasgow Royal Infirmary
For her exemplary and dedicated service to the RSC Analytical Division, both within the UK and Scotland. Especially noteworthy is her record of more than 30 years' continuous service to the Scottish Region.



Joseph Black Award

Professor Christy Haynes
University of Minnesota

For her work on leveraging the core principles of analytical chemistry to gain insight into pressing toxicological, immunological, and ecological questions.



Ronald Belcher Award

Paul Bassan
University of Manchester

For his work on the scattering of IR radiation from biological cells and the development of a correction algorithm to remove the effects of resonant Mie scattering from IR spectra. His work has transformed the field of biomedical IR spectroscopy.



Theophilus Redwood Award

Professor Anthony Turner
CChem FRSC

Linköping University
For his outstanding work in biosensors. In particular, his pioneering work which has led to the development of home blood glucose monitoring technology.



Sir George Stokes Award

Professor Richard Compton
CChem FRSC

University of Oxford
For his work in translating original and fundamental insights in interfacial charge transfer mechanisms and their kinetics into innovative and robust analytical sensing protocols. His work has revolutionised the field of electroanalysis.

It is with pleasure that we announce the **RSC 2011 Award Winners**. These awards are designed to recognise the outstanding work carried out by scientists in specialist areas in all branches of science. For further information visit www.rsc.org/awards

Most of these winners will deliver lectures at a variety of locations throughout the UK during the next academic year. For information on upcoming lectures and symposia go to www.rsc.org/awardevents

Chemical Biology Interface Division

These awards focus on specialist subject areas, rewarding outstanding work at the boundary between chemistry and biology.



Jeremy Knowles Award

Professor Christopher Schofield
FRSC

University of Oxford

For his work on determining the structure and function of human oxygenases of chemical and biomedical importance.



Norman Heatley Award

Dr David Spring
FRSC

University of Cambridge

For his work on diversity generation in organic synthesis and its application to the discovery of novel bioactive compounds including chemical probes.

Rita & John Cornforth Award

Collaborative Computational Project Number 4
STFC Rutherford Appleton Laboratory

For providing a resource that underpins macromolecular structural chemistry worldwide and for exemplar team-ethos over many years.

Environment, Sustainability and Energy Division

This division was formed in 2003 in order to support, manage and co-ordinate the important activities relating issues such as health and safety, toxicology, hazard management and environmental chemistry.



Environment, Sustainability and Energy Award

Professor Mercedes Maroto-Valer
FRSC

University of Nottingham

For her internationally recognised research at the interface between energy and the environment. In particular for your outstanding contributions in carbon capture and storage.



Sustainable Energy Award

Professor Edwin Charles Constable
CChem FRSC

University of Basel

For his work on supramolecular coordination chemistry for the design and fabrication of next generation energy-devices, especially his work centred on energy generation from photovoltaics and efficient lighting devices based on LECs & OLEDs.

Organic Division

The Organic Division has more than 6,000 members based in industry and education. Its work includes supporting many local, national and international meetings, symposia and conferences on organic chemistry.



Applied Inorganic Chemistry Award

Professor Russell Morris
CChem MRSC
University of St Andrews

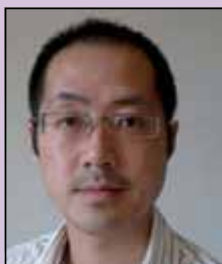
For his outstanding work in the development of medical gas delivery agents, the synthesis of new porous materials for metal coatings, and the development of new methods for the characterisation of solids.



Merck Award

Professor Jonathan Clayden
CChem FRSC
University of Manchester

For his remarkable, recent contributions to organic chemistry in the areas of stereochemistry, conformational control, and organolithium chemistry.



Hickinbottom Award

Dr Hon Lam
MRSC
University of Edinburgh

For the development of new metal-catalysed reactions that address important unsolved problems, typically with an 'asymmetric twist'.



Organic Stereochemistry Award

Professor Ben Feringa
CChem FRSC
University of Groningen

For his crucial achievements in the fields of stereochemistry, asymmetric catalysis and molecular motors.



Organic Industrial Award

Professor Klaus Müller
F Hoffmann La Roche, Basel

For outstanding contributions to medicinal chemistry and drug discovery research including the oxetane concept which has made enormous impact recently.



Pedler Award

Professor Mark Lautens
University of Toronto

For his discovery of useful new methodology for the construction of carbocycles and heterocycles and application of this in the synthesis of natural products and biologically active compounds. His research uses metal catalysts to selectively form C-C, C-X and C-N bonds in a chemo, stereo- and enantioselective fashion.



Organometallic Chemistry Award

Professor Ilan Marek
FRSC
Technion – Israel Institute of Technology

For development of organometallic methods for organic chemistry allowing an enantioselective synthesis of quaternary aldol products, the stereoselective synthesis of important organic molecules using Ti- or Zr-reagents or main-group organometallics.



Physical Organic Chemistry Award

Professor Christopher Hunter
University of Sheffield

For his contributions of molecular recognition and related weak interactions, exemplified through innovative models to explain solvation, aromatic interactions and secondary structure in DNA.



Bader Award

Professor Karl Hale
CChem FRSC
Queens University Belfast

For outstanding contributions to organic chemistry, including elegant total syntheses and pioneering new synthetic methods of broad use to the community, and his significant contributions to the synthesis and medicinal chemistry of bioactive natural products and their analogs.



Synthetic Organic Chemistry Award

Professor Timothy Donohoe
MRSC
University of Oxford

For his highly original and innovative methods for stereoselective oxidation and reduction-tethered aminohydroxylation, oxidative cyclisation, partial reduction. In addition his work on metathesis is also of the highest standard.

Organic Division (Continued)

For further details on the work of the organic division, see page 14.



Robert Robinson Award

Professor Lewis N Mander

MRSC

The Australian National University

For major contributions to organic chemistry through his innovative work on the total synthesis of structurally complex natural products including the gibberellin family of plant growth regulators and the Galbulimima alkaloids.

Dalton Division

The Dalton Division promotes the study and dissemination of all aspects of inorganic chemistry.



Bioinorganic Chemistry Award

Professor James Cowan

CChem FRSC

The Ohio State University

In recognition of creative research in the areas of cellular iron chemistry, novel advances in the understanding of the biological chemistry of magnesium and metallo-nucleases, and development of a new field of research in catalytic metallo-drugs



Dalton Young Researchers Award

Dr Elizabeth New

University of California
In recognition of her research in bioinorganic chemistry, and in particular the development of new probes for molecular imaging in living systems.



Ludwig Mond Award

Professor David Parker

CChem FRSC

Durham University

For work on the coordination chemistry of the rare earths, leading to an understanding the action of responsive optical and magnetic resonance probes and the development of lanthanide complexes and conjugates for use in analysis and imaging.



Sir Edward Frankland Fellowship

Dr Stephen Liddle

MRSC

University of Nottingham

For contributions to f-element chemistry.



Homogeneous Catalysis Award

Professor Jonathan Williams

University of Bath

For the use of transition metal catalysts for the formation of C-C and C-N bonds by 'Borrowing Hydrogen' methodology.



Inorganic Mechanisms Award

Dr Lawrence Que

University of Minnesota

For his seminal contributions to our mechanistic understanding of dioxygen activation by nonheme iron enzymes.

Organometallic Chemistry Award

This award is for any aspect of the organic chemistry of the main group and transition metals. Awarded jointly by the Dalton Division and the Organic Division awards committees. See **Organic Division**.

Faraday Division

The Faraday Division Awards focus on specialist subject areas to reward outstanding work in all areas of physical chemistry.



Bourke Award

Professor Mark Ratner
Northwestern University
For seminal contributions to the areas of electron transfer, nonlinear optics, relaxation dynamics, polymer electrolytes, and theoretical chemistry, and for key efforts in establishing, defining, and championing of the field of molecular electronics.



Chemical Dynamics Award

Professor Anthony Harriman
FRSC
University of Newcastle
For pioneering work in the area of photochemistry and in the elucidation of energy transfer mechanisms for the efficient use of solar energy.



Marlow Award

Dr Sharon Ashbrook
MRSC
University of St Andrews
For pioneering work in solid-state NMR, combining experiments and first principles calculations for the study of important materials.



SF Boys-A Rahman Award

Professor Michael Klein
Temple University
For devising ingenious and innovative algorithms and methods that have enabled the simulation and understanding of properties of macromolecular systems and molecular assemblies.



Soft Matter & Biophysical Chemistry Award

Professor Jacob Klein
Weizmann Institute of Science
For discoveries and seminal contributions to the physical chemistry of soft matter and interfaces, in particular to the dynamic properties and interactions of confined simple and polymeric molecules.



Surfaces & Interfaces Award

Professor Geoff Thornton
CChem FRSC
University College London
For extensive and innovative contributions to the surface science of oxide materials using an interdisciplinary approach employing techniques from physics, chemistry and materials science.

Education Division

The Education Division promotes the study and dissemination of knowledge of chemical education at all levels.



Education Award

Dr John Oversby
MRSC
University of Reading
For services to chemical education, especially in the field of classroom based research.



Higher Education Teaching Award

Dr David McGarvey
CChem MRSC
Keele University
In recognition of the significant contribution he has made to chemistry education at third level for over a decade, particularly his implementation and evaluation of innovative and carefully-designed teaching and assessment methods.

Inspiration and Industry Award

The Inspiration and Industry Award recognises the contribution of an individual in industry to the outreach, promotion or teaching of the chemical sciences

Awarded jointly by the Education Division and Industry & Technology Division awards committees. See [Industry & Technology Division](#)

Industry & Technology Division

The Industry and Technology Division has over 12,000 members based in industry and commerce, working with a host of industry-focused organisations and companies of all sizes.



Chemistry World Entrepreneur of the Year Award

Dr Karl Coleman
CChem MRSC
Durham University

For his development of new intellectual property for the production of graphene and its commercial exploitation via his spin-out company Durham Graphene Science Ltd.



Inspiration and Industry Award

Dr David Fox
CChem FRSC
Pfizer Worldwide R&D, Sandwich

For his pioneering efforts to excite and inspire students at all levels through the Discover Chemistry initiative, which has had national impact on chemistry outreach and education.



Young Industrialist of the Year Award

Dr Martin Hanton
CChem MRSC
Sasol Technology UK

For his development of innovative homogeneous alkene di- and tetramerisation initiator systems, which played a major contribution in developing one of the most important recent new processes in the petrochemical industry.



Teamwork in Innovation Award

**The Institute of Cancer Research
Abiraterone Discovery
and Clinical Development Team**

In recognition of their exemplary teamwork and scientific innovation that took abiraterone from idea to successful multicentre Phase III clinical trials for the treatment of prostate cancer.

Materials Chemistry Division

The Materials Chemistry Division provides a home for members with an interest in the properties, function or processing of materials, from solid state, photonic and nanomaterials to polymers, liquid crystals and soft solids.



Barrer Award

Professor Geoffrey Ozin
MRSC
University of Toronto

For his major contributions to fundamental scientific & technological advances in the field of nanoporous materials.



John B Goodenough Award

Professor Andrew Holmes
MRSC
University of Melbourne

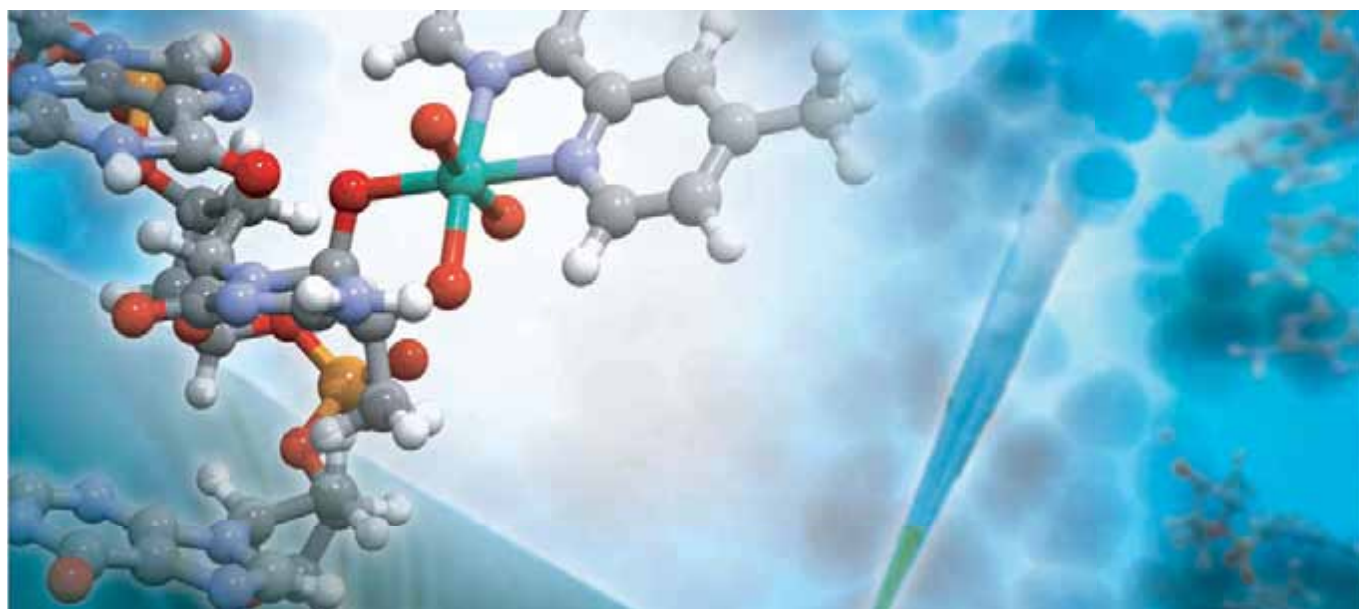
For his ground-breaking contributions to our understanding of the synthesis, properties and practical device-applications of polymeric materials for optoelectronics and for harvesting energy from light.



Peter Day Award

Professor Paul McMillan
FRSC
University College London

For leading the development of new directions in solid state chemistry and materials research under high pressure conditions.



A TIPPING POINT FOR ORGANIC CHEMISTRY

Spotlight on organic chemistry activities

Members of the Organic Division Council (pictured opposite) have been involved in a range of activities over the past 12 months

From left to right: Organic Division President David Rees and 2010 Award Winners Dean Toste, Darren Dixon and Jonathan Ellman, with Ray Jones of Loughborough University, who hosted the awards symposium in March

Organic chemistry will have a significant role to play in addressing major global challenges.

The work of chemists in this field is supported by the Organic Division. In the last 12 months, the division's members have been involved in organising scientific meetings, overseeing the organic division awards, influencing science policy and supporting students.

Hosted by organic chemists in academia across the UK, the Organic Division Regional Meetings are continuing to go from strength to strength. The 39th Scottish Regional Meeting was held in December 2010, whilst in November 2010 the North West and Ireland regions held their first meetings, in Manchester and at Trinity College, Dublin. Three superb regional meetings have been held so far this year, at Queen Mary, University of London (South-East), Loughborough University (Midlands) and Northumbria University (North

East). All these events have provided useful networking opportunities and have hosted some excellent plenary speakers from the UK and further afield.

The Division is also providing opportunities for international networking and collaboration. In 2010, the division provided support for four UK academics to attend the National Organic Symposium Trust (NOST) Organic Chemistry

Conference in Goa, India. This year, the division supported eight further postgraduates from the UK and Ireland to attend the student J-NOST meeting in Hyderabad and arranged for two academics from Indian Universities to travel back to the UK to attend the Symposium on Organic Synthesis in September, and visit Cardiff University and the University of Bath. In addition, the Division hosted some of the best international



organic chemists in three awards symposia at the Universities of Cambridge, Loughborough and Trinity College, Dublin.

The Division's policy work continues to tackle important issues and in the past year has focused on the future of pharmaceutical research in the UK – work that gained particular significance following the announcement of the closure of Pfizer's Sandwich site in February (see *RSC News* March 2011). More information can be found on the RSC website.

www.rsc.org/pharma

Recently, Richard Whitby, principal investigator on the Dial-a-Molecule network (see below) was elected to the Organic Division Council. The division is also delighted to welcome Andrew Thomas (AstraZeneca) and Jon Deeley (BP) to the council.

If you know of any challenges or activities in the UK or internationally that the Organic Division could get involved with, please get in contact with Ellen Friel. frielle@rsc.org

Dial-a-molecule

Dial-a-Molecule is a Grand Challenge Network funded by EPSRC to promote research aimed at step change in our ability to deliver molecules quickly and efficiently:

How can we make molecules in days, not years?

Upcoming meetings include:

- **The Smart Laboratory: Towards a National ELN** (Chilworth 28-29 July 2011).
- **A Step Change in Organic synthesis** (AstraZeneca 2-3 August 2011).
- **Reactor Platforms for the 21st Century** (GSK 11-12 August 2011).

Tackling this challenge will require collaboration between all disciplines of chemistry, other sciences, engineering and mathematics. For synthetic chemists Dial-a-Molecule provides a framework to encourage creativity and adventure in developing synthesis, together with the invigorating effect of input from other disciplines, with a clear, very ambitious, long term goal.

www.dial-a-molecule.org



PRIORITIES FOR ORGANIC CHEMISTRY



David Rees was elected President of the Organic Division in July 2010. Here, he reflects on the last 12 months and outlines the priorities for the future.

A hallmark of organic chemistry is devising new synthetic reactions, making new molecules and researching their properties and applications. We've seen some amazing science in university laboratories, leading to breakthroughs in new medicines, food production and materials. In 2011 we now face huge additional challenges: energy production, environmental

sustainability and the growing population. It's fitting that in the International Year of Chemistry we explore and publicise the critical role of chemists in tackling these challenges.

It is in universities that these challenges and opportunities are going to be tackled at a fundamental level. Many people are aware that organic chemistry research in universities has led to the breakthroughs mentioned above. Consider, as just one example, the catalytic hydrogenation reaction. Wilkinson's catalyst was used by Merck in their original discovery and subsequent production of the antiparasitic drug, Ivermectin. This has been used to treat over 200 million people worldwide with river blindness. The underlying organometallic synthesis led to a Nobel Prize in 1973 and more recently there has been similar recognition for many other organometallic and catalytic reactions, in 2001, 2005 and 2010.

A key skill of organic chemists in universities is making new molecules: design, synthesis, purification and characterization. In the last five years we've seen impressive new methodologies such as Dial-a-Molecule, selective C-H bond activation, DNA origami and molecular level machines that allow us to make new types of molecules not possible ten years ago. Recently we've also used enzymes, the polymerase chain reaction, bacteria and micro-fluidic devices in organic chemistry laboratories. We have never been more capable in the methodology. Many of the RSC Organic Division Awards recognise leading research into new molecule synthesis (see page 10 for 2011 Organic Division Awards). We need to build on these skills and develop them further in collaboration with other scientific disciplines.

We are at a tipping point. The big societal challenges that need organic chemists are changing. Renewable energy, environmental sustainability and the population growth are all addressed in the *Chemistry for Tomorrow's World* report. www.rsc.org/roadmap This does not mean that we need to change the skills that have made organic chemists successful in the past, neither should it reduce our efforts into our core areas like human health and food production, but it does imply we've got opportunities for new directions that are greater than at any time in our history.

21st CENTURY ANALYSIS

The RSC Analytical Division is working hard to support scientists and ensure this multidisciplinary field is well-placed to meet the challenges of the 21st century



GILLIAN GREENWAY,
PRESIDENT, ANALYTICAL
DIVISION

Without analysis, there would be no safe food, water or pharmaceuticals, no forensic capability to catch criminals and no means of measuring our impact on the world through pollution monitoring. Innovative chemical measurement is fundamental to all areas of the chemical and biological sciences and ensures that our manufactured goods are safe and fit for purpose. It's also a key component in answering the challenges identified in the report *Chemistry for Tomorrow's World*. Human health, energy and scarce natural resources will be a particular focus for the work of the Analytical Division over the next few years.

The Analytical Division has had an extremely busy year, working on a number of fronts to ensure that analytical science in the UK can respond to the roadmap challenges and many other issues in the future.

Influencing government policy

The Analytical Division has been active in ensuring that the concerns of all members are heard by parliament, responding to the House of Commons Science & Technology Select Committee's call for evidence into the closure of the Forensic Science Service and the House of Lords Science & Technology Select Committee call for evidence on nuclear research and development capabilities. In both cases, we collated and submitted evidence from expert members of the analytical community, which was very well received by policy-



Human health is one global challenge the analytical division will be focusing on over the next few years

makers. It is critically important to constructively influence our policy makers, especially in times when budgetary restrictions are impacting on the chemical sciences in the UK and the Analytical Division will continue to look for opportunities to influence key decisions.

Education and training

A major role for professional chemists is to enthuse and encourage the next generation of scientists.

School events

We have continued to support the very successful Schools Analyst Competition, which saw 19 teams competing in last year's final at Huddersfield and was won by Charterhouse School (South East Region). Earlier heats, organised jointly with RSC Local Sections, involved more than 200 teams of AS level chemistry students.

Analytical Science Network

The Analytical Science Network (ASN) is a self-help group of early career analytical scientists; it facilitates networking and professional development amongst early career analytical scientists. ASN held its 16th Emerging Analytical Professionals conference in Kettering in May. ASN events continue to be particularly successful at attracting delegates from industry, many of whom return year after year.

Analytical Research Forum

The Analytical Research Forum (ARF) is a major event for researchers in analytical science and is run by the RSC with funding from the Analytical Chemistry Trust Fund. The meeting is aimed towards early career stage analytical scientists (PhD students and postdoctoral researchers). ARF 2010 in Loughborough attracted 130 delegates. ARF 2011 will be held at the Manchester Interdisciplinary Biocentre (MIB). The event will include a tour around the laboratories and a workshop demonstrating new analytical techniques being developed and applied at MIB, allowing delegates to gain practical insights into analytical research.

Looking ahead

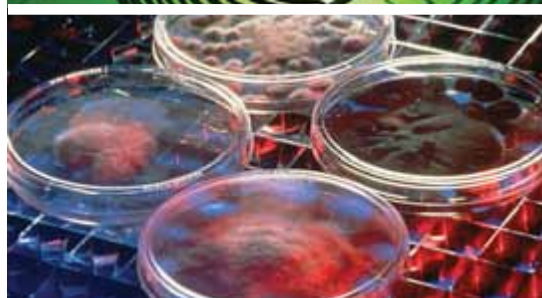
Future developments in the measurement sciences are likely to occur at the interface between different scientific disciplines. With the RSC Analytical Sciences Programme Manager, Steve Lancaster, we will be concentrating on the following important areas.

Building competitive advantage

Analytical science is critical to the success of all sectors of UK industry and will play a major part in increased innovation, better quality of information and increased global competitiveness.

Convergence of the Life Sciences and the Physical Sciences

In addressing global challenges such as human health, the boundaries between scientific disciplines are coming down. The Analytical Division Council will be



working to ensure that analytical scientists are at the forefront of facilitating this change. One example of this is through supporting close collaborations with scientists working in other fields. Recent events, such as the joint symposium on radiolabeled peptides in medical imaging in treatment, co-organised with the Radiochemistry Interest Group, have been very successful in bringing together chemists, biologists, physicists and medical practitioners. Future events will include a series of workshops starting in spring 2012 entitled 'Analytical Tools for the Life Sciences', organised together with the Biochemical Society and the Chemistry Biology Interface Division.

Social and economic development

Analytical Science will play a key enabling role in economic development, particularly in developing regions such as Africa. Emerging green industries and commodities will rely on advances in science and technology, for example new analytical techniques providing cheaper, portable analysis in real time.

To drive these areas forward, the Analytical Division Council has recently put together a small team of leading innovators in analytical science to examine these issues. Their findings will lead to an action

plan that can help to ensure that the recognition of, and funding for, analytical science into the future is maintained.

Other activities

The Analytical Division Awards Symposium was held at Strathclyde University in April and featured lectures from three winners of RSC Awards and Prizes: the Robert Boyle Prize (Professor Gary Hieftje), The Harrison-Meldola Memorial Prize (Dr Nathan Lawrence) and the Theophilus Redwood Award (Professor Paul Bohn).

The Division's strong regional network continues to organise and host a number of national and international activities driven by a hard-working and enthusiastic membership. Over the past 12 months, the Analytical Division Council has worked hard to strengthen links with the regions by initiating a networking and communications event at the RSC General Assembly. The first such event was held in 2010 and will be held again this year. The Analytical Division Council now also invites two regional representatives to each of their Council meetings, so all Analytical Division Regions should get a chance to contribute to decisions taken, on an 18 month rotating basis. For more information, visit the Analytical Division section of the website. www.rsc.org/analyticaldivision

Without analytical science, there would be no safe food, water or pharmaceuticals, and no forensic capability to catch criminals.





THE CLEAN ENERGY CHALLENGE

Clean energy science is high on the agenda for the RSC

The RSC has been busy promoting and encouraging research into clean energy.

In 2008, the RSC launched *Energy and Environmental Science*, a community-spanning journal including aspects of cutting edge chemical sciences relating to energy conversion and storage, alternative fuel technologies and global environmental science. The journal quickly became the number one ranked journal by Thomson (ISI) in its subject category, demonstrating how important it is for the RSC to

be involved in this area. Energy and environmental issues, such as solar power and biofuels, also feature strongly in the roadmap for the chemical sciences, *Chemistry for Tomorrow's World*.

Latest research on show

Building on activities in this area, the RSC jointly organised the recent International Conference on Clean Energy Science (ICCES 2011), held in the Chinese port city of Dalian. China continues to invest heavily in science and research and is a world leader when it comes to investment

in clean energy. A recent report from the Pew Charitable Trusts claims that China invested over \$54 billion in clean energy in 2010, more than any other G-20 nation. Dalian, located in the northeast Liaoning province, is itself a major hub for the production of components for wind turbines.

Organised together with the Dalian Institute of Chemical Physics, Chinese Academy of Sciences (DICP), the conference attracted over 300 delegates from 23 countries from across Asia, Europe and North America. It

featured 78 presentations including plenary, keynote, oral talks and approximately 160 abstracts were submitted for a lively poster session. Topics covered solar energy conversion, biofuels and biomass conversion, photocatalysis and the use of nanotechnology for energy systems. “We had some excellent contributors from across the world”, explained Xinhe Bao at the DICP, who chaired the conference. “The conference offered a unique opportunity for international researchers to discuss the latest developments in clean energy and energy storage research, and the fundamental issues surrounding the scientific challenges faced ahead. It provided an excellent experience for delegates, particularly some of the younger researchers such as my own students from the DICP.”

Delegates and speakers praised the opportunities to build new contacts. Julien Preat from the University of Namur in Belgium, explained how the conference provided him with an opportunity to present his work on dye-sensitised solar cells as a keynote speaker: “It was really a very exciting experience for me as a young researcher and this conference was, without a doubt, a good opportunity to create and strengthen contacts.”

The importance of clean energy science to business was reflected in the strong representation from industry at ICCES 2011. “We’re always committed to cutting our greenhouse gas emissions, for instance by adopting ever-improving production processes,” explained Guoxin Jiang, Innovation Manager at Bayer MaterialScience in China. “The topic of this conference fit well with our key concerns and efforts in climate protection, and provided a wonderful channel to learn about the latest academic developments.” Other organisations in attendance included BP, who sponsored the event and is also involved in CACHET II. CACHET II is a collaborative research project exploring the use of palladium membranes for efficient carbon capture and hydrogen production; it is funded by the EU and European Commission Seventh Framework



Top: RSC International Programme Manager Sarah Thomas greets delegates at ICCES 2011.

Centre: Conference Chairman Xinhe Bao speaks to visitors at the Welcome Reception.

Bottom: 160 poster abstracts were submitted for the lively poster session at the first international event on clean energy in the region.



Programme. Andreas Goldbach, a professor at DICP and one of the collaborators on CACHET II said: “We had a very successful workshop covering CO₂ capture with membrane reactors at ICCES; the whole meeting was a very enjoyable experience for our group.”

The RSC in China

ICCES 2011 is just one of the many activities organised by the RSC in China. The RSC has offices in Beijing and Shanghai, based in the Institute of Chemistry and the Institute of Organic Chemistry, both part of the Chinese Academy of Sciences. As well as organising events, the offices help develop networks and collaboration opportunities between

researchers in China and the UK, and with other chemists worldwide. The offices also support Chinese chemists through membership and publication services, with six full-time members of staff on hand in China to respond to any queries about the RSC and its activities in the region.

www.rsc.org/china

► MORE INFORMATION

Following the success of the conference, discussions are underway over holding further green science events in China and nearby countries including Korea. To find out more about the RSC's activities in China contact Sarah Thomas, International Programme Manager for Asia. thomass@rsc.org

opinion

Letters and comments on RSC activities and issues



How should school science experiments be conducted? At the end of last month the RSC helped hundreds of children across the country get involved in practical chemistry

through the Global Experiment. While many will agree that schools need to develop children's experimental skills, not everyone agrees on the right method to do this, as our contributor opposite shows. This is likely to remain an important topic as the Government continues its review of the National Curriculum in England.

We're now more than halfway through the International Year of Chemistry. Since joining the RSC earlier this year, I've been impressed by the range of exciting activities members have been organising to promote their work and engage with different audiences. We've been busy, too, and this month sees the opening of a highlight in our IYC2011 calendar, Our Children on Water. This exhibition will be well worth a visit, showing a remarkable insight into differing attitudes to water from children across the world (see page 27).

Nick White

Nick White

RSCNews@rsc.org

Population is the problem

Your contributor to the feature on *Wealth Not Waste* (RSC News, June 2011) poses the question "Could green chemistry hold the key to Africa's future? The answer is a resounding 'no'.

Contrary to popular opinion, the bigger problem is over-population. The small country (by African standards) called Niger had a population of two million 50 years ago. Today that figure has grown to fifteen million. It is pointless worrying about the lack of resources in Africa – or for that matter in the rest of the world – when the population continues to increase out of control. If just a fraction of all the effort and money wasted on useless windmills peppering the landscape (which can never provide more than 2% of a country's electricity) were put to controlling worldwide population (and chemistry would play a large part) then we could start thinking seriously about man-made global warming (if there is any), atmospheric pollution, congestion in city centres, financial meltdown and most of the other ills we are heir to. In fact many of these problems would automatically disappear.

I have heard it said by population 'experts' that it can't be done. Can't it? Are your members prepared to act on their – I hope – concern about population explosion? If they would all write to their MPs...

David Brayford, CChem, FRSC, Edinburgh

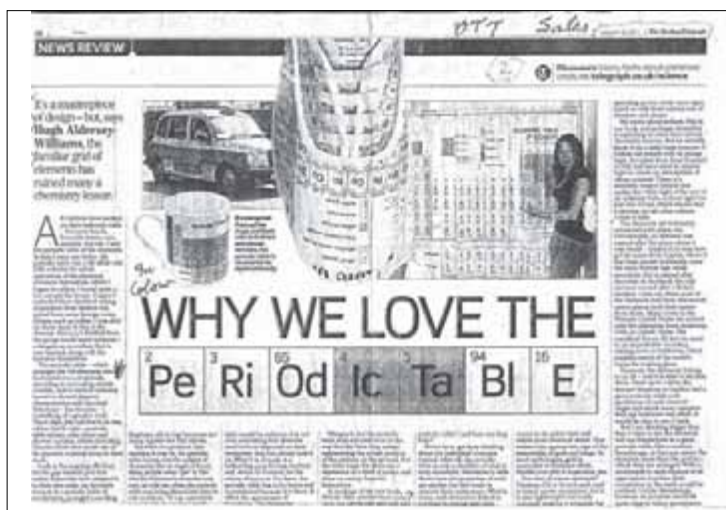
Long or short?

Recently I have had the long form of the Periodic Table thrust at me. First, on page 9 *RSC News*, April 2011, next an A5 size advertising card and finally an A3 size article in a broadsheet newspaper (below).

The short form periodic table is much more amenable for study by young people (e.g. triads) and to memorise. For example, at 80, I can still write out from memory the short form in seven minutes!

How many chemists will use elements 93 to 103?

D. Kaye, MRSC, Ilford





Goodbye school science experiments?

This article is adapted from an Opinion article in the June issue of the RSC's magazine *Education in Chemistry*. To read the full article, and join the on-going debate on the value of practical science in schools, visit www.talkchemistry.org on MyRSC

Experiments have been a favourite activity of school science for many years. Most pupils like them, and many science teachers feel they are an essential part of learning science. However, perhaps it is now time to recognise that 'experiments' have little to offer in modern teaching.

The critique of experimental work in school science has at least two major components. One concerns the validity of equating practical work with experiments, the other concerns the value of practical work itself. School science practical work has costs, which makes science an expensive curriculum subject, and can raise serious safety issues. The justification for investing in these costs is the perceived role of practical work in terms of learning science, learning about the nature of science and motivating pupils.

However, there is limited evidence that practical work actually motivates students, rather than alleviating their boredom with 'theory' by providing a break from listening and writing.¹ It has also long been recognised that practical work seldom demonstrates key ideas that allow pupils to link theory to actual experience.² Students often misinterpret their observations in terms of their prior conceptions, at least when they are not too busy

handling apparatus to observe anything significant in the first place. If the aim of practical work is to provide opportunities for making observations, and link evidence to scientific ideas, then teacher demonstration offers greater potential for learning. The teacher can highlight the salient points, and ask questions to ensure the students have appreciated the science.

Science learning should be active, so that pupils are not simply passive observers. But this need not mean that so much science curriculum time is committed to students collecting, manipulating, misinterpreting, and then clearing-away materials and apparatus. What is important is that students' minds, not their hands, are active.³

Now some science teachers will want to retain experiments in their lessons, because they think that it helps teach about the nature of science – 'how science works'. Yet despite so much time being spent doing 'experiments' in UK schools, most students actually have very disappointing ideas about the nature of science. Many school science experiments have been set out as 'demonstrating' or 'proving' some principle, showing they were actually anything but experiments. No wonder so many pupils think



Keith S Taber is a senior lecturer in science education at the University of Cambridge.

1. Abrahams, *Practical Work in Secondary Science: A Minds-On Approach*. London: Continuum, 2011
2. R Driver, *The Pupil as Scientist?* Milton Keynes: Open University Press, 1983
3. R Millar, *Int. J. Sci. Educ.*, 1989, 11, 587

science is about having theories (ie guesses or hunches) that are unproblematically converted to facts or laws by doing a simple standard experiment. Real science is nothing like the school experiment.

So teachers who wish to use practical work to teach scientific method, will have to find time to allow students to undertake authentic enquiry: motivated by genuine questions, where the answers are not given in their textbook. That will mean working over extended periods to allow students to design, critique and refine experimental approaches. Only then will they get a feel for the experimental method, by doing a real experiment in school science.

talkchemistry.org

Connecting chemistry teachers

An exciting new online community for chemistry teachers to share ideas, best practice, useful resources and much more

Talk Chemistry is funded as part of the Reach and Teach educational programme supported by the Wolfson Foundation



RSC | Advancing the Chemical Sciences

www.talkchemistry.org

diary

YOUR GUIDE TO
ALL IMPORTANT EVENTS

Announcing

Crystallisation - A Biological Perspective: Faraday Discussion 159

23 - 25 July 2012
Leeds Metropolitan University,
UK

► Call for abstracts – submit now
www.rsc.org/FD159

Ion Specific Hofmeister Effects: Faraday Discussion 160

3 - 5 September 2012
Queens College Oxford, UK

► Call for abstracts – submit now
www.rsc.org/FD160

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Major conferences

Artificial Photosynthesis

Faraday Discussion 155

4-6 September 2011
University of Edinburgh, UK

Registration deadline – 5 August 2011

This meeting will bring together researchers from diverse backgrounds to discuss novel solutions for converting sunlight into chemical and/or electrochemical potential.

The programme will focus on possible solutions to long-standing problems by exploring these themes:

- Electronic energy transfer
- Bio-inspired mimics and integrated photo-systems
- Solar fuels
- Water oxidation
- Photo-electrochemical approaches

In addition, a satellite meeting will be held immediately after the Faraday Discussion, on 8-9 September at the University of Edinburgh. Those attending the main meeting will be able to give a short talk on their research, and there will also be talks by several leaders in the field of artificial photosynthesis. Those wishing to participate in the meeting should get in touch with Dr Andy Benniston (Newcastle University) or Dr Anita Jones (Edinburgh University).

www.rsc.org/FD155

Molecular Reaction Dynamics in Gases, Liquids and Interfaces

Faraday Discussion 157,
25-27 June 2012, Assisi, Italy

Call for oral abstracts now open – submit by 26 August 2011

The study of gas-phase molecular reaction dynamics has long proved to be a central and fruitful field of research, with impact in many areas of science.

This Faraday Discussion is particularly timely because of the exciting developments of the last decade and the prospects that they are generating. It is intended to bring together practitioners, both experimentalists and theorists, of reaction dynamics in the gas phase, at interfaces and in the condensed phase. The vision is to define the state-of-the-art, and to outline future prospects within these themes:

- Bimolecular reaction dynamics in the gas-phase
- Photodissociation dynamics in the gas and liquid-phase
- Reaction dynamics at interfaces (gas-liquid and gas-solid)
- Ultrafast reaction dynamics in the condensed phase

www.rsc.org/FD157

DATES AND DEADLINES

Ionic Liquids: Faraday Discussion 154

22-24 August 2011

Belfast, UK

► Registration deadline –
15 July 2011

www.rsc.org/FD154

Challenges in Organic Materials & Supramolecular Chemistry (ISACS6)

2-5 September 2011

PKU, Beijing, China

► Call for posters deadline –
8 July 2011

► Early bird registration
deadline – 8 July 2011

► Registration deadline –
5 August 2011

www.rsc.org/isacs6

Dalton Transactions Younger Researchers Symposium

20-21 September 2011

University of Warwick, UK

► Call for abstracts deadline –
22 July 2011

[www.rsc.org/
DaltonTransYRS](http://www.rsc.org/DaltonTransYRS)

► MORE INFORMATION

To find out more about any
event on this page, see
www.rsc.org/events

Call +44 (0) 1223 43 2254/2380
Or email events@rsc.org

Residential School:
Medicinal Chemistry Training
See listings below



Events

FURTHER INFORMATION

The RSC News Diary this month lists RSC events from July to September 2011 that are held on the RSC conference database. Further details on any of these meetings can be obtained from the named contact or from the conference website at

www.rsc.org/ConferencesAndEvents/conference

Type in the specific ID number for each event in the search box.

You can also browse events by type, organiser or region.

SCOTLAND

Other Events

Applied Catalysis Group, Surface Reactivity and Catalysis Group

Europacat X

28 August –
2 September
ID=107520

University of Glasgow
The conference theme is 'catalysis across the disciplines'. This is the main European catalysis conference. For more details about the conference, see the website at www.europacat.co.uk

In association with the Faraday Division, Industry and Technology Division and the European Federation of Catalysis Societies

Contact David Jackson

t 0141 3304443
e David.Jackson@glasgow.ac.uk

WALES

South East Wales Section

Mechanisms of Mo Catalysed Hydrosilylation

18 July at 16:00
ID=108567

Wallace Lecture Theatre, Cardiff University

• Georgii Nikonov, Brock University, Canada

Contact James Redman

t 02920 876273
e redmanje@cardiff.ac.uk

Other Events

Faraday Division Faraday Discussion 152: Gold

4-6 July
ID=105643

Cardiff University

The precise nature of the active sites and the mechanisms of the catalysed reactions of gold are as yet unknown. FD152 will focus on the origins of high catalytic activity observed with gold nanoparticles. The

aim is to bring together the catalysis and surface science communities with materials scientists and theoreticians, so that new insights can be gained

Contact RSC Events

t 01223 432380
e events@rsc.org

MIDLANDS

Birmingham and West Midlands Section

The Flash Bang Show

6 July at 13:30
ID=107617

Aston University, Birmingham

• Dr Frank Muir, University of Manchester

A lecture demonstration for year 9 and year 10 pupils. Exciting chemistry to delight and fascinate the young audience of future chemists. This is a free event but places are limited. In association with West Midlands Chemistry Teachers' Centre

Contact D J Jones

e d.j.jones@blueyonder.co.uk

East Midlands Section

Chemical Magic: a Lecture for Sixth Form Students

5 July at 14:00
ID=108545

University of Nottingham

• Dr Ray and Mrs Rosemary Plevy
A visual presentation: a kaleidoscope of chemical reactions demonstrated in a light-hearted manner. A mélange of observations with sometimes unexpected

results pass before the eyes, creating an atmosphere of magic to the uninitiated but to those in the know, it's just chemistry. Registration restricted to invited schools and colleges only.

In association with the University of Nottingham

Contact Samantha Tang

t 0115 8467229
e samantha.tang@nottingham.ac.uk

Other Events

Industry and Technology Division

Residential School: Medicinal Chemistry Training

4-8 July
ID=107881

Burleigh Court Conference Centre, Loughborough University
The residential training school focuses on current thinking in drug discovery. Aimed primarily at graduate and post doctoral chemists with one to four years experience, teaching includes a series of lectures from experts in the field with tutorials and opportunities to put the learning into practice.
Contact Ellen Friel, RSC
t 01223 432440
e friele@rsc.org

Why Do Chemists Want to Make New Molecules?

14 July at 18:00
ID=108517

University of Nottingham
This public lecture will explore why the study of chemical bonding

and the development of new molecules is important. The talk will explore some of the latest breakthroughs in synthetic chemistry, such as new medicines and diagnostics, and how advances in analytical techniques will allow us to see chemical bonding in action.

Contact Samantha Tang

t 0115 8467229
e Samantha.tang@nottingham.ac.uk

Faraday Division

Faraday Discussion 153: Coherence and Control in Chemistry

25-27 July
ID=105644

University of Leeds
The meeting will bring together experimentalists and theoreticians working in all areas of physics and chemistry who have an interest in probing and controlling chemical interactions at the quantum resolved level with the aim of defining the future challenges in the field.

Contact RSC Events

t 01223 432254
e events@rsc.org

EASTERN

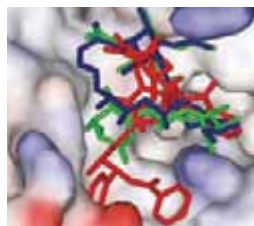
East Anglia Section

Dalton Division Coordination Chemistry Group

Coordination Chemistry Discussion Group 2011

7-8 July
ID=106930

University of East Anglia
You are cordially invited



22nd International Symposium:
Synthesis in Organic Chemistry

See listings below

to the annual meeting of the Coordination Chemistry Discussion Group. Plenary speakers will cover topics including discrete neutral and cationic complexes of alkaline- and rare-earths, and metal-organic framework materials for gas storage and separations.

Contact **Micheline Pickett**
t 01603 592486
e m.pickett@uea.ac.uk

Essex
Section

Schools Spectroscopy
Workshop

6 July at 10:00
ID=107207

University of Essex
• Host: Mr Phillip Reed
Contact Alan Osborne
t 02085 902021

Schools Spectroscopy
Workshop

8 July at 10:00
ID=107208

University of Essex
See listing above

Schools Spectroscopy
Workshop

11 July at 10:00
ID=107209

University of Essex
See listing above

Schools Spectroscopy
Workshop

13 July at 10:00
ID=107210

University of Essex
See listing above

Schools Spectroscopy
Workshop

15 July at 10:00
ID=107211

University of Essex
See listing above

Mid-Anglia
Section

Peter Joyce as Galileo
and Newton

13 July
ID=107779

The Denes High School,
Lowestoft

• Peter Joyce,
professionally trained
actor.

One of two one-day
performances.
Peter Joyce, formerly
employed by two RSC's
– the Royal Shakespeare
Company and the Royal
Society of Chemistry
– will be performing
his inimitable one-man
shows for students,
portraying the lives of
Galileo Galilei and Isaac
Newton. Please note that
this is a schools only
event.

In association with SCI
Cambridge and Great
Eastern Section

Contact **Les Hatton**
e leshatton@btinternet.
com

Peter Joyce as Galileo
and Newton

14 July
ID=107779

The Denes High School,
Lowestoft

• Peter Joyce,
professionally trained
actor.

See listing above

Other
Events

Organic Division
22nd International
Symposium: Synthesis in
Organic Chemistry

11-14 July
ID=105329

Churchill College,

Cambridge

The flagship event of the
RSC's Organic Division.
The Synthesis in Organic
Chemistry Symposium
traditionally provides an
international showcase
for the core area of
organic chemistry –
synthesis – and provides
a forum for the ever more
exciting methodologies
and strategies that
continue to emerge.
The symposium will be
a high point in the year
for academics, post
doctoral researchers and
students in universities,
as well as those
involved in research
and development and
discovery chemists in
industry.

Contact **Ellen Friel, RSC**

t 01223 432440
e friele@rsc.org

International Network of
Environmental Forensics

25-27 July
ID=106980

St John's College,
Cambridge

Following the success
of last year's Calgary
conference we are
seeking papers for
the 2011 Cambridge
conference. The
combination of
plenary presentations,
technical sessions
and workshops will
provide an opportunity
for people of all
experiences to learn from
environmental forensic
experts practicing and/
or studying in this field.
Presentations from
speakers with 'real
world experience' are
encouraged along with
example case studies.

Contact **Gwen O'Sullivan**

t 01752 584705
e gwen.osullivan@
plymouth.ac.uk

NORTH EAST

Hull and East
Yorkshire Section

Retired Members' Lunch

7 July at 12:00
ID=108572

University of Hull
Contact **Chris Casey**
t 07772 978053
e chris@cdc Casey.karoo.
co.uk

Teesside
Section

Chemistry at Work

5-7 July 2011
ID=108438

Teesside University
This event will be run on
three separate days.
In association with
STEMPoint Tees Valley
Contact **Leila Elliott**
t 01642 649038
e leila_elliott@yahoo.
com

Alum, Alchemy and
Ammonites

12 July at 18:00
ID=108561

Margrove Heritage
Centre, Saltburn
• Dr Beth Andrews, Tees
Valley Wildlife Trust.
This talk gives an insight
into the history of the
alum industry and the
role that East Cleveland
played in its production.
Contact **Elizabeth
Colbourn**
t 01642 715380
e colbourn@
intelligensys.co.uk

NORTH WEST

Manchester
and District Section

CANCELLED - Joseph
Black Award Lecture

28 July at 16:00
ID=106944

University of Manchester
• Prof Andre Simpson,
University of Toronto
Contact **Richard
Henchman**
t 0161 306 5194
e henchman@
manchester.ac.uk

Other
Events

Materials Chemistry
Division

MC10: International
Conference on Materials
Chemistry

4-7 July
ID=106699

University of Manchester
The flagship event of
the Materials Chemistry
Division. This year's
themes include energy
and sustainability,
advanced technologies
and nanomaterials, life
and health, soft matter,
and crystalline solids.
MC10 will appeal to
academic and industrial
scientists working on
the chemistry, physics
and materials science
of functional materials.
Student participation is
also strongly encouraged.

Contact **RSC Events**

t 01223 432380
e events@rsc.org

Analytical Division
Analytical Research
Forum 2011

25-27 July
ID=106793

University of Manchester

Protein Evolution and Engineering:
From Research to the Real World
See listings below



The annual Analytical Research Forum (ARF) is the premier Analytical Science meeting of the RSC. The meeting is primarily for early-stage analytical science researchers (industrial scientists, PhD students and postdoctoral fellows) to present their latest results in the context of the wider analytical science community.
Contact RSC Events
t 01223 432380
e events@rsc.org

Chemical Biology Interface Division
5th International Symposium on Advancing the Chemical Sciences - Challenges in Chemical Biology
26-29 July
ID=106948

University of Manchester
This conference will review current research developments in chemical biology and highlight future challenges, covering the ribosome, the origins of life, synthetic biology,

engineered enzymes, DNA nanotechnology, chemistry of surfaces and next generation pharmacology.
Contact Joanne Thomson, RSC
e isacs@rsc.org

Chemical Biology Interface Division
Protein Evolution and Engineering: From Research to the Real World

9 August at 09:00
ID=108580
University of Leeds, Business School
The Young Life Scientist Centenary committee is hosting an exciting one-day conference in the field of protein evolution and engineering. This event will provide a fantastic networking environment, specially-designed early-stage career workshops, enticing keynote lectures, the opportunity to formally present and receive feedback, and the chance of winning a CV boosting prize. In association with Young Life Scientists Organising Committee Biochemical Society
Contact Nicole Timms
e ylscentenary2011@gmail.com

SOUTH EAST

Chilterns and Middlesex Section

Guided tour of Dulwich Picture Gallery
14 July at 12:00
ID=108494
Bel Air Park Brasserie, London

Lunch at the Bel Air Park Brasserie, Beauberry House followed by a guided tour of Dulwich Picture Gallery.
Contact Stephen Robinson
t 02085 467940
e stephenrobinson_3@hotmail.com

Thames Valley Section

Retired Members' Visit to Highclere Castle
SOLD OUT
28 July at 11:00
ID=107824
Highclere Castle, Newbury
Highclere is a beautiful Victorian Castle set in 1,000 acres of spectacular parkland and is featured in the popular TV series, Downton Abbey. Please note this event is now sold out.
Contact Mike Jenkins
e cmike.jenkins@btinternet.com

Other Events

Dalton Division, Organic Division
6th International Symposium on Macrocyclic and Supramolecular Chemistry (6-ISMSC)
3-7 July
ID=106720
University of Sussex
The 6th International Symposium on Macrocyclic and Supramolecular Chemistry will cover all aspects of macrocyclic and supramolecular chemistry and the interface with biological,

nanotechnological and materials arenas. The meeting will include a mix of established and younger speakers and will offer the chance for students to present their work in the form of short oral presentations and posters.
Contact Ruth Bircham, RSC
t 01223 432380
e events@rsc.org

Colloid and Interface Science Group
UK Colloids 2011
4-7 July
ID=107572
De Vere Conference Centre, London
An international colloid and surface science symposium. The conference provides a perfect opportunity for UK and international researchers interested in colloids and interfaces to meet, present and discuss issues related to current developments in this field.
In association with SCI Colloid & Surface Science Group
Contact Simon Biggs
t 0113 3432790
e s.r.biggs@leeds.ac.uk

NMR Discussion Group, Physical Organic Chemistry Group
NMR Applied to Structure and Reactivity in Solution
4 July at 10:30
ID=108221
GSK Stevenage
A one-day meeting organised jointly by the NMR Discussion Group and Physical Organic Chemistry groups of the

▶ **HIGHLIGHT**



RSC books at Blackwell's Bookshop Oxford

Blackwell's flagship bookshop in Oxford now stocks all RSC books. From nanotechnology to energy and even popular science, you'll find all our titles on Blackwell's bookshelves or through Blackwell's Online Bookshop.

Don't forget that RSC members are entitled to **35% discount on RSC books**. You'll need your membership number for online purchases or simply bring your membership card to Blackwell's Bookshop, 48-51 Broad Street, Oxford.

BLACKWELL'S



The Nuclear Debate

See listings below

RSC. Extensive poster presentations in standard formats and as quick-fire short oral presentations. A number of companies with relevant interests will also be exhibiting at the meeting. Contact Mike Williamson
t 0114 2224224
e m.williamson@sheffield.ac.uk

Joint Pharmaceutical Analysis Group Best Practice for Outsourcing of Analytical Support and Use of Contract Laboratories
7 July at 10:00
ID=108404

Royal Astronomical Society, London
 This meeting explores the regulatory aspects of outsourcing skills and technologies used in drug development and manufacturing, many involving pharmaceutical analysis.
Contact Gabriella Highfield
t 0207 572 2640
e events@rpharms.com

The Nuclear Debate
7 July at 18:30
ID=108577
 The Chemistry Centre, RSC London
 The topic of nuclear

power comes under scrutiny in this informative and topical debate. The motion under discussion is: The Climate Change Act 2008 specifies legally binding targets for reducing emissions of greenhouse gases. This house believes that it will be impossible to meet the emissions reductions required without the use of nuclear power. Join our panel of experts and pitch your questions as they explore the arguments for and against nuclear power. This event will also be broadcast live on The Reaction.

Contact Lucy Sandbach, RSC
t 01223 420066
e chemistrycentre@rsc.org

Nucleic Acids Group
7th Nucleic Acids Forum
8 July at 10:00
ID=106100
 The School of Pharmacy, London
 This meeting provides an opportunity for discussion of exciting and new research at the interface of chemistry and biology that involves the study of nucleic acids. The meeting is for all researchers, but is particularly aimed at new academic staff members, post-doctoral workers or PhD students who wish to communicate their latest results. The meeting will consist of a series of short talks, selected from the submitted abstracts, and time available to view poster presentations.

Contact Mark Dillingham
t 0117 3312159
e mark.dillingham@bristol.ac.uk

Water Quality:How Clean is Clean?
11 July 2011 at 10:00
ID=108594
 Brunel University, London
 An opportunity to hear from and meet decision makers from government, the regulator and industry alongside researchers at Brunel University engaged in understanding the significance of chemicals in water.
e water@brunel.ac.uk

Atomic Spectroscopy Group
16th BNASS - Biennial National Atomic Spectroscopy Symposium
POSTPONED
12-14 July
ID=107466
 University of Surrey
 This event is now expected to take place in July 2012.
Contact Andrew Taylor
t 01483 689978 or 01483 571122 ext 4479
e andrewtaylor4@nhs.net

Dalton Division Main Group Chemistry Group
Annual Main Group Chemistry Meeting
15 July at 11:00
ID=106862
 The Chemistry Centre, RSC London
 Speakers include Professor Doug Stephan, University of Toronto, Professor Sjoerd Harder, Stratingh Institute of

Chemistry and Dr Chris Russel, University of Bristol.
Contact Richard Layfield
t 0161 3060567
e Richard.Layfield@manchester.ac.uk

Robert Boyle's A Sceptical Chymist
4 August 2011 at 18:30
ID=108646
 The Chemistry Centre, RSC London
 • Professor Duncan Thorburn-Burns
 This year is the 350th anniversary of the publication of *A Sceptical Chymist* by Robert Boyle, reckoned to be the most important book about chemistry ever published. Boyle was a leading intellectual figure of the 17th Century and one of the founders of Modern Chemistry.
Contact Lucy Sandbach, RSC
t 01223 420066
e chemistrycentre@rsc.org

What Flavour Is My Lunchbox?
10 August 2011 at 12:30
ID=108647
 The Chemistry Centre, RSC London
 Join Dr Jane Parker, food scientist, for a sensory overloaded lunch as she explains why there is much more to flavour than what our taste-buds tell us.
Contact Lucy Sandbach, RSC
t 01223 420066
e chemistrycentre@rsc.org

▶ HIGHLIGHT



E-communication for Downland members

The Downland Section kindly requests that members supply email addresses to the RSC to keep up to date with activities in the section. Communication with section members most commonly occurs by electronic means (e.g. via email addresses supplied by the RSC, the RSC website and MyRSC); the section is keen to ensure that members remain engaged and connected with activities occurring within the section.



Can we live without e-numbers?

See listings below

Marketing Group

How to Build a Business on Water

18 August at 18:00
ID=107579

The Chemistry Centre,
RSC London

• Chris Martin, Managing Director, H₂O Chemicals
Chris Martin, a member of the RSC Water Science Forum, will describe the growth of his company's

involvement in water quality assessment and assurance.

Contact Paul Fielding
e paul.fielding@cogo.co.uk

Can We Live Without E-numbers?

23 August 2011 at 18:30
ID=108648

The Chemistry Centre,
RSC London

E-numbers are often seen as the nemesis of a healthy diet, yet we eat them every day – why? Come and find out more with Dr David Baines, scientist and food consultant.

Contact Lucy Sandbach,
RSC

t 01223 420066
e chemistrycentre@rsc.org

SOUTH WEST

Bristol and District Section

Molecules and God

5 July at 14:00
ID=107612

University of Gloucestershire
• Dr Andrew Misiura, University of Gloucestershire
This lecture considers how faith and molecular science are compatible. In association with SCI, BSciA and University of Gloucestershire

Contact Becky Lake

t 01242-714700
e rlake@glos.ac.uk

IRELAND

Other Events

Faraday Division

Faraday Discussion

154: Ionic Liquids

22-24 August

ID=105645

Queens University,
Belfast

This meeting will discuss fundamental experimental and theoretical aspects of the physical chemistry of room temperature ionic liquids (RTILs). Topics include the thermodynamics and phase behaviour of ionic fluids, microscopic and mesoscopic structures, transport and relaxation in ionic liquids, and chemical reactivity and interfacial behaviour.

Contact RSC Events

t 01223 432254
e events@rsc.org

INTERNATIONAL

USA

Dalton Division, Environment, Sustainability and Energy Division, Materials Chemistry Division
4th International Symposium on Advancing the Chemical Sciences – Challenges in Renewable Energy

5-8 July

ID=106947

MIT, Boston

The first event in the International Symposia on Advancing the Chemical Sciences (ISACS) series for 2011. The conference will review current research developments in renewable energy and highlight future challenges, covering:

bioinspired systems, battery technology, electrochemistry, photocatalysis, solar harvesting and energy storage.

Contact Robert Eagling,
RSC

e isacs@rsc.org

Our Children on Water at The Chemistry Centre



Share the imagination of children from Africa and Europe in a thought provoking art exhibition as they explore if water is refreshment or responsibility.

18 – 29 July, Monday – Saturday, 10.30am – 4.30pm

Late opening: Friday 22 July until 8.30pm

Free Admission

For more information contact Sophie Boldon

childrenonwater@rsc.org

01223 432694

RSC | Advancing the
Chemical Sciences

www.rsc.org/ourchildren

Admissions - July 2011

Chartered Chemist (CChem)

Caroline Aciro, Imad Ahmed, Bernadette Alcock-Earley, Sophie Apoux, Rameya Arulanantham, David Beal, Paul Leonard Beaumont, Gemma Bennett, Simon James Brooks, Denise Judith Burring, Laura Butchins, Dario Castiglione, Yuen-Ki Cheong, Thomas Edward Clark, Martin Corless, Sarah Denham, Barry Dillon, Henry Dube, Jolene Duguid, Katherine S. England, Philip Raymond Evans, Sebastien Galan, Paul Glossop, Polly Louisa Grundy, Gareth W. Harbottle, Michael Hargreaves, Ian Henry Higgins, Laura Hilton, Katherine Hodgkinson, Patrick Stephen Johnson, Peter Jones, Robert John King, Stewart Brian Kirton, Wolfgang Klute, Kevin Little, Graham Lunn, Darren Machen, Mukram Mackeen, Andrew Mansfield, Paul Matejtschuk, Neil McDowall, Donald S. Middleton, Barry Mitcheson, Rachel Osborne, Ian Michael Parker, Lee John Priest, Michael James Ralph, Lee Roberts, Mathew Robinson, Ghulam Shabir, Alexandra Sherlock, Paul Slavin, Paul Robert Smith, Kevin Walter Snaddon, John Brian Stephen, Robert Ian Storer, Nicholas Summerhill, Catriona Thom, Thien Duc Tran, Florian Wakenhut,

Robert Walton, Gavin Whitlock, Amy Woolley.

Fellow (FRSC)

Christopher Barber, Neil Barnwell, Paul Leonard Beaumont, Ian Bell, William Bloss, Steven Carter, Gregory Leonard Challis, Stephen Champion, Simon Cosbey, Liming Dai, Adrian Davis, Robert Edwards, Stephen Eichhorn, Elizabeth Farrant, Felix Fernandez-Alonso, Karl Gibson, Itaru Hamachi, Lei Jiang, Ralf-Ingo Kaiser, Melanie Catherine Jane Kearney, Keith King, Alexei A. Kornyshev, Nikolai Kuhnert, Renzo Luisi, Richard Lynch, Mohd Jamil Maah, Julie Victoria MacPherson, Russell Martin, Heather D. Maynard, Colin Melia, Karsten Meyer, Donald S. Middleton, Aminul Mirza, Hywel Morgan, Anthony Newcombe, Kenneth Ozoemena, Sourav Pal, Michael Palmer, Sebastien Perrier, Thomas Carl Porter, David C. Pryde, David Read, Martin Resano, Martin D. Rudd, Matija Strlic, Thomas Sumner, Wen Hua Sun, Brian William Tempest, Martin Tillotson, Avesh Kumar Tyagi, Huanting Wang, Richard Wells, Martin Whiteland, Andrew Willetts, Guobao Xu.

Member (MRSC)

Ralph Adams, Joanne Alcindor, Alexander Ansbert Alex, Dawn Allen,

Neyvis Almora Barrios, Mohammad Alotaibi, Eugenia Alvarez Vela, David Anderson, Aurora Antemir, Ross Stewart Robert Archer, Christine Ashaolu, Jennifer Astle, James Darren Astrop, Sarah Joanne Aves, Paul Beck, Angela Beesley, Gemma Bennett, James Best, Torsten Beveries, Rohit Bhagat, Peter Robert Birkin, Richard Nevin Brown, Aisling Maria Burns, Andrea Louise Burron, Nicholas Ian Burton, James Butterworth, Tiana Butti, Brent D. Cahill, Andrew Richard Camenish, Caroline Campbell, Audrey Carmichael, Paul Carrick, Naresh Chennamsetty, Joe WaiChiu Cheung, Nikola Paul Chmel, Chunwa Chung, Steven Clinton, Peter Coffey, Mark Collins, Martin Corless, Ashish Dasani, Chris De Savi, Peter Deakin, Sarah Denham, Barry Dillon, Frank C. Dillon, SreeSuresh Kumar Duggirala, Paula Michelle Dunster, Angharad Naomi Edwards, Jonathan Edwards, Oriana Esposito, Roger William Evans, Stuart Edward Field, Liam France, Louise Froude, Steven Fussell, William Fullard Gabrielli, Sebastien Galan, Mark Gardner, Philippe Garnier, Caroline Gauchotte, Mohammad Ghattas, Ernest Goddard, Simonne Graells, Emmelyn Graham, Kenneth Roger Grainger, Jennifer Claire Gray, Rebecca Gullane,

Manish Gupta, Sisir Gupta, Umakant Gupta, Charlotte Hague, Fiona Harvey-Doyle, Elizabeth Anne Hawkins, Paul Hickford, Abigail Higgins, Ian Henry Higgins, Laura Hilton, Danny Ka Hei Ho, Stephen Holt, Matthew Hood, Gregory James Hunt, Thomas Augustine Douglas Ar Husband, Leanne James, Catherine Maria Joce, Mayur Jogia, David Jones, Huw Jones, Joanne Jones, Leigh Fon Jones, Khatuna Kakhiani, Neetu Kaushal, Sethu Kavuri, Bernard Kiernan, Jung Rae Kim, Yasuko Kiyoi, Julia Rosemary Louise Knight, Pamela Konate, Claire Kulisa, Arpita Lahiri, John Latus, Jia Li, Muhammad Gidado Liman, Zhongjie Lin, Qi Liu, Jeffrey Long, Philip David Long, Amanda Caroline Lucas, Graham Lunn, Carrie Magee-Cummings, David Magri, Marcus John Main, Philip Mallender, Andrew Mansfield, Ian Marsh, Jeffrey Martin, Stuart Martin, Neil McDowall, Greg McEntee, Catriona M. McGilvery, Alastair McIntosh, Alon Meizler, Paula Mendes, John Milligan, Soe Moe Min Oo, Ulises Miranda Ordoez, Simon Mitchell, Aumber Moeeniddin, Aoife Morrin, Kenoye Muzan-Ekpelu, Sebastien Naud, Helen Neal, Kian Eang Neo, Ravi Nerella, Sing Muk Ng, Karen Joyce Ogilvie, Lesley Barbara Oliphant, Dominic Ormerod, Jennifer Owen, Pui Shan Pang, Susan Pang, Venkatesu Pannuru, Pradeep Pareek, Daniel Graham Parker, Stuart John

Pattinson, Torren Mark Peakman, Manuel Perez Pacheco, Emily Perry, Sree Lakshmi Ponnuru, Marie-Capucine Pope, Celine Praquin, Darren Ragheb, Sheshadri Raj, Michael James Ralph, Nicholas Rattray, Nicola Ann Razzell, Lee Reilly, Joanna Renshaw, Tony Robertson, Claire Russell, Malkeet Singh Sahota, Philip Schauer, Donald Thomas Scofield, Moussa Sehailea Yogita Sen, Maxine Shaw, Maria Simon Saenz De Samaniego, Alistair David Smith, Derek Smith, Eileen Smith, Gordon Smith, Jeroen Spooren, Darren Starr, Ifan Stephens, Grace Stevenson, Katarzyna Surowiec, Nigel Alan Swain, Carolyn Swann, Christopher Szostak, Sheena Takhar, Huw Aubrey Tallis, Andrew Peter Thomas, Thien Duc Tran, Svetlana Tretsiakova-McNally, Venkata Krishna K Upadhyayula, Trinidad Velasco-Torrijos, Isabel Villanueva, Neil Walden, Tanya Marie Wallace, Frank Wania, Kerry Warr, Jonathan Weaver, James Donald Webb, Ashley Weekes, Neil Wells, Benjamin J. Welsh, Barry Michael Whatmore, Peter Whitcombe, Samuel Whitmarsh, Gillian Williams, Xandria Williams, David Wilson, Jacqueline Wilson, Gillan James Woodward, Adrian Wright, Jason Yarwood, Caroline Zeyfert.

Associate Member (AMRSC)

Khadijat Abdulwahab, Tom Acrill, Abubakar Shehu Ahmad, Fatma Alhanash, Mosaed Alhumaimess, James Allen, Emily Marieke Allwright, Muhammad Nurudeen Almustapha, Widad Saif Sulaiman Al-Rawahi, Mohammed Al-Shammari, Jetsuda Areephong, Sarah Ashwood, Sharon Baillie, David Barber, Anna Barnard, Benjamin Beasley, Victoria Louise Bemmer, Chris Bester, Muhammad Bilal, Christine Monika Boehner, Ndokiari Boisa, Thitikorn Boonkoom, Daniel Bridgewater, Nathalie Busschaert, Kaylie Butler, Natalia Calle Alonso, Chiara Cappelletti, Amrit Chandan, Michelle Cheung, Youngeun Choi,

Evita Chundoo, Amy L. Cooper, Caroline J E Davies, James Dawson, Miklos De Kiss, Rodrigo De Oliveira, Louise Diamond, Ryan Dixon, Richard Doveston, David John Dutton, Esra Edaan, Nwabueze Igiri Elom, John David Emmott, Hannah Farnfield, Andrew Farrell, Gary Foote, Mark Gallagher, Jennifer Garden, Anna Maria Giordano, Simon Ed Greenough, Tamara Lloyd Griffiths, Wilma Groenewald, Murat Gulcur, Ute Haedke, Carlos Harrison, Fiona Hatton, Alison Hawkins, Sarah Hayes, Cally Jo Elizabeth Haynes, Xiao He, Silke Heinzmann, Meetal Hirani, Soon Wen Hoh, Philip Howes, Alan Hughes, Alan McKay Hutton, Thomas James, Charlotte Anne Jemmett,

Robert Johnson, Ibrahim Kadi, Zoe Karthaus, Albert Karugaba, Natasha Keasberry, Elizabeth Keating, James Keeley, Brendan Kelly, Samuel Matthew Keltie, Justin Claude Kemmegne Mbougou, Caoimhe Keogh Hansen, Cyrille Kioto Solo, Isabelle Kirby, Paul Koovits, Sivil Kopilevich, Abdulsalami Kovo, Mikiembo Kukwikila, Ryan Lafraniere, Ryan Lakey, Adassooryage Nadeesh Madusanka, Jochua William Makepeace, Amy Joan Managh, Helen Martin, Piers Mathias, Geoffrey McDermott, Fiona Irene McGonagle, Alasdair Iain McKay, Mireya Loreley McKee, Ian McKeogh, Eva Menart, Iacovos Michaelides, Antonio Misale, Robert

William Mitchell, Mohamed Irfan, Mohamed Mahir, Lindon Moodie, Stephen John Moore, Marco Mottinelli, Charmaine Nathaniel, Andrew Naylor, Nelly Ndukwe, Ayorinde Olufunke Nejo, Hakan Niyazi, Marie-Therese Nolan, Omobolape Oloyede, Emily Parker, Louise Parkes, Claire Parks, Laura Parry, Suzanne Paterson, Nirmal Peiris, Sarah Percival, Stuart Phillips, Jaroslaw Piwowarczyk, Christopher Mark Priestley, Daniela Quaglia, Anna Regoutz, Phil Richards, Jennie Roberts, Jonathan Daniel Rolin, Freddie Sankey, Debayan Sarkar, Anita Savanur, Georgia Saviolaki, Ilona Schofield, Bruno Sil Dos Santos, Paulina Skrobuk, Graham Xerxes,

Raymond Smith, Siobhan Smith, Ophir Snir, Kar Yeung So, Emma Steeds, Emma Stefaniak Kerri J. Stenning, Jennifer Lea Stephen, Anna Louise Sudlow, Sarah Elizabeth Taylor, Stuart Thompson, James Timmis, Alexander Warren, Damian Weske, Ryan West, Claire Whitfield, Gareth Wignall, Kevin Williams, Stephen Williamson, Rebecca Leigh Wood, Nazia Yamin, Isla Young, Kin Yu, Yizhe Zhao.

RSC expulsion

Anthony Brian Manners has been expelled from the RSC for falsification of qualifications. He is no longer entitled to use the designation CSci CChem MRSC.

Become a chartered chemist

Chartered status signifies that you have an in-depth knowledge of your chosen area of chemistry and builds upon academic achievement. It demonstrates that you have acquired professional skills in a work-based environment – skills that are much sought after by employers.

If you're an RSC member and want to be recognised as an

experienced, competent and professional chemist by your peers and the wider scientific community, apply for chartered status today.

Go to www.rsc.org/cchem for further information and to download an application form, or contact our Professional Standards Specialist.

Tel: 01223 432326

Email: cchem@rsc.org



Personal News

Nick Long CChem FRSC, Professor of Applied Synthetic Chemistry at Imperial College, London, has been appointed to The Sir Edward Frankland BP Chair in Inorganic Chemistry.

David Morgan CChem FRSC, Emeritus Professor at the School of Physical and Geographical Sciences, Keele University, has been made Honorary Doctor of Science by Memorial University, Canada

The Royal Society

The following RSC members have been elected as Fellows of The Royal Society in 2011:

Professor Hagan Bayley FRSC

Professor of Chemical Biology, University of Oxford

Professor John William Goodby CChem FRSC

Professor of Materials Chemistry, University of York

Professor Clare Philomena Grey FRSC

Professor of Chemistry, University of Cambridge

Professor Kostya Novoselov HonFRSC

Professor in Physics, University of Manchester

The following RSC member was among those elected as Foreign Members of the Royal Society in 2011:

Professor Thomas A Steitz HonFRSC

Professor of Molecular Biophysics and Biochemistry, Yale University

Learned Society of Wales

In addition to the list published last month, the following RSC members were among those elected as Fellows of the Learned Society of Wales:

Professor Barry Carpenter

Professor of Chemistry and Director of the Physical Organic Chemistry Centre, School of Chemistry, Cardiff University

Professor Peter Knowles

Professor of Theoretical Chemistry and the Head of the School of Chemistry, Cardiff University



Thermal Methods Group conference

Thermal Methods Group Chairman Ian Priestley congratulated Kumar Khamar from Liverpool John Moore's University on giving what was voted the best presentation at the Thermal Method's Group Annual Conference for his paper on 'Understanding Enantiomers: the stability relationships of four polymorphs of theophylline'. This year's conference, held in Northern Ireland for the first time, covered topics ranging from rocket science to growing mushrooms. The annual meeting is regularly preceded by a one-day course on thermal analysis, which attracted double the normal number of participants this year.



Microbial event a success

Many of the world's top environmental microbiologists and regulators could be found present at the Water Science Forum conference, Faecal Indicators: Problem or Solution, in Edinburgh last month. With the last such event held back in 1995, this conference addressed the existing and emerging issues that have come about since then.

The 29 presentations and 30 posters outlined how rapid culture and molecular analytical methods for indicators and most potential pathogens have advanced in recent years, offering opportunities for near real-time management information for public health protection at bathing and drinking water sites. Delegates discussed some of the latest developments in microbial source tracking and heard about the impact of changes brought about by the US Clean Water Act and EU Water Framework Directive.

A highlight of the conference was a series of debates examining some of the moral issues behind the relevance of coliforms to public health and whether regulations help or hinder the innovation in testing methods. Both topics resulted in some very lively discussions with some very strongly held views expounded and defended.

The Exchange

MyRSC has just launched The Exchange, where users can advertise items they are willing to donate free of charge to other members, such as chemistry equipment for schools, books for chemistry students, tutoring services or site visits. We welcome individuals and companies to come here and post items that they feel others may want. You can view The Exchange through the RSC forums, but will need a MyRSC account to advertise items. <http://my.rsc/forums>

Obituary

Professor Francis Gordon Albert Stone CBE CChem FRSC FRS 19 May 1925 – 6 April 2011

Gordon Stone, Emeritus Professor of Inorganic Chemistry at the University of Bristol, was a well-respected chemist, earning honorary doctorates from six universities. Appointed CBE in 1990, he earned, among other accolades, the RSC Sir Edward Frankland Prize lectureship in 1988 and the Longstaff Medal in 1990.

After qualifying at the University of Cambridge, his career included time spent at the University of Southern California, Harvard University and as Chair of Inorganic Chemistry in Bristol.

Dr Nigel Peter Botting CChem MRSC 16 June 1962 – 4 June 2011

Nigel Botting graduated in 1983 and completed his PhD in Physical Chemistry in 1986, both at Imperial College, London. He began postdoctoral research at Southampton University until 1990 when he was appointed to a Lectureship in Organic Chemistry at the University of St Andrews. He was made Senior Lecturer in 2002. Nigel was heavily involved in RSC education activities, such as the National Scottish Meeting for Teachers of Chemistry and was formerly the Chair of the RSC Tayside Local Section.

Deaths

Dr Kenneth Bernard Alberman CChem MRSC Retired consultant. Died 4 February 2010, aged 83
Dr Richard John Atkins MRSC Retired organic chemist, GlaxoSmithKline. Died 28 April 2011, aged 57
Mr Frank Barker MRSC Retired principal scientific officer, UKAER/BNFL. Died 17 April 2011, aged 82
Dr Clare Louise Bauer CChem MRSC Formerly specialist, Atomic Weapons Establishment plc. Died 7 March 2011, aged 35
Dr Jill Patricia Benner MRSC Formerly team leader/metabolism chemistry, Syngenta Agrochemicals. Died 30 March 2011, aged 53
Dr Gordon Beswick CChem FRSC Retired consultant and part-time lecturer. Died 22 March 2011, aged 85
Dr Nigel Peter Botting CChem MRSC Formerly senior lecturer in organic chemistry, University of St

Andrews. Died 4 June 2011, aged 48
Mr Arthur Ralph Claridge CChem FRSC Retired southern area chemist and laboratory manager, BOCM Silcock Ltd. Died 28 March 2011, aged 88
Dr James Andrew Walter Dalziel CChem FRSC Formerly emeritus reader, University of London. Date of death not supplied
Miss Ranjna Darbar CChem MRSC Formerly health, safety & environment advisor, Cranfield University. Died 22 November 2010, aged 56
Dr Jifeng Ding MRSC Formerly senior lecturer, Manchester Metropolitan University. Died 29 April 2011, aged 46
Dr James Lynton Garraway CChem FRSC Retired senior lecturer in agricultural chemistry, Wye College. Died 13 March 2011, aged 77

Mr Anthony Michael Gaskell CSci CChem MRSC Formerly self-employed. Died 14 April 2011, aged 45
Mr Peter James Gaston MRSC Retired assistant college safety officer, University College London. Died 25 March 2011, aged 82
Mr Michael David Gibson CChem FRSC Retired general inspector, Royal Borough of Kingston on Thames. Died 20 May 2011, aged 74
Dr David Robert Hardisty CChem FRSC Retired partner and chartered patent attorney, Boulton Wade Tennant. Died May 2011, aged 81.
Dr Barbara Mary Constance Hargreaves CChem MRSC Retired. Died 18 April 2011, aged 92
Dr Harold George Higson CChem FRSC Formerly section head, Merrel – National Laboratories, USA. Died 13 February 2011, aged 80

Mr Richard Edward Hughes MRSC Formerly commercial and technical consultant (self-employed). Date of death not supplied.
Mrs Margaret Mimie Jones CChem MRSC Retired. Died 31 March 2011, aged 89
Professor Gordon William Kirby CChem FRSC Formerly emeritus professor, University of Glasgow. Died 6 May 2011, aged 76
Professor William Nunn Lipscomb HonFRSC Formerly professor, Harvard University, USA. Died 14 April 2011, aged 91
Mrs Abigail Rose Habiba Mackeen MChemA AMRSC Formerly secondary school teacher, Lord William's School, Thame. Died 8 April 2011, aged 30
Dr Robert Clive Poller CChem FRSC Retired, reader in chemistry, King's College, University of London. Date of death not supplied
Mr Gerald Prothero Robbins MBE CChem MRSC

Retired lecturer and health and safety consultant. Died 31 January 2011, aged 78
Dr Gordon Victor Robins CChem FRSC Retired. Date of death not supplied
Dr Martin Anthony Sherwood CChem MRSC Retired director of public affairs, Wellcome plc. Died 10 May 2011, aged 69
Professor Francis Gordon Albert Stone CBE CChem FRSC Retired, department of chemistry, Baylor University, USA. Died 6 April 2011, aged 85
Professor Paul Theodore Van Brandt CSci CChem FRSC Formerly emeritus professor, Université Catholique de Louvain, Belgium. Died July 2010, aged 74
Dr Basil John Wakefield CChem FRSC Formerly consultant, SAFC. Died 3 May 2011, aged 76
 Mr Gordon Watson JP CChem FRSC Retired consultant. Died 6 April 2011, aged 88

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