

RSC NEWS

JUNE 2015 www.rsc.org

Public attitudes
to chemistry
Our research results are in

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winners 2015
p6

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perceptions
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Top of the Bench 2015

The final of this year's Top of the Bench competition took place on 25 April, once again hosted by the excellent team at Loughborough University. After an exciting day of chemistry the prestigious first place went to King Edward VI Camp Hill School for Boys, representing our Birmingham & West Midlands section.

Congratulations to second-placed Queen Elizabeth Boy's School (from Chilterns & Middlesex), third-placed King Edward VI Grammar School (from our Essex section) and all those who took part this year, from across the UK and beyond.



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JUNE 2015

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Snapshot

A look at the latest news from around the world

INBRIEF

Industry and Technology Awards 2015

The Royal College of Physicians played host to a packed ceremony at our Industry and Technology Awards 2015 on Monday, May 11. Six winners were recognised for their outstanding contributions to the chemical sciences industry – from the discovery, development and application of new technologies, through to improving STEM skills and encouraging the next generation of chemists.

Our Industry Manager, Steve Pleasance, opened up proceedings introducing the awards before welcoming broadcasting royalty, Sandi Toksvig OBE, to the stage to present the winners with their prizes. Sandi returned to the stage following the presentations to do a 20-minute comedy set.

More than 130 people from academia and industry attended the ceremony and dinner. There was also a surprise medal awarded on the night for the outgoing Industry and Technology Division Council president, Dr Jacquin-Wilford Brown, of AkzoNobel, who led the council for five years.

The awards ceremony was part of the Chemistry Means Business 2015 event, which earlier in the day saw EnterprisePlus businesses attend a number of workshops and networking opportunities. EnterprisePlus is our dedicated service for small businesses.

For the full list of this year's awards and prizes winners, see page six.



Dr Charlotte Harvey, see p12

All change for science at Westminster

This month saw the Conservative Party win a surprise majority in the UK General Election, after weeks of opinion polls showing them neck and neck with the Labour Party. The party won 331 seats compared to Labour's 232, giving them a small 12 seat majority.

The Conservatives' former coalition partners, the Liberal Democrats, saw less success at the polls. The party lost 49 seats, with only eight Liberal Democrat MPs now remaining at Westminster. Big names, such as the former Business Secretary Vince Cable, and the former Climate Secretary Ed Davey, lost their seats.

The election also saw a number of chemists lose their seats. Dr Julian Huppert (Liberal Democrat, Cambridge) and Stephen Moseley (Conservative, City of Chester) both lost their seats to Labour, and Julie Hilling MP (Labour, Bolton West) lost her seat to the Conservatives.

A number of new MPs with science backgrounds were elected. These include Heidi Allen, the new Conservative MP for Cambridgeshire South, who has a degree in

astrophysics, and Maggie Throup, the new Conservative MP for Erewash, who previously worked as a biomedical scientist within the NHS. Carol Monaghan (SNP, Glasgow North West) and Chris Philp (Conservative, Croydon South) both have physics degrees, and Philippa Whitford (SNP, Ayrshire Central) previously worked as a consultant breast surgeon.

Following the election, David Cameron appointed Jo Johnson MP as the new Minister for Universities and Science, replacing Greg Clark who has now become Secretary of State for Communities and Local Government. Sajid Javid replaces Vince Cable as Business Secretary, and Amber Rudd replaces Ed Davey as Secretary of State for Energy and Climate Change. Education Secretary Nicky Morgan and Environment Secretary Liz Truss both remain in their roles.

▼ Jo Johnson the new Minister for Universities and Science (below left) and Dr Julian Huppert who lost his seat (below right).



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Prestigious honours for members of our community

The Royal Society have recently announced their newly elected members of their fellowship, recognising the outstanding contributions of pioneers across the sciences. Among them are eight fellows of the Royal Society of Chemistry, including one of our former presidents (see page 20 for more from David) and one of our recently appointed honorary fellows.

Congratulations to all of those from our community who have been recognised – through a process of peer review by the existing fellows of the RS – with this prestigious honour.

Our new fellows of the Royal Society are:

- Professor Ali Alavi FRSC FRS
- Professor Jane Clarke FRSC FRS
- Professor Andrew Cooper BSc PhD FRSC FRS
- Professor Benjamin G Davis BA DPhil FRSC FRS
- Professor David Phillips CBE BSc PhD CSci CChem FRSC FRS
- Professor Roger A Sheldon PhD CChem FRSC FRS
- Professor Dame Julia Slingo DBE HonFRSC FRS
- Professor Bryan M Turner FRSC FRS

Also announced recently are the new fellows of the Royal Society of Edinburgh, including two of our prize and award winners from 2014.

Our new fellows of the Royal Society of Edinburgh are:

- Professor Marcel Jaspars BA PhD CChem FRSC FRSE
- Professor Dr Guy C Lloyd-Jones BSc DPhil FRSC FRS FRSE
- Professor Mercedes M Maroto-Valer BSc PhD FRSC FRSE
- Professor Niamh Nic Daeid MRSC FRSE
- Professor Klaas Wynne MSc PhD FRSC FRSE

▼ Dame Julia Slingo (below) and David Phillips (bottom).



INBRIEF

A decade of service

On the evening of 5 May a special meeting of the RSC Belgium executive committee welcomed our chief executive, Dr Robert Parker to Brussels. Robert was in the Belgian capital for a meeting at the European Parliament and stayed on to talk to the executive committee and make a special presentation to one of its long-term members, Dr Ian Carson.

Ian received a Long Service Award, in recognition of his ten-year service on the RSC Belgium committee and his tremendous efforts to organise many significant events for the section.

RSC Belgium section chairman, Tim Reynolds, said: "It was really pleasing to see Ian get this long service award from Robert Parker. It was a special occasion.

Ian has done so much for the section in Belgium."



▲ Dr Ian Carson (left), receiving his long service award from Dr Robert Parker (right).

Reminder to vote in the Royal Society of Chemistry elections 2015

Details of contested elections taking place in 2015 are given through our *Vacancies and Elections* page of the Royal Society of Chemistry website rsc.li/vacancies-elections

For those not voting online, the option still exists to vote by post, and voting papers will be sent out accordingly. If you would like further information or assistance on the elections, please get in touch at election@rsc.org

The Royal Society of Chemistry 2015 Elections are open until noon on Monday 8 June and administration of the elections will be carried out by *Mi-Voice*.

The names of the newly elected members will be announced at the Royal Society of Chemistry's Annual General Meeting on 8 July 2015 and reported later on the website at rsc.li/agm15.

Prize and award winners 2015

Every year we recognise those who are advancing excellence across the chemical sciences through our prizes and awards programmes.

From researchers to teachers and entrepreneurs; whether at the start of a career in the chemical sciences or having served our community for a number of years, we celebrate and reward those who make a lasting contribution.

Our chief executive, Dr Robert Parker, says: "It is always a pleasure to recognise excellence in the chemical sciences and I am pleased to acknowledge the illustrious achievements of our prize and award winners this year.

"Whether they work in research, industry or academia, our winners are the very best in their fields, and they can be very proud to follow in the footsteps of some of the most influential and important scientists around the world.

"In a complex and changing world, chemistry and the chemical sciences are vital in responding to some of humanity's biggest challenges and our prize and award winners are at the forefront of meeting that challenge."

One of our new award winners adds: "I am delighted to receive this prestigious award and I do so on behalf of my group, whose talent and dedication have got our research projects off the ground. This recognition will definitely encourage us to keep trying hard to discover new and useful chemistry!"

Our prizes and awards have a rich history, with some having been awarded for over 140 years. Find out more about individual prize and award winners at www.rsc.org/awards

In celebration of our winners, we have assembled some of the exciting research they have recently published in our journals in a special collection. To read the articles for free for a limited period of time, visit <http://rsc.li/rscwinners2015-collection>

Many winners will also deliver talks at a variety of locations throughout the UK during the next academic year. You can find out when these take place by keeping an eye out for upcoming lectures and symposia at <http://rsc.li/award-events>

Prizes

Centenary Prize



**Professor
Chad Mirkin**
Northwestern
University

For his development of spherical nucleic acids and new nanotechnology-based tools in biomedicine and materials science.



Geoff Ozin
University of
Toronto

For his work in defining, enabling and popularising a chemical approach to nanomaterials for innovative nanotechnology in advanced materials and biomedical science.



**Professor
Jean-Marie
Tarascon**
Collège de France

For outstanding contributions to the development and understanding of new ionic conductors and electrode materials for rechargeable lithium ion batteries.

Corday-Morgan Prize



Professor Stephen Liddle

University of Nottingham

For his outstanding contributions to actinide chemistry, including significant advances in our understanding of the bonding, reactivity and magnetism in uranium and thorium compounds in particular.



Professor Sharon Ashbrook

University of St Andrews

For her contribution to the structure of materials combining solid-state NMR spectroscopy and first-principles calculations.



Professor Andrei Khlobystov

University of Nottingham

For his pioneering work on carbon nano-containers and nano-reactors leading to new ways of directing molecular assembly and studying chemical reactions.

Creativity in Industry Prize



Dr Christopher Barnard

Johnson Matthey Technology Centre

For high impact research in the field of platinum group metal chemistry for catalytic and medicinal applications in industry.

De Gennes Prize



Professor Mercouri Kanatzidis

Northwestern University
Marie Curie

For his development of novel chalcogenide and related materials that are useful in energy conversion and environmental remediation schemes.

Harrison-Meldola Memorial Prize



Dr David Scanlon

University College London

For his development and application of computational techniques to understanding and predicting the properties of functional semi-conductors for energy applications.



Dr Adrian Chaplin

University of Warwick

For contributions to the fundamental organometallic chemistry of small molecule activation reactions.



Professor Robert Paton

University of Oxford

For his pioneering work in using computation to understand reactivity and selectivity in organic and bio-organic chemistry allowing rational design in synthesis.

Environment Prize



Professor Roy Harrison

University of Birmingham

For sustained and significant innovations in the application of analytical chemistry to air pollution and environmental health.

Interdisciplinary Prize



Professor Elaine Holmes

Imperial College London

For outstanding contributions to metabolic phenotyping and systems biology, leading to novel biomarkers and mechanistic insights into toxicity and disease.



Professor Sarah Price

University College London

For transforming our understanding of the subtle differences in the crystalline organic solid state energy landscape and discovering new physical forms of organic molecules.



Professor Anthony Watts

University of Oxford

For pioneering new solid state NMR techniques that have revealed the functional significance of conformational dynamics in biomembrane complexes of ligands and small molecules.

Nyholm Prize for Inorganic Chemistry



Dr Nick Greeves
University of Liverpool

For the creation and development of ChemTube3D, an internationally renowned, open education resource widely used in teaching chemistry at school and university.

Perkin Prize for Organic Chemistry



Professor Amos Smith
University of Pennsylvania and the Monell Chemical Senses Center

For his continued outstanding contributions to new organic reaction development, complex natural product total synthesis, and new small molecules for medicinal chemistry.

Tilden Prize



Professor Mark Bradley
University of Edinburgh

For his extensive interdisciplinary work in the area of chemical biology, with a specific focus on the control and manipulation of stem cells.



Professor Leroy Cronin
University of Glasgow, School of Chemistry

For his work on the synthesis and understanding of the self-assembly, electronic structure and nanotechnology device applications of polyoxometalate architectures.



Professor David Wales
University of Cambridge

For the development of methods to elucidate potential energy landscapes and their role in dynamics and thermodynamics, with a particular emphasis on self-organisation.

Awards

Analytical Division

Ronald Belcher Award



Dr Sophie Harvey
The University of Edinburgh

For her outstanding innovation in native mass spectrometry of conformationally dynamic proteins.

Sir George Stokes Award



Professor Sergei Kazarian
Imperial College London

For his outstanding, sustained contributions to spectrochemical analysis via the development of ATR-FTIR spectroscopic imaging.

Theophilus Redwood Award



Professor Richard Van Duyne
Northwestern University

For communication of his research in surface-enhanced and tip-enhanced Raman spectroscopy.

Chemistry Biology Interface Division

Jeremy Knowles Award



**Professor
Herman
Overkleeft**
Leiden University

For his innovative and insightful development of activity-based protein probes for the imaging and identification of enzymes in health and disease.

Norman Heatley Award



**Professor
Mark Wallace**
University of
Oxford

For his distinguished work in the area of artificial lipid bilayers, creating a new way of studying membrane proteins.

Rita and John Cornforth Award



**Professors
Alison Ashcroft
and Sheena
Radford**
University of
Leeds



For their seminal contributions in mass spectrometry and allied biophysical methods to characterise protein misfolding mechanisms and inform on new strategies to combat human disease.

Dalton Division

Applied Inorganic Chemistry Award



Professor Yi Lu
University of
Illinois at Urbana-
Champaign

For his original research on the catalytic activity of DNA in the presence of metal ions, and the development of a new class of sensors for on-site and real-time detection of metal ions in environmental monitoring, food safety, and medical diagnostics.

Bioinorganic Chemistry Award



**Professor
Paul Dyson**
Ecole
Polytechnique
Fédérale de
Lausanne

For his outstanding contributions to bioinorganic and medicinal chemistry through the development of ruthenium-based drugs.

Dalton Young Researchers Award



**Mr Nicholas
Chilton**
The University
of Manchester

For his major contributions to theory and modelling in molecular magnetism, developing new computer programs for fitting data and new intuitive models for understanding low temperature magnetic behaviour.

Homogeneous Catalysis Award



**Professor
Pedro Pérez**
Universidad
de Huelva

For the development of alkane C-H functionalisation reactions, including those of methane, and other reactions catalysed by metal carbenes.

Inorganic Mechanisms Award



**Professor
Peter Ford**
University of
California,
Santa Barbara

For his fundamental contributions to the mechanisms of inorganic photochemistry, homogeneous catalysis and the bioinorganic chemistry of nitric oxide and related nitrogen oxide species.

Dalton Division (con)

Ludwig Mond Award



Professor Vivian Yam
The University of Hong Kong

For her work on the innovative design of new strategies utilising non-covalent metal-metal interactions as spectroscopic reporters for host-guest interactions and microenvironment changes, and for chemosensing and biological assays.

Sir Edward Frankland Fellowship



Dr Scott Dalgarno
Heriot-Watt University

For his work in supramolecular coordination chemistry, in particular the synthesis and properties of d-block calixarene compounds with applications in molecular nanomagnetism.

Dalton Division and Organic Division

Organometallic Chemistry Award



Professor Todd Marder
Julius-Maximilians Universität Würzburg, Institut für Anorganische Chemie

For his pioneering, fundamental studies of the synthesis, structure, bonding, reactivity and photophysical properties of organometallic compounds, and their applications in homogeneous catalysis and materials chemistry.

Education Division

Higher Education Teaching Award



Dr Patrick O'Malley
The University of Manchester

For the development and application of technical innovation in the teaching methods of university level chemistry education.

Environment, Sustainability & Energy

Environment, Sustainability and Energy Division Early Career Award



Professor Omar Farha
Northwestern University
King Abdulaziz University

For seminal contributions to the development of catalysis, storage and separations by metal-organic frameworks.

Sustainable Energy Award



Professor John Irvine
University of St Andrews

For his outstanding and sustained contributions to low carbon energy generation, in particular the development of electrode materials for solid oxide fuel cells.

Toxicology Award



Professor Vicki Stone
Heriot-Watt University

For pioneering transdisciplinary approaches to assessing the safety of nanomaterials.

Faraday Division

Bourke Award



**Professor
Lyndon Emsley**
Ecole
Polytechnique
Fédérale de
Lausanne

For the development and application of technical innovation in the teaching methods of university level chemistry education.

Marlow Award



**Professor
Philipp Kukura**
University of
Oxford

For the development of ultrafast spectroscopic and ultrasensitive microscopic imaging techniques with applications in chemistry, physics and the life sciences.

Soft Matter and Biophysical Chemistry Award



**Professor Nico
Sommerdijk**
Eindhoven
University of
Technology

For his seminal contributions towards a mechanistic molecular-scale understanding of macromolecular assembly and biomineral formation.

Chemical Dynamics Award



**Professor
Kenneth
McKendrick**
Heriot-Watt
University

For the development of novel methods to study elementary reactions and collisional energy transfer in the gas phase and at the gas-liquid interface.



**Dr Flemming
Hansen**
University
College London

For the development and application of NMR spectroscopy in understanding motions in biological molecules at atomic resolution.

Spiers Memorial Award



**Professor A. Paul
Alivisatos**
Lawrence
Berkeley National
Laboratory

For his contributions to the fundamental understanding of the relationship between nanoparticle synthesis and their properties.

S F Boys-A Rahman Award



**Professor
Anna Balazs**
University of
Pittsburgh

For the development of new theoretical and computational approaches to enable understanding of polymeric materials.

Surfaces and Interfaces Award



**Professor
Mihail Barboiu**
Institut Européen
des Membranes –
CNRS

For the development of artificial water channel systems, which have led to a better understanding of the molecular-scale hydrodynamics of water in biological systems and novel membranes systems for water purification.

Industry and Technology Division

Chemistry World Entrepreneur of the Year Award



Dr Ray Fisher
Peakdale
Molecular

For innovation and entrepreneurship in UK fine chemicals and contract research for over 30 years.

Inspiration and Industry Award



Dr Hilary Jeffreys
Actavis

For her significant contribution to the promotion of the chemical sciences, both locally and nationally.

Teamwork in Innovation Award



Procter & Gamble and Durham University Partnership

For their multidisciplinary, collaborative and high-impact research leading to product innovation.

Young Industrialist of the Year Award



Dr Charlotte Hardy
GlaxoSmithKline

For her significant contribution to the delivery of three clinical candidates within the respiratory portfolio at GlaxoSmithKline.

Materials for Industry – Derek Birchall Award



Professor Tobin Marks
Northwestern University

For his pioneering work on the industrial application of new organic, inorganic and hybrid materials for electronics and photonics.

Materials Chemistry Division

John B Goodenough Award



Professor William David
ISIS Facility and
University of Oxford

For his development of new theoretical and experimental approaches to powder diffraction and his contributions to the understanding of structure-property relationships in important solid-state materials.

Peter Day Award



Professor Russell Morris
University of St Andrews

For his pioneering work on the chemistry of porous solids, especially his discovery of the Assembly-Disassembly-Organisation-Reorganisation route to zeolite synthesis.

Organic Division

Bader Award



Professor Stephen Clark
University of Glasgow

For the development of new reactions and strategies for the efficient synthesis of highly functionalised natural products.

Organic Industrial Chemistry Award



Dr Debra Wallace
MSD

For her contributions to the design and implementation of green, efficient, safe and cost effective synthetic routes to drug candidates.

Physical Organic Chemistry Award



Professor Anthony Davis
The University of Bristol

For creative design and study of innovative functional molecular architectures, such as carbohydrate receptors and transmembrane anion transporters.

Hickinbottom Award



Dr John Bower
University of Bristol

For his research on the design and mechanism of broadly applicable transition metal catalysed processes for organic synthesis.

Organic Stereochemistry Award



Professor David O'Hagan
University of St Andrews

For his outstanding contributions exploring the properties of stereoisomers of differently configured multiple C-F bonds.

Robert Robinson Award



Professor Chi-Huey Wong
Academia Sinica

For his development of chemical and enzymatic synthesis methods to elucidate the roles of carbohydrates in biology and create new opportunities in medicine.

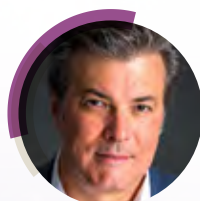
Merck Award



Professor Shuli You
Shanghai Institute of Organic Chemistry

For the development of catalytic asymmetric dearomatisation reactions opening elegant access routes to complex molecular architectures.

Pedler Award



Professor Michael Krische
University of Texas at Austin

For pioneering novel powerful C-C coupling methodologies via transfer hydrogenation and their applications to elegant and highly efficient natural compound syntheses.

Synthetic Organic Chemistry Award



Professor Richmond Sarpong
University of California Berkeley

For the development of innovative methodology for the total synthesis of complex alkaloid natural products.

2016 PRIZES AND AWARDS

Our portfolio of prizes and awards celebrates achievements in the chemical sciences, recognising individuals and teams in industry, education and academia.

As we celebrate the success of our 2015 winners and organise symposia and lectures to showcase their contribution to the chemical sciences, the process of identifying our 2016 winners is on the horizon. The nomination period for the next round of RSC Prizes and Awards will open on 1 October 2015 and will close on 15 January 2016. See rsc.org/awards-funding/ for more information.

We look forward to your 2016 nominations. If you have any questions about our nomination procedure, eligibility or process used, please contact awards@rsc.org

Understanding public perceptions

A first look at the findings from our research on public attitudes to chemistry in the UK

Last year we announced that we were undertaking research to try to understand public attitudes to chemistry in the UK (see *RSC News* October 2014) and since then hundreds of members have been involved in interviews, surveys and workshops.

We are now very excited to present the findings of the first national, in-depth study of how the UK public thinks and feels about chemistry, chemists and chemicals.

The first study of its kind

Much research has been conducted into public attitudes towards science but there is relatively little data about attitudes towards chemistry. Anecdotal evidence suggests that there is low public awareness and recognition of what chemists do. Our study provides robust data on the public's relationship with chemistry in the UK, and an insight on how it could be improved.

The research was conducted on our behalf by the social research company TNS BMRB. It included several stages of qualitative and quantitative research, including a national public survey, with 2,104 face-to-face interviews with UK adults (16+).

In this issue we present the key findings, along with an infographic insert. You can read the full report and see other supporting materials at rsc.li/pac

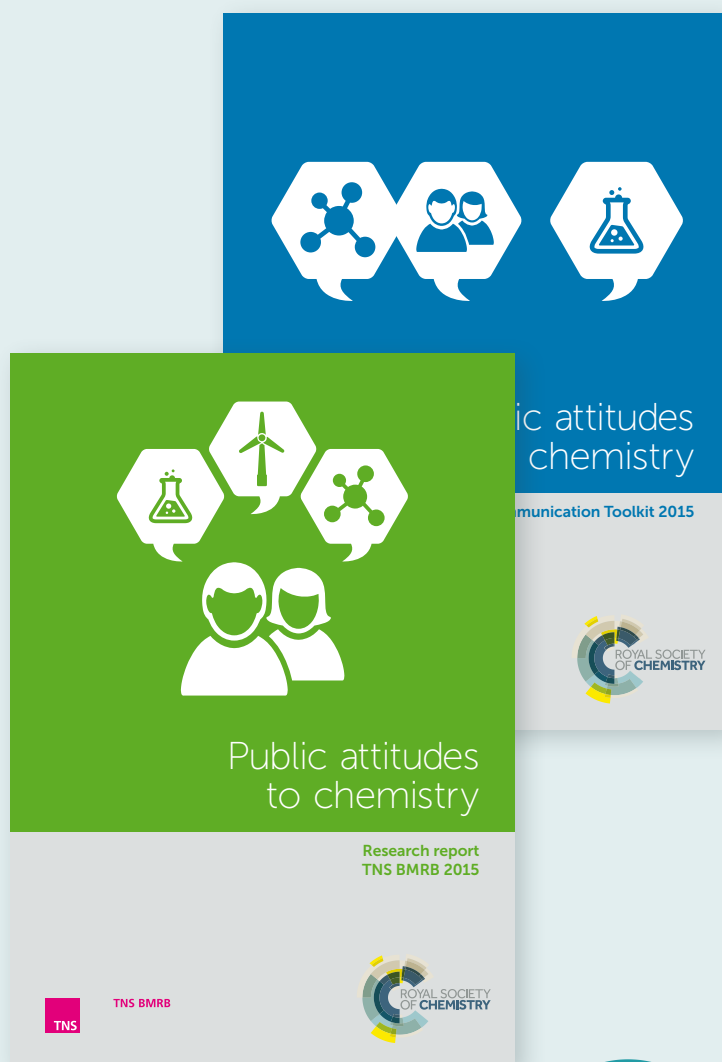
Good news

The public perception of chemistry, chemists and chemicals is more positive than we expected. We asked our members to take part in an online survey to find out how they thought the public answer some of the questions. When we compared what we thought people would say with what they actually said, we saw that members painted a significantly more negative picture than the one that emerged from the public survey.

For example, only 25% of the UK public agreed that 'school put them off chemistry' but 96% of the members we polled thought that more people would have agreed with that statement. Also, 60% of the UK public agreed that 'everything is made of chemicals' but only 25% of the members we polled thought more than half the public would have said so.

So our negative prediction has not been confirmed; far from it. Overall, people in the UK are positive about chemistry's impact on society.

Continued on p19...



Pull out
and keep our
infographic
insert



Public attitudes to chemistry

The first national, in-depth study on how the UK public thinks and feels about chemistry, chemists and chemicals.

While there is extensive literature about the public image of science, there is little data specifically on chemistry. As we work to advance excellence in the chemical sciences for the benefit of science and humanity it's critically important that we understand and measure people's interest in and engagement with chemistry.

To unlock new insights we commissioned the social research company TNS BMRB to investigate current public attitudes, awareness, interest and engagement towards chemistry in the UK.

The reports and other materials are available online. Visit rsc.li/pac



Public attitudes to chemistry

The first national, in-depth study on how the UK public thinks and feels about chemistry, chemists and chemicals.

For more information visit rsc.li/pac



84% of the UK public agreed that chemists make a valuable contribution to society

But only

12% of the chemists we interviewed thought the public would have said so

People are positive about chemistry's contribution to society



59%

of the public believe the benefits of **chemistry** are greater than any harmful effects



55%

of the public believe it is important to know about **chemistry** in their daily life



72%

agree that **chemistry** research and developments make a direct contribution to economic growth in the UK

55%

for **science***

72%

for **science***

76%

for **science***

Most people can't think of chemistry beyond their school memories

When I talk about chemistry what comes to your mind? Top 5 answers



School/teachers



Science



Drugs/
tablets/pills



Chemicals/
elements



Medication

Public attitudes to chemicals

Although there are some concerns about chemicals, these do not affect people's views on chemistry

60%

of the public agreed that "everything is made of chemicals"

70%

of the public agreed that "everything including water and oxygen can be toxic at a certain dose"

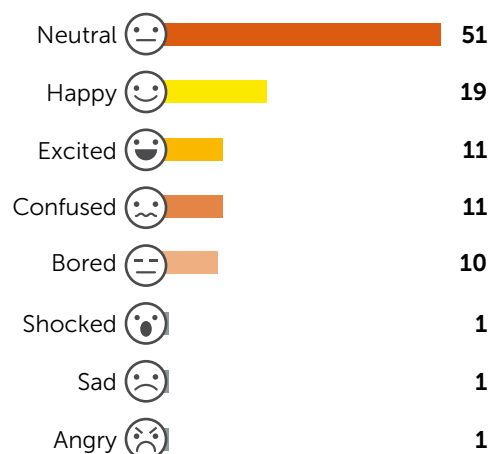
67%

of the public disagreed that "all chemicals are man-made"



Public perceptions of chemistry are more positive than chemists expected

How do you feel about chemistry? (%)**



People don't have an emotional connection with chemistry

TNS BMRB

TNS



62% of the UK public agreed that jobs in chemistry are interesting

But only

27% of the chemists we interviewed thought the public would have said so



88% of the UK public said chemists are approachable

But only

20% of the chemists we interviewed thought the public would have said so

People strongly associate chemists with pharmacists

When I talk about a chemist what comes to your mind? Top 5 answers



Pharmacies/
pharmacists



Medication/
medicine



Prescriptions



Drugs/
tablets/pills



Shop/
chemist's
shop

Lack of confidence and feelings of inferiority could explain the absence of emotional connection with chemistry

School put me off...



Chemistry

25% agree

48% disagree

23% neither agree
nor disagree

4% don't know



Science*

24% agree

63% disagree

13% neither agree
nor disagree

1% don't know

I don't feel confident enough
to talk about chemistry



58%
of women
agree

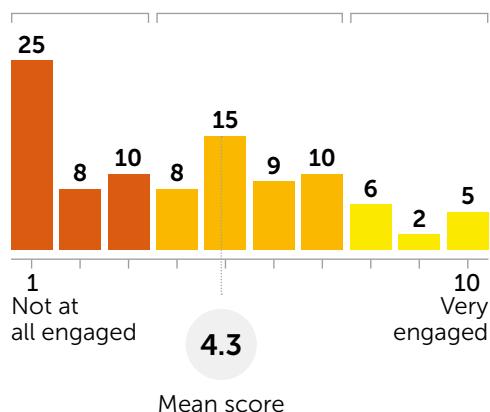


45%
of men
agree

People are more positive

How engaged or interested are you with chemistry? (%)

■ 43% ■ 42% ■ 13%



Overall engagement is fairly low

People are interested in finding out more about chemistry, especially how it relates to their everyday life

How interested people are in finding out more about the role of chemistry in...

65%

feeding world
population



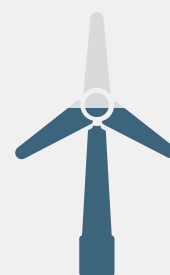
68%

developing clean
water technology



63%

developing
renewable energy
technologies



Public attitudes to chemistry is a study conducted by TNS BMRB on behalf of the Royal Society of Chemistry.

TNS BMRB conducted qualitative research followed by 2,104 face-to-face interviews with UK adults aged 16+. Interviews were conducted between 13 and 25 February 2015 on the TNS omnibus. For more details on the methodology and data visit rsc.li/pac

*Ipsos MORI Public Attitudes to Science 2014

**Multi-coded questions represent % of respondents who select each category, but respondents can be in more than one category.

We hope that this research on public attitudes to chemistry will help our members – and others interested in communicating chemistry to the public – to better understand their audiences.

For more information about the research, including the report and the infographic visit rsc.li/pac

Follow the conversation on Twitter [#chemperceptions](https://twitter.com/chemperceptions)

Key principles for communication

- 1 Every encounter counts:** public communication covers everything from public lectures to a conversation at a party, from a post on social media to an article in a newspaper – it is not just about talking to interested adults or outreach within schools.
- 2 Let your passion inspire others:** show people how chemistry makes you feel. They might forget the facts but will remember your enthusiasm.
- 3 Understand your audience:** remember to ask questions. It will help you to recognise their level of confidence/interest – which may relate to their age and background – and tailor your communication accordingly.
- 4 Make it tangible:** people relate to things they understand and topics they care about. This can include everyday things such as food and transport – try and relate your work to people's everyday interests and concerns.
- 5 Keep it simple:** how can you quickly convey what excites you about your work and why it is important? Develop and perfect your 'elevator pitch'.
- 6 Recognise your skills:** communication is a skill that can be learnt, and there is plenty of support available to develop it.
- 7 A two-way process:** there is a common misconception that science communication is where an expert 'educates' those with less expertise. Instead it should be a two-way process which involves talking about the interests of others, asking questions and actively listening to what your audience has to say.

Getting started

For more information on how we are supporting our members to engage with the public visit rsc.li/outreach

Despite this general acclaim for chemistry, people lacked specific examples of how chemistry makes a positive impact, instead finding it easier to specify and visualise negatives or stereotypes. People lacked personally-relevant and concrete examples and, for many, the word chemistry activated memories, symbols, and feelings of their school experience. In the absence of other associations, this was the predominant driver of responses. In general most people lack an emotional connection: half (51%) of our survey respondents said they felt 'neutral' about chemistry.

Views on chemists

Most people associate chemists with pharmacists, as they lack other examples of the kinds of industries chemists work in. While this is probably not a big

When we asked about chemists as scientists, people's views were positive, with 95% saying they thought chemists made a difference in the world, 93% saying they were honest, and 88% that they were approachable. (Read more about this in David Phillips' opinion, see page 21.)

The word 'chemicals' is used in everyday language as shorthand to refer to harmful or potentially dangerous substances. Though this is the principal meaning, it is not the only meaning, and respondents showed their definitions were multiple and context-dependent. In general people scored quite well in all the questions about chemicals:

- 75% disagreed that all chemicals are dangerous and harmful,
- 70% agreeing that everything including water and oxygen can be toxic at a certain dose
- 60% also said that everything is made of chemicals

Just as for chemistry, people were relatively neutral about chemicals (55%) and just under one in five (19%) reported feeling positive. People's views of chemicals were nuanced and multifaceted, and they were seen to possess positive, neutral and negative attributes.

A clear finding of this research was the associative separation that existed between chemicals and chemistry. People's views and feelings about chemicals were not attributed to chemistry or chemists.

Current public attitudes to chemistry are fairly neutral and in general the picture is more positive than we expected. There are few actively negative views to overcome, and there are some inherent challenges involved in engaging people with a subject in which they have limited interest.

This research offers us new insights into people's view on chemistry, chemists and chemicals. We hope the findings will inspire our community to think about the results.

We look forward discussing the findings and their implications with our members. There will be plenty of opportunities in the upcoming months – including our first outreach conference and the General Assembly – and we hope many of you will have interesting discussions with colleagues and friends.

We are keen to hear your thoughts and you can get in touch with your questions and comments by writing to **communications@rsc.org**

For more information about the research, including the report, toolkit and the infographic visit rsc.li/pac

Follow the discussion on Twitter **#chemperceptions**

Public attitudes to Chemists

Public attitudes to chemistry

62% of the public think 'jobs in chemistry are interesting'

59% think the benefits of chemistry are greater than any harmful effects

People lack an emotional connection with chemistry (3)

People recognise that chemistry is important and are open-minded to learn more about it. However, emotionally, people are largely neutral or positive about chemistry

Emotion	Percentage
Neutral	51
Happy	19
Excited	11
Confused	11
Bored	10
Other	1

Source: Public Attitudes to Chemistry 2013 Public Survey Q4B Which of the following describes how you feel about chemistry? Base: All respondents (2204)

People currently have limited associations with chemistry, mainly thinking back to school experiences or debating to stereotypes. They also don't feel confident, particularly if they didn't have a good experience with science or chemistry in school.

When I talk about chemistry what comes to your mind? Top 5 answers (1)

Answer	Count
School/teachers	21
Science	16
Chemical elements	14
Medication	8
Labs	8

People are drawn in by the outcomes of work undertaken under the 'chemistry' but most are not familiar enough with its applications to let us take on the subject. For example, people are receptive to

72% of people interested in new drugs and medical breakthroughs

68% of people interested in developing clean water technology

Public attitudes to chemicals

When talking about chemicals, most people are not referring to what scientists mean by the same word. 'Chemicals' is used in everyday language as a short-hand to refer to harmful or potentially dangerous substances. Changing the meaning of words is arguably almost impossible. We should acknowledge these two different meanings exist, and not worry that people are 'getting it wrong'.

< 20% of the public think 'all chemicals are dangerous and harmful'

60% of the public agree that 'everything is made of chemicals'

Explaining that 'everything is made of chemicals' will not necessarily change people's views – the majority of people already know this, and people can hold both meanings of the word at once at the same time.

How people feel about chemicals %

Emotion	Percentage
Neutral	55
Happy	13
Excited	12
Confused	8
Bored	6
Shocked	3
Sad	3
Angry	3

How informed people feel about chemicals used in their everyday life

Level of Informed	Percentage
Well-informed	9
Fairly well-informed	48
Not very well-informed	32
Not at all informed	11

Source: Public Attitudes to Chemistry 2013 Public Survey Q4C Which of the following describes how you feel about chemicals? Base: All respondents (2204)

People don't necessarily feel strongly negative about chemicals – at the surface they are mostly neutral. However, they recognise that they are not very knowledgeable about how chemicals are used, in industry or food production for example, and this can make them feel uneasy. These feelings are deeply embedded and strongly held, and based on a

of to think of chemists, the first thing people think of is a pharmacist, and for some it is the only thing they think. This is because there is a void in people's understanding of chemists work and an associated lack of awareness of what they actually do or the they are working towards. They would be 'different from me', and expecting them to be in a way which is going to be difficult for them to understand.

31% Only said pharmacies or hospitals

76% pharmacies

47% Laboratories

29% in hospitals

17% in medical research

17% for pharmaceutical companies

15% mentioned samples

Source: Public Attitudes to Chemistry 2013 Public Survey Q3 Where do you think chemists work? (multi-coded). Base: All respondents (2204)

noticed, people recognise that not all chemists work in pharmacies

rational assessment of risk and their need to rely on regulators and industry to act in the long-term public interest. People's views of chemicals do not impact their view of chemistry or chemists. But if chemists talk about chemicals all the time – especially in trying to combat inaccuracies in the views of others – we risk activating existing fears.

Opinion

Letters and comments on RSC activities and issues

FROM THE EDITOR



It's once again time to celebrate excellence across the chemical sciences in the form of our 2015 awards and prizes.

Our news and media team have been busy spreading the word about this year's winners - we've already seen news coverage for our winners across the UK, in Ireland, France, Spain, Taiwan, China and the USA. You'll find a full list of our winners from p6-13.

We told you in October that we were undertaking the first ever UK-wide research project into public attitudes to chemistry. The results are now in - there's a pull-out of the fascinating findings from p15-18 and explanation and opinion from the project manager, Dr Chiara Ceci (p14 and p19) and Professor David Phillips (p21).

And you can find out who was Top of the Bench for 2015, with a round-up of images of some of our brightest young chemists in action on our inside cover.

Edwin Silvester
rscnews@rsc.org

RSC News welcomes letters, which should be concise (normally less than 300 words) and timely. Those selected for publication are subject to editing for clarity and length. Letters should be marked 'for publication'; letters are not routinely acknowledged. rscnews@rsc.org

You can also let us know your thoughts and comments via Twitter or Facebook.



@RSC_Comms



facebook.com/RoyalSocietyofChemistry

Public perceptions – over to you...

The Public Attitudes to Chemistry research has been a fascinating project to be part of. Along with members of our Outreach, Science, *Chemistry World* and Communications teams, I have been lucky enough to get involved from the outset, including seeing first-hand the fascinating focus groups and research questionnaire. As editor of *RSC News*, I now want to hear from you with your reactions to the research findings.

How do you feel about the results showing that our community thought the public would have a much more negative view of chemistry than it actually does?

And on the opposite page, you'll see our former president, Professor David Phillips, with his view on the study.

What do you think we should now do to build on the robust data the research provides?

I look forward to gathering your views and building on the excellent foundations this research gives us.

Edwin Silvester Cambridge, UK

Former presidents

On pages 8 and 9 of May 2015 *RSC News* there is a picture of seven ex-presidents but I do not see them named. Could you please let me know the name of the president on the extreme left who appears to be wearing a University of Wales tie.

Rev Dr Graham D Loveluck FRSC Marianglas, UK



© DAVID PARRY P/A

Our illustrious former presidents are, from left to right:

- Professor Eddie Abel, CBE, FRSC, who was president from 1996-1998
- Professor Steve Ley, FRSC, FRS, president from 2002 to 2004
- Professor David Phillips, CBE, FRSC, FRS, president from 2010 to 2012
- Professor Lesley Yellowlees, CBE FRSC FRSE, immediate past president
- Professor David Garner, FRSC, FRS, president from 2008 to 2010
- Professor Sir Harry Kroto, FRSC, FRS, president from 2002 to 2004
- Professor Sir Simon Campbell, CBE, FRSC, FRS, president from 2004 to 2006

As for whether it's a University of Wales tie, I'll have to ask Professor Abel when next our former presidents gather!

Edwin Silvester Cambridge, UK

A positive future for talking about chemistry

David Phillips comments on our public attitudes to chemistry research and says that a first step in influencing attitudes towards chemistry will be for chemists to rethink their attitudes towards the public

As a passionate public advocate of chemistry I am happy to have been involved with this project and found its approach very interesting. As professional chemists, we thought that we knew how the public feels about chemistry, but we had no hard evidence to back this up. For the first time this study provides that evidence, and informs us how to better understand our audiences.

For me the most interesting and surprising finding is that the public perception of chemistry and chemicals is far more positive than professional chemists believed. Having said that, this view is coloured by some confusion over what a chemist is and what a chemist does. For example, the misidentification of chemists as pharmacists, which is a peculiarly British phenomenon. While we could have anticipated this result, I think we probably underestimated its scale. We will have to work hard to try to ensure that the noun 'chemist' is in future used for what we understand it to mean.

We can't easily change the common meaning of a word but what we can do is be consistent with the way we use it so when we talk about ourselves and our job and say 'I'm a chemist' (and I am always proud to say it!) we could change it to 'I am a scientist working in chemistry'. And if we think that framing ourselves as scientists sounds obvious, we should look to this research because it is not at all. It could be a first important step in contributing to a more understandable use of a word that defines who we are.

My historical perspective

I went to primary school in 1945, just at the end of the WWII. Science then was in general viewed as hugely beneficial to UK society, not least because of the widespread introduction of life-saving antibiotics. The chemicals industry was viewed positively right up until the late 1960s, early 70s. Certainly when I went to University in 1958, science was seen as a good thing – hard subjects were only attainable by the brightest students and an assurance of employment in industry, was again viewed positively.

The growing awareness of issues like pollution, (after Rachel Carson's *Silent Spring*), or mercury poisoning which caused Minimata disease in Japan led, fairly rapidly, in the 70s through 1980s to a general perception of chemicals and industry being seen as 'dirty'. The truth of course was that the chemical industries still provided immense benefits to society, but all the good things were obscured by the focus in the press and environmentalists on 'bad' chemicals.

I believe things have changed for the better in the last ten years or so. Of course there is still a general issue with the word 'chemicals'; it has a double meaning but the research tells us people understand both meanings and that their views are nuanced. This is confirmed by my experiences because when ask young schoolchildren these days how they feel about 'chemicals', they will usually say they can be good or bad depending on what and how they are used. 20 years ago, if a straw poll had been taken during one of my lectures the overall response would have been that chemicals are 'bad'.

Changing our attitudes

The research shows that our views of public opinion can be too negative. Chemistry is our profession, our passion, and we care about it so much that we possibly a little biased. Perhaps we have become defensive due to poor press over decades. But we should challenge this view and instead start thinking about public opinion in a more evidence-based way.

This research shows us a better picture than anticipated but also a picture of neutrality towards chemistry. Instead of focusing on the minority of negative views we should try to address this neutrality. I believe that it is with these people that we can make a difference.

Our motivation, style and tone shouldn't fall just in the content-focused traditional approach in order to educate others. We need to embrace a more strategic and contextual approach of public communication where as much planning goes into understanding our audience and crafting an effective narrative as it does in building the content. The first step in an effort to try to influence public attitudes towards chemistry is for us, as chemists, to rethink our attitudes towards the public.

Read the full report at rsc.li/pac

"As professional chemists, we thought that we knew how the public feels about chemistry, but we had no hard evidence to back this up"



Professor David Phillips
CBE FRSC FRS was President of the Royal Society of Chemistry between 2010 and 2012 and is Professor Emeritus at the Department of Chemistry, Imperial College London. He was recently elected as a fellow of the Royal Society.

One to one

Take advantage of a wide range of member services

Earning expectations – developing our Pay and Reward Survey

Would working in a different area of the chemical sciences affect your pay? Can you expect to earn more if you have a PhD or are a Chartered Chemist? Will taking a career break affect your career prospects? What could your salary increase to in the future?

To help us give you the answers to these questions and many more about salaries, pay and employment benefits, take part in our Pay and Reward Survey later this month. In this straightforward questionnaire we will ask you to provide information, in the strictest confidence, about what you earn and additional benefits you receive from your employer.

Why do we run the survey?

We run this survey, to provide an authoritative report on salaries in the chemical sciences. The data collected from your responses to the questions provides a valuable resource to our members, allowing them to benchmark their salaries. From planning future career options to contemplating a job change or negotiating a salary offer, the results are an extremely important tool for your career management.

The survey, previously known as the Trends in Remuneration, has a rich history; we have collected salary information from our members every two years since 1920. The results give us the ability to track trends in income of those working in the chemical sciences over time, allowing us to analyse changes in our field. The report is also used by influential employers in a wide range of sectors to benchmark salaries of professionally qualified scientists.

Why take part?

Contribution from our members into this survey is key to the quality of the data. The more responses we get to the survey, the more representative our data on pay and reward in the chemical sciences will be. And so we can provide our members with a more reliable resource to plan and manage their careers.

In addition to a written report, we will be providing members with access to an interactive tool which you can use to directly compare your salary against others, using criteria of interest to you; from age, gender and geographical location through to qualifications, employment sector and job role. This year, we will also be giving all members who participate in the survey an exclusive opportunity to view the results before they become available to anyone else.

How to take part

We welcome input from members of all ages, career stages and membership

categories, provided you are not currently an undergraduate student.

Your responses to the survey will be collected in the strictest confidence and kept completely anonymous. To ensure this, we have partnered with external market research agency Research by Design, who fully comply with the Market Research Society Code of Conduct. We are confident in their work after they ran our Member Survey in 2013.

Research by Design will be sending out an email on our behalf later this month, inviting you to take part in the survey. Your contribution to this survey is essential for us to provide our members with a quality, reliable and useful information on pay and rewards and we'd sincerely appreciate your support in responding to this year's Pay and Reward Survey.

This year, we will also be giving all members who participate in the survey an exclusive opportunity to view the results before they become available to anyone else.



Profile

A closer look at our members and their interests



Duncan Browne
Caption

Duncan Browne

Stand first

Q What inspired your career in chemistry?

A I did have a very good teacher at school. His name was James Maple and at the time you probably didn't realise quite how good some of these people were. It turns out James had written the text book – you look back on it these days and it was very well written.

I think he was an Oxford graduate and he was very well-spoken. He was also a bit of a free spirit because he played the guitar. Sometimes at lunchtimes on Mufti days he was there on the stage playing in a band composed of teachers and students.

In the lab he would always be very experimental with his demonstrations. To the side of his blackboard you'd have a crash helmet – once a year he'd do his hydrogen balloon with a lit splint explosion reaction. There were several other things he would do. Some Borax slimes and air-puffed mixtures – he'd mix two liquids and get a very exothermic reaction that produced a gaseous product with a foam that spills over the top of the flask.

I wouldn't say it inspired us as to what we're currently researching but as a young person at the time who quite enjoyed school but very much learned visually, I think that's what hit the gong with me. That and the fact that he was clearly communicating very effectively.

Q What does your work now involve and how have you got there?

A Our current work is involved in exploring the use of different enabling chemical technologies to streamline or clean up a little bit the molecular synthesis process. As society we're interested in new molecules that can serve us with some new kind of function, be it a healthcare product or a flavour or a fragrance.

These new molecules have to be made or indeed discovered in some way or other and traditionally the way this is done isn't always as clean as it can be. There's a bit of a dichotomy that exists because sometimes we get a new discovery very rapidly and the most effective approach isn't to care about the way in which you do it.

We can change that over time so subtly changing the technique by which someone's doing the reaction. Instead of doing the reaction in a traditional round-bottomed flask that we all know and love, we try to do it using flow chemistry, mechanochemistry or microwave heating techniques.

Currently there's three of us in the group and there's going to be another three people joining over the summer for placement projects.

How I arrived at this – I did my PhD in Sheffield and that was a fairly hardcore Organic methodology development. While in Sheffield I held a one-year EPSRC doctoral prize fellowship – I did my own research and then I moved to Cambridge to work with Steve Ley – four years as a post-doc in the use of flow chemistry systems.

The inspiration came from James Maple as a schoolboy, then Joe Harrity was my PhD student – and I suppose he put his thoughts on to me – then Steve Ley also left a strong impression.

Q You've been in India recently with the Royal Society of Chemistry – tell us about that

A The first time I went at the end of my PhD to IIT Kanpur, as part of a delegation led by Ray Jones. The second time was this year and we went to the Indian Institute of Science Education and Research in Bhopal and Pune, as well as the National Chemical Laboratory in Pune.

This was as part of a small delegation from the RSC led by David Phillips. I suppose we were ambassadors for UK chemistry, trying to show what we're doing here and to see whether there's commonality with people in India who are also researching in chemistry.

Q What have you gained from working with the chemistry community in India?

A I think I gained a more holistic view of what the RSC are actually doing, which I didn't appreciate before. You speak to many academics and I guess we're all quite busy – we don't necessarily pick up everything that's going on outside of our bubble.

I think being in India, the facilities we saw were just amazing. This very smart thing of combining biology, physics and chemistry under one roof so they can all share the expensive analytical machinery – it's quite sensible. If you're building from zero to new infrastructure it's easily possible but I suppose in the UK system we can't rebuild from zero, so we're working with what we've got.

I think actually the RSC delegation over there made me realise how quickly some of these countries are going to catch up, with what they're doing and it's opened collaborations for me.

"I think being in India, the facilities we saw were just amazing. This very smart thing of combining biology, physics and chemistry under one roof...."

Diary

Your guide to all important events

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NOTICES



Join us at this year's AGM on 8 July. More information on p28.

Further 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

RSC conferences

Faraday Discussion

Advanced Vibrational Spectroscopy for Biomedical Applications

21–23 March 2016
Cambridge, UK

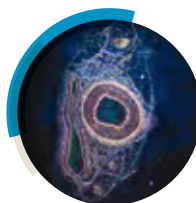
Oral abstract submission deadline – 6 July 2015

The time is right for a discussion meeting on the rapidly changing field of vibrational biomedical spectroscopy. Diagnostic and prognostic tools based on these new technologies have the potential to revolutionise our clinical systems leading to improved patient outcome, more efficient public services and significant economic savings for healthcare providers and society.

Help answer the many fundamental scientific and technological questions that need to be addressed before any of this can happen by submitting an abstract within these themes:

- spectral pathology
- single cell analysis/data handling
- clinical spectroscopy
- biofluids and other techniques

<http://rsc.li/vibspec-fd2016>



Faraday Discussion

Designing New Heterogeneous Catalysts

4–6 April 2016
London, UK

Oral abstract submission deadline: 20 July 2015

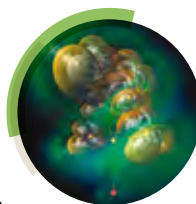
Catalysis is a core area of contemporary science posing major fundamental and conceptual challenges. It is also at the heart of the chemical industry, playing a crucial part in the production of 80% of all manufactured goods.

Help shape the discussion around the design of new heterogeneous catalysts by submitting an abstract within these themes:

- catalyst design from theory to practice
- designing new catalysts: synthesis of new active structures
- bridging model and real catalysts
- application of novel catalysts

The aim of this meeting is to develop fundamental understanding of key aspects of catalytic science, especially relating to knowledge that is essential for the design of new catalysts: catalyst preparation and production, the determination of atomic-architectures of active, reactive and de-activated catalysts and modelling of the active site. Don't miss your chance to be involved.

<http://rsc.li/catalysis-fd2016>



DATES AND DEADLINES

Analytical Research Forum 2015

3 July 2015
London, UK

Final registration deadline:
12 June 2015

<http://rsc.li/arf15>

Solid Oxide Electrolysis: Fuels and Feedstocks from Water and Air (Faraday Discussion)

13–15 July 2015
York, UK

Final registration deadline:
15 June 2015

<http://rsc.li/electrolysis-fd2015>

12th International Conference on Materials Chemistry (MC12)

20–23 July 2015
York, UK

Final registration deadline:
22 June 2015

<http://rsc.li/mc12>

Challenges in Chemical Renewable Energy (ISACS 17)

8–11 September 2015
Rio de Janeiro, Brazil

Poster abstract deadline:
29 June 2015

<http://rsc.li/isacs17>

Single-Molecule Microscopy and Spectroscopy

14–16 September 2015
London, UK

Poster abstract deadline:
6 July 2015

<http://rsc.li/molecule-fd2015>

Joliot – Curie Conference 2015

16–17 September 2015
Cambridge, UK

Poster abstract deadline:
22 July 2015

<http://rsc.li/joliot-curie-2015>

Events

Further information

The RSC News Diary this month lists Royal Society of Chemistry events from June to July 2015 that are held on our conference database. Further details on any of these meetings can be obtained from the named contact or from our conference website at www.rsc.org/events

You can search events by name, date or keywords and have the option to browse by location, subject area and event type.

EASTERN

Essex Section

Spectroscopy Workshops

1,3,6,8 and 10 July
University of Essex
A hands on day for A-level students to gain experience of spectroscopy in action. There is a charge of £10 per student, teachers gratis.
Contact Alan Osborne
+44 (0)208 590 2021
dimequin@bushinternet.com

Mid-Anglia Section

Building Stones of Cambridge – Geology Walking Tour

18 June
Cambridge City Centre
This walking tour takes in a wide variety of buildings and rock types in a compact area of the city centre. The route involves about a mile and a half of walking. Tickets are limited and there is a charge of £5 per person.
Contact John O'Toole
+44 (0)1223 894174
john.otoole9@btopenworld.com

Other Events

Organic Division 24th International Symposium: Synthesis in Organic Chemistry

20-23 July
Churchill College, Cambridge
The flagship event of the Organic Division.
Contact RSC Events
+44 (0)1223 432254
events@rsc.org

INTERNATIONAL

Japan

Organic Chemistry Symposia – Sendai

1 June
Tohoku University, Sendai, Japan
The Symposium will bring together leading international scientists delivering lectures which cover the broad spectrum of organic synthesis, from small organic molecules to biomolecules and organic materials. It will comprise three one-day meetings each one featuring a selection of Japanese and international speakers. There will also be seminars on publishing by RSC journal Editors. Registration is free.
Contact RSC Events
+44 (0)1223 434048
events@rsc.org

Organic Chemistry Symposia – Tokyo

3 June
Tokyo University, Japan
The Symposium will bring together leading international scientists delivering lectures which cover the broad spectrum of organic synthesis, from small organic molecules to biomolecules and organic materials. It will comprise three one-day meetings, each one featuring a selection of Japanese and international speakers. There will also be seminars on publishing by RSC journal Editors. Registration is free.
Contact RSC Events
+44 (0)1223 434048
events@rsc.org

Teacher Training Scholarships

Inspire the next generation

Apply for a Royal Society of Chemistry Teacher Training Scholarship

<http://rsc.li/teacher-scholarships>



Organic Chemistry Symposia – Kyoto

5 June
Kyoto University, Japan
The Symposium will bring together leading international scientists delivering lectures which cover the broad spectrum of organic synthesis, from small organic molecules to biomolecules and organic materials. It will comprise three one-day meetings each one featuring a selection of Japanese and international speakers. There will also be seminars on publishing by RSC journal Editors. Registration is free.
Contact RSC Events
+44 (0)1223 434048
events@rsc.org

China

International Symposium on Mechanochemistry

6-7 June
University of Science and Technology of China, Hefei, Anhui, China
This international symposium will bring together leading experts as well as emerging researchers in the field of mechanochemistry.
Contact
+86 5982 2317
chinaevents@rsc.org

Portugal

Chemistry Biology Interface Division 6th European Conference on Chemistry for the Life Sciences

10-12 June
Reitoria da Universidade Nova de Lisboa, Lisbon, Portugal
The conference will provide an excellent opportunity to view state of the art research and network with other European chemical biologists. It is run by the EuCheMS Division for Chemistry in the Life Science in collaboration with the European Federation for Medicinal Chemistry.
Contact Sofia Pauleta
+35 (1) 212948835
srp@fct.unl.pt

Switzerland

ISACS16: Challenges in Chemical Biology

15-18 June
ETH, Zurich, Switzerland
The event will bring together world-leading experts from several disciplines under the broad subject of chemical biology. The diverse subject scope will provide a broad overview of some of the key challenges within cutting edge areas of chemical biology with many opportunities for networking. Our hope is that delegates will be exposed to new areas of research, encouraging the cross fertilization of ideas. There will be extensive poster sessions in the evening and questions after each talk.
Contact RSC Events
+ 44(0)1223 434048
events@rsc.org

Germany

Formulation Science and Technology Group Right on Target – Sector Specific Formulation for Performance Optimisation and Control

24-25 June
Koelnmesse, Cologne, Germany
This two day international symposium organised by the RSC Speciality Chemicals Sector at the 2015 Chemspec Europe & Chemsources Exhibitions organised by Quartz Chemicals in Cologne.
Contact Patricia Keen
+44 (0)1606 888005
patricia.keen@dpwe.co.uk

MIDLANDS

Other Events

Medicinal Chemistry Residential School

21-26 June
Burleigh Court Conference Centre, Loughborough University
Contact RSC Events
+44(0)1223 434048
events@rsc.org

EVENTS

NORTH EAST

Central Yorkshire Section

York River Cruise

28 June
York Boat Company
Meet for a river cruise through historic York. The cruise is £9 per person.

Contact Duncan McDougall
+44 (0)1757 709230
mcdougall001@btinternet.com

Hull and East Yorkshire Section

Mixer Meeting and Exploration of Hull's Guildhall

3 June
Guildhall, Hull
Meet other local section members and guests for a glass of wine and tour of Hull's Guildhall historic rooms and treasures followed by supper.

Contact Phil Caygill
+44 (0)1482 783978
phil.caygill@lineone.net

Cafe Scientifique – Biomass: an Old Known Source of Green Energy

24 June
The White Horse Inn (Nellies), Beverley
An introduction to lignocellulosic biomass gasification.

Contact Mark Lorch
+44 (0)1482 465687
m.lorch@hull.ac.uk

Sheffield and District

Summer Social

18 June
The Fat Cat, Sheffield
Beer garden social event.

Contact Jackie Morton
+44 (0)1298 218437
jackie.morton@hsl.gsi.gov.uk

Teesside Section

RSC Bioorganic Chemistry Award Lecture

1 June
Durham University
Biosynthesis of Cyclic Peptide Antibiotics
Presented by Professor Wilfred A. Van der Donk, University of Illinois.
Contact AnnMarie O'Donoghue
+44 (0)1913 342592
annmarie.odonoghue@durham.ac.uk

Other Events

Structured Soft and Biological Matter

9 June
Calman Learning Centre, Durham University
This one-day meeting, co-organised by the RSC journal Soft Matter and the Durham Centre for Soft Matter, will mark the 10th anniversary of the launch of Soft Matter. Featuring thought-provoking talks from members the Soft Matter Editorial Board, the meeting will contain two theme sessions: one focussing on the chemistry, physics and dynamics of condensed polymer rings, and the second on nanostructured soft materials. The aim is to explore the essential structures of these soft matter systems at different length scales, and compare and contrast differences between biological and non-biological soft matter.
Contact Nicola Wise, RSC
01223 432438
softmatter-rsc@rsc.org

Faraday Division Solid Oxide Electrolysis: Fuels and Feedstock from Water and Air: Faraday Discussion

13-15 July
University of York
There is great interest in converting electricity overcapacity e.g. from renewables, to fuels such as hydrogen and synthetic gasoline or for the conversion of nitrogen to ammonia.
Contact RSC Events
+44 (0)1223 432380
events@rsc.org

Materials Chemistry Division 12th International Conference on Materials Chemistry (MC12)

20-23 July
University of York
The Conferences represent the flagship event of the Materials Chemistry Division. The meeting is organised into six themes run in four parallel sessions, with two poster sessions to allow maximum participation of all delegates. Six Plenary Lecturers will talk across the scope of the conference, while 24 Keynote Speakers will set the scene for different aspects of the six topics, supported by more than 100 contributed talks. Around 300 posters will be displayed over the two sessions.
Contact RSC Events
+44 (0)1223 432380
events@rsc.org

NORTH WEST

Liverpool Section

Retired Members' Event

23 June
Knowsley Hall, Prescot
Private Guided Tour of Knowsley Hall followed by afternoon tea. Tickets are £21 and members can bring a guest.

Contact Dr Bob Lee
+44 (0)1513 347875
drboblee@msn.com

Other Events

Professor Michael Willis RSC Award Lecture

10 June
The University of Manchester, Chemistry Building
Contact Lu Shin Wong
+44 (0)1613 068939
l.s.wong@manchester.ac.uk

Corday-Morgan Prize 2014 Lecture Tour

19 June
University of Manchester, Chemistry Building
• Professor Milo Shaffer
Contact Sven Koehler
+44 (0)16130 64448
sven.koehler@manchester.ac.uk

NMR Discussion Group Postgraduate Meeting

25 June
University of Manchester, School of Chemistry Building
This meeting is designed to showcase the research work of early career researchers, including postgraduates, early career postdoctoral workers and young industrialists whose work has a strong NMR content. Following on from previous years, there will be two overview lectures by established NMR spectroscopists. This event provides an ideal opportunity for early career researchers to gain experience in presenting their work, either in poster format or via oral presentation.
Contact Stephen Byard
+44 (0)1665 608544
stephen.byard@covance.com

Catalysis: Fundamentals and Practice

20-24 July
University of Liverpool
The Summer School introduces catalytic science, engineering and business, and provides an opportunity to meet leading catalyst scientists.
Contact Jon Iggo
iggo@liverpool.ac.uk

SCOTLAND

Energy Sector

1st Chemistry in Energy Conference

20-22 July
Heriot-Watt University, Edinburgh
The purpose of this Conference is to bring together scientists and technologists from academe and industry with interests in the applications of Chemistry in the Energy Industry. Given the wide scope of this conference, it is intended to hold multiple parallel sessions, with individual sessions which will identify fundamental chemical science subjects and will, for example, cover cross-cutting issues over the whole energy field, such as materials chemistry, corrosion, water/steam chemistry, etc.
Contact Maggi Churchouse
+44 (0)1359 221004
maggie@maggichurchousevents.co.uk

SOUTH EAST

Chilterns and Middlesex Section

Retired Members' Guided Tour of Strawberry Hill House

30 June
Strawberry Hill, Twickenham
A guided tour of Horace Walpole's House followed by lunch.
Contact Stephen Robinson
+44 (0)208 546 7940
stephenrobinson_3@hotmail.com

Kent Section

Tour of Hilger Crystals (Manufacturer of synthetic crystals)

26 June
Hilger Crystals, Margate
A tour of their manufacturing site which will also include a talk on the processes involved. This tour is free but places are limited.
Contact Craig Milsted
+44 (0)1845 866668
craig.milsted@fujifilmsis.com

Other Events

Biological and Medicinal Chemistry Sector Lectureship – Award Lecture

3 June
Institute of Cancer Research, London
Michael Waring is a Principal Scientist in the Oncology medicinal chemistry group at AstraZeneca and has worked on projects at all stages of drug discovery across both oncology and cardiovascular disease areas, culminating in the discovery of 14 development candidates, including AZD9291.
Contact Professor Keith Jones
+44 (0)208 722 4334
keith.jones@icr.ac.uk

Management Group From Macro-Trend to Macromolecule

4 June
The Royal Society of Chemistry, Burlington House, London
A free to attend evening lecture. Dr Robert Watson from Nuplex Resins will look at some specific examples of downstream industries and the role that chemistry plays, in particular polymer chemistry, from the perspective of coatings and ultimately show the relationship between macro-trend and macromolecule.
Contact Mario Moustras
moustrasm@outlook.com

Automation and Analytical Management Group Bioanalytical Sensing Technologies

16 June
The Royal Society of Chemistry, Burlington House, London
The conference will examine the design and application of materials and development of sensors for monitoring medical and biological processes. It will be supplemented with poster presentations and an exhibition.
Contact R Narayanaswamy
+44 (0)7974 515265
conference@aaamg-rsc.org

Initial Teacher Training Provider Meeting

17 June
The Royal Society of Chemistry, Burlington House, London
An opportunity for us to consult with science Initial Teacher Training providers about current issues in ITT, and how we can best support trainee teachers and their providers.
Contact Lizi McLoughlin, RSC
+44 (0)1223 432500
teach@rsc.org

Environmental Chemistry Group**Distinguished Guest Symposium on Nanomaterials and Annual General Meeting**

24 June
The Royal Society of Chemistry, Burlington House, London
Nanomaterials – Environmental Remediation or Toxicants?
Hosting Prof Eva Valsami-Jones. The group's AGM will be held after the meeting.
Contact Rowena Fletcher-Wood
01214 145205
r.l.fletcher-wood@bham.ac.uk

Emerging Technologies Showcase

29 June
The Royal Society of Chemistry, Burlington House, London
Join us to see our competition finalists present the latest technologies in the chemical sciences and hear about future trends in science and design from our visionary speakers. Network and form new collaborations with our guests from small companies, universities, multinationals, and investment firms. The event will conclude with a black-tie dinner at BAFTA 195 Piccadilly.
Contact RSC Events
+44 (0)1223 434048
events@rsc.org

Analytical Division Analytical Research Forum

3 July
The Royal Society of Chemistry, Burlington House, London
The Forum provides a high impact scientific meeting for the UK analytical community with both high profile speakers and opportunities for younger researchers to present their work.
Contact RSC Events
+44 (0)1223 434048
events@rsc.org

Fullerenes – Past, Present and Future, Celebrating the 30th Anniversary of Buckminster Fullerene

15-16 July
The Royal Society of Chemistry, Burlington House, London
A two-day symposium to honour Professor Sir Harry Kroto's scientific achievements and to celebrate the 30th anniversary of the discovery of C60. Organised jointly with the Royal Society.
Contact RSC Events
+44 (0)1223 434048
events@rsc.org

Tertiary Education Group University Teaching Fellows Network Meeting

23 July
University of Sussex
Contact Shane Lo Fan Hin
+44 (0)1273 678439
S.Y.Lo-Fan-Hin@sussex.ac.uk

SOUTH WEST

Bristol and District Section**No More Drugs for Superbugs. The End of the Antibiotic Age?**

10 June
Royal Agricultural University, Cirencester
Open to RSC members and guests.
Contact Colin Chapman
+44 (0)1453 547531
crc@lochin.fsnet.co.uk

Women Members' Network Meeting

30 June
Zero Degrees, Bristol
Contact Beth Anderson
+44 (0)117 331 7194
beth.anderson@bristol.ac.uk

Mid-Southern Counties Section**Porous Organic Cages – More than MOFs Minus the Metals**

17 June
Southampton University
Contact Syma Khalid
+44 (0)2380 594176
sykhalid@googlemail.com

WALES

South East Wales Section**Boronic Acids: Recognition, Sensing and Assembly**

1 June
Cardiff University
The lecture will last approximately one hour.
Contact James Redman
+44 (0)2920 876273
redmanje@cardiff.ac.uk

Alkaloid Biosynthesis in Plants

8 June
Cardiff University
The seminar will last for one hour. No registration necessary.
Contact James Redman
+44 (0)2920 876273
redmanje@cardiff.ac.uk

South West Wales Section**Retired Members Meeting and Tea**

18 June
Sketty Hall, Swansea
Contact John Davies
+44 (0)1792 894778
j.s.davies131@btinternet.com

Notices

Annual General Meeting

Our Annual General Meeting (AGM) is one of our foremost meetings held each year, and we would like to invite you to join us at this year's AGM on Wednesday 8 July at 17.00 in Burlington House, Piccadilly, London.

At the meeting, President Dominic Tildesley and Chief Executive Robert Parker will review the work we've done for the chemical sciences and our financial statements for 2014. We will note the election of members to our governance bodies including welcoming our next President Elect. The AGM offers a great opportunity for members to direct questions to Council and the Leadership Team and we are keen to hear your views on our activities.

The meeting will be followed by a reception, which offers you additional opportunities to network with Council, employees and other members.

Further information is provided in the AGM Notice circulated alongside this month's magazine and on our website at <http://rsc.li/agm15>



Invitation to a Special Lecture

We would also like to invite you to attend a special lecture at Burlington House before the start of the AGM. From 15.00, Professor Sir Martyn Poliakoff CBE CChem HonFRSC FRS, Research Professor of Chemistry at the University of Nottingham will give a lecture titled *Chimistes Sans Frontière*, this lecture will suggest how chemists should be crossing borders to reach new people, new disciplines and new solutions to global challenges. You may register your attendance by email AGM@rsc.org

Join the Early Career Network Committee

The Early Career Network is member-led, and activities and events are organised by Early Career Network Representatives and driven by the Early Career Network Committee.

We are looking for three members to join our Early Career Network Committee. The committee will meet at least once a year, and has the following remit; to have oversight on activities that support members in the early stages of their career, suggest and support potential activities, agree funding levels and identify areas of development for the Early Career Network.

The Early Career Network (previously known as the Younger Member Network) is an inclusive network for anyone who considers themselves in the early stages of their career and who feels they would benefit from networking within their peer group whilst forming connections with others who are further ahead in their career, whilst in a friendly and accessible environment. This may include members in industry, teachers, students, academics, as well as members who are returning to work or study following a career break, or those changing career path.

For more information on the role and the network please go to rsc.li/early-career-network

If you are interested in joining our committee please contact Marie Chapman by 1 July 2015 at networks@rsc.org, attaching a short personal statement outlining why you would like the role. For more information, please email or call 01223 432274.

Medimmune Protein and Peptide Science Award

The Protein and Peptide Science Group (PPSG) is pleased to announce that the winner of the 2015 Medimmune Protein and Peptide Science Award is Professor David Spring, from the University of Cambridge.

In recent years Professor Spring has developed novel methodologies for the synthesis of diverse macrocyclic peptidomimetics and the synthesis of stapled peptides where the staple itself can be functionalised.

Professor David Spring will receive his award, and give the Plenary Lecture, at the PPCS Early Stage Researcher Meeting on Friday 13 November 2015.

Analytical Awards Symposium

The 2015 Analytical Awards Symposium recently took place at Manchester University, in the Manchester Institute of Biotechnology. The aim of the event was to showcase the value that analytical chemistry and more broadly analytical science at all levels and to celebrate excellence through our awards programme which recognizes early career as well as more established researchers at the cutting edge of our vitally important field of chemistry.

The event covered some of the excellent work taking place in analytical science across a wide range of applications, from cell imaging and proteomics through to detection of psychoactive substances, food analysis, point of care diagnostic devices to analysis of pigments in valuable paintings.

Professor Perdita Barran and her students organised an interactive, energetic and thoroughly enjoyable event. Thanks are also due to our award winners who enabled us to celebrate great science that was communicated so well – we will look forward to hearing them all again in the future!

The event featured talks by Evan Williams (UC Berkeley), Shabaz Mohammed (Oxford), Sarah McAughtrie (Strathclyde), Kevin Giles (Waters Corporation), Amira Guirguis (University of Hertfordshire), Emma Richardson (University College London), Roberto de la Rica (University of Strathclyde) and Isabel Garcia-Perez (Imperial College London). **See more on p31.**

Chemical Reaction Challenge prizes

Students, teachers and parents joined members of staff and partners 3P Learning for the Chemical Reaction Challenge prize giving, held at Burlington House in May.

We organised the challenge in partnership with 3P Learning to celebrate British Science Week 2015. Almost 4,000 students around the world competed against each other and the clock for the chance to win an iPad for themselves and a free site licence for IntoScience – the interactive digital science resource – for their school.

Congratulations to our winners (who seemed to thoroughly enjoy their tour of Burlington House with members of our education and marketing teams!).

Top schools:

- Wilson's School in Wallington, UK – highest number of students taking part
- Beaconhouse Margalla Islamabad, Pakistan – highest average student score

Top students:

- First place: Declan Bradley, King Edward's School, Birmingham, UK
- Second place: Jack Gamble, Cokethorpe School, Witney, UK
- Third place: Raunak Jain, King Edward's School, Birmingham, UK
- Highly commended: Izzy Saint, Jarrow School, Jarrow, UK



▲ Our education team taking our guests on a tour of Burlington House.

▼ Our Chemical Reaction Challenge winners.



RSC Energy Sector PhD Thesis Award Competition 2014

Dr Oluwafunmilola Ola is the winner of the RSC Energy Sector PhD Thesis Award competition for 2014. The award is given for an outstanding PhD Thesis completed at a UK university in the calendar year 2014 in the field of Chemistry for the Energy Sector and assessed by a panel of experts drawn from the RSC Energy Sector Committee.

Dr Ola's thesis entitled *Effect of Metal Doping and Supports on TiO₂-based Catalysts for CO₂ Photoreduction* and her work explores the production of solar fuels from carbon dioxide, water and sunlight with a sol-gel derived TiO₂ photocatalysis. A key discovery was that methanol production rates from CO₂ using copper and cobalt doped TiO₂ on a quartz support was found to be 20 times higher than the conventional technique. Dr Ola completed her PhD studies at Heriot-Watt University under the supervision of Professor Mercedes Maroto-Valer.

Second place was awarded to Dr Hazel Reardon for her PhD entitled *Structure and Characterisation of Novel Lightweight Energy Materials based on Group I and II Metal Compounds* and third place to Dr Ruth Downie for her PhD entitled *Synthesis, Structure and Properties of Zintl-Type Thermoelectric Materials*.

The award is given to spotlight UK PhD research in the energy sector and the competition is judged largely on the content and quality of an Executive Summary submitted by the candidate and considers the following criteria: (i) the level to which the work addresses a clear identified need in UK or global energy requirements, (ii) the level to which the work adds significant new understanding to an aspect of the energy sector and (iii) the level to which the work contributes to quantifiable environmentally sustainable energy provision.

For further details please contact rsenergysector@gmail.com

Summary of financial information 2014

Each year we pull together a summary of the previous year's activities and our financial performance in the Financial Statements and Trustees' Report. A summary of our financial statements is reproduced here. For more detailed information on our finances as well as our many achievements throughout 2014 you can download the full report at www.rsc.org/aboutus/corppubs

We will also share further details at the Annual General Meeting, which will take place on Wednesday 8 July at 17.00 at Burlington House.

I am pleased to report that 2014 again saw some fantastic achievements, with a total of £55.20M being spent on supporting the chemistry community and advancing excellence in the chemical sciences. A modest deficit was generated on a turnover of £53.94M, which was an increase of £2.34M on the prior year, and which underpins the Society's commitment to investing in the chemical sciences.

Membership has continued to grow to an all-time high of 51,561, generating £3.62M from subscriptions. This was balanced by expenditure of £4.25M in support of members and member activities. Our membership retention rate rose to 91%, with 84% of respondents saying that they are proud to be members of the Royal Society of Chemistry.

We were again able to increase overall expenditure in support of scientific affairs, from £1.76M in 2013 to £2.31M in 2014 due to an increased number of conferences that were organised and supported by the Society during the year.

Our publishing portfolio continued to perform well, returning a surplus of £7.27M over the year. We attracted 92,139 submissions to our journals and published 36,251 articles, representing a 33% year-on-year growth. We also announced that our flagship journal, *Chemical Science*, would become a Gold Open Access journal from 2015, with a two-year waiver on article processing fees.

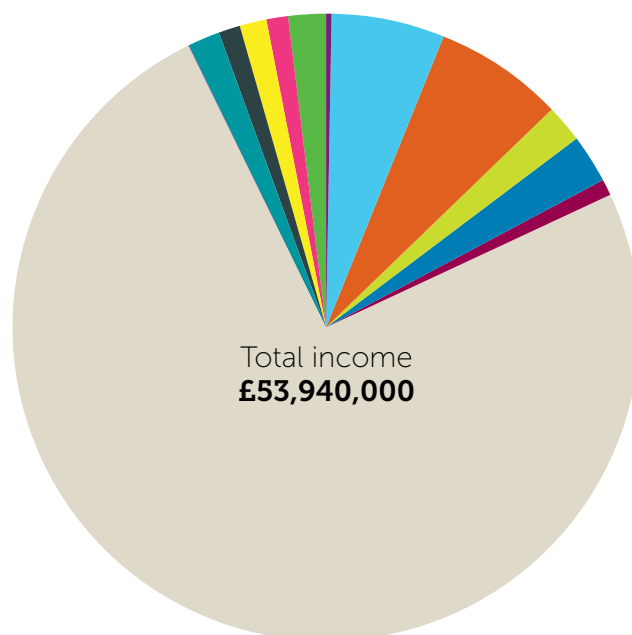
Overall, we continue to be in a strong position to play a major role in advancing and promoting the chemical sciences and to maintain our position as one of the world's leading sources of reliable chemical science knowledge.

Professor David Grayson, Honorary Treasurer

TRUSTEES' STATEMENT

This financial information is taken from the audited and published statements for 2014, which were approved in April 2015. The full financial statements contain an unqualified audit report and will be submitted to the Charity Commission after the Royal Society of Chemistry Annual General Meeting on 8 July 2015. This summary information may not contain sufficient information to allow a full understanding of the financial affairs of the group and parent charity. The 2014 Financial Statements and Trustees' Report is available for download from www.rsc.org/aboutus/corppubs

If you would like a printed copy or have any questions regarding the financial statements, please contact our finance department at finance@rsc.org

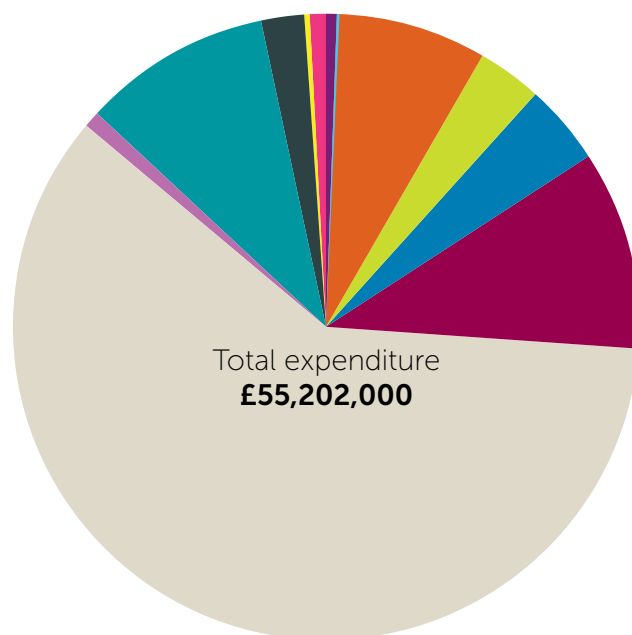


Income (£000)

Voluntary income	206
Investment income	3,140
Membership	3,617
House journal	1,072
Conferences	1,274
Qualifications and education	506
Publishing	40,290
Library	2
Scientific affairs	937
International development	534
Other	857
Activities for generating funds	493
Defined benefit scheme	1,012

Expenditure (£000)

375	Voluntary income
71	Investment income
4,249	Membership
1,880	House journal
2,305	Conferences
5,645	Qualifications and education
33,024	Publishing
493	Library
5,361	Scientific affairs
1,255	International development
103	Other
441	Activities for generating funds



Tom West Fellowship Award nominations open

Part of the Analytical Division celebrations in Manchester (see p28) included awards given to celebrate the life and work of Professor Tom West FRS CBE. The fellowship was established to assist early career analytical chemists within five years of their first full-time junior academic appointment at a UK or Irish higher education institution to establish their own independent analytical science research identity.

The fellowships are valued at £15,000 and may be used by fellows in any way that advances the purpose of the fellowship and of the Analytical Chemistry Trust Fund.

To apply or for more information please contact the Trust Secretary, Dr David A Ferguson: tel: 01276 500780 or email david.ferguson@ntlworld.com



2015 Tom West winners

The winners of the 2015 Tom West Fellowships, pictured left at the Analytical Awards Symposium are:

- **Dr Emma Richardson**, University College London
Tom West Analytical Fellow in Heritage Science
- **Dr Isabel Garcia-Perez**, Imperial College London
Development of novel multivariate analytical methods to characterise low molecular weight molecules in whole meals
- **Dr Roberto de la Rica**, University of Strathclyde
Biosensors for the one-step detection of proteins with the naked eye

The Analytical Chemistry Trust Fund administers the Tom West Fellowships, which were established in 2012.

Deaths

Dr Douglas Ambrose OBE
CChem FRSC Retired. Died 1 February 2015, aged 95

Mr Frank William Bampton
CChem FRSC Retired. Died 18 March 2015, aged 97

Mr James Hugh Brash MRSC
Retired. Died 13 March 2015, aged 83

Professor Raymond Victor Brooks OBE CChem FRSC
Retired Emeritus Professor, St Thomas Hospital. Died 24 March 2015, aged 92

Dr Peter Ellyatt Cattermole
CChem FRSC Retired head of science, Winchester College. Died 16 March 2015, aged 65

Mr Michael Anthony Child
MRSC Retired senior analyst, West Yorkshire Analytical Services. Died 12 March 2015, aged 67

Mr Jeremy Nicholas Cook
CChem MRSC LGC Ltd. Died August 2014, aged 49

Dr Trevor Morgan Cook CChem FRSC
Chairman, British Institute of Homeopathy. Died 4 March 2015, aged 84

Mr Albert John Buchanan
Edgar MC CChem MRSC Retired Procter & Gamble Ltd. Died 25 March 2015, aged 92

Mr Jeffery George Flower
CChem MRSC Retired Dickinson Robinson Group. Died 1 February 2015, aged 84

Dr Alan John Fudge CChem MRSC
Retired principal scientific officer, AEA Technology. Died 7 March 2015, aged 86

Professor Raymond Gerdil
MRSC Retired crystallographer, University of Geneva. Died 14 November 2014, aged 85

Mr Reginald William Hale
CChem FRSC Retired. Died 28 March 2015, aged 101

Dr Dorothy Muriel Hall MRSC
Retired. Died 22 March 2015, aged 95

Mr Christian Schmidt Hansen
CChem MRSC Registrant, Richard Baker Harrison Ltd. Died 19 December 2014, aged 58

Mr Dewi Ieuan Jones CChem MRSC
Retired. Died 29 January 2015, aged 85

Mr Roderick John Livingstone
CChem FRSC Retired. Died 3 March 2015, aged 70

Dr Velliur Nott Mallikarjuna Rao MRSC
Retired scientist, El DuPont de Nemours & Co. Died December 2014, aged 77

Mr Eric Marshall CChem MRSC
Retired prescribed analyst, The Townley Analytical Company. Died 3 March 2015, aged 88

Mr Frederick Johnson Morpeth
CChem FRSC Retired. Died 18 August 2014, aged 75

Mr Finnbar Murphy CChem MRSC
Retired. Died 16 March 2015, aged 91

Mr Robert Symes Robertson
CChem MRSC Retired. Died 15 March 2015, aged 74

Mr Patrick Roche CChem MRSC
Retired department plant manager, Courtaulds Acetate Ltd. Died 13 February 2015, aged 85

Mr Edward Joseph Rothery
CChem FRSC Retired head of department of chemistry, Dublin Institute of Technology. Died 8 March 2015, aged 85

Dr Laurence Rule CChem FRSC
Retired University of East London. Date of death not supplied

Professor John Nicholas Staniforth CChem FRSC
Died 6 March 2015, aged 61

Mr Edward Stevenson CSci CChem MRSC
Discipline lead production chemistry, Shell International Exploration & Production. Died 4 February 2015, aged 63

Mr Raymond Tully-Turner
CChem FRSC Management consultant. Died 29 March 2015, aged 94

Dr John Edward Tyler CChem FRSC
Retired research scientist, Medical Research Council. Died 19 March 2015, aged 84

Mr Peter James Wood CChem MRSC
Retired senior lecturer, Llandrillo Technical College. Died 31 January 2015, aged 80

To inform us of the death of an RSC member please contact the Membership Department on 01223 432141 membership@rsc.org



THE ROYAL SOCIETY OF CHEMISTRY'S

Summer Party at the Royal Academy of Arts

Thursday 16 July 2015, 7.30pm-10.00pm

Come and join us for our flagship event and celebrate the work of the Royal Society of Chemistry in the company of fellow members, colleagues, friends, industrialists, politicians and distinguished scientists, whilst viewing the largest contemporary art exhibition in the world.

Tickets include private admission to the Royal Academy of Arts Summer Exhibition, entertainment and a selection of food and drinks throughout the evening.

Dress code: Black tie, decorations

To purchase your tickets by credit/debit card please visit our website <http://rsc.li/summer-party> or complete the form below and return to the Royal Society of Chemistry Events team by booking deadline 22 June.

events@rsc.org

Please complete in CAPITAL letters and return to: Events Team, Royal Society of Chemistry,
Thomas Graham House, Science Park, Cambridge, CB4 0WF

Name: RSC Membership no:

Address:

Contact tel: Email:

Please state guest names and any dietary requirements for all guests:

.....

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Number of tickets at member rate of £65 each (maximum 2) ☐

Number of tickets at non-member rate of £95 each ☐

Please make your cheque payable to 'Royal Society of Chemistry' for £

Members regularly receive information about the Royal Society of Chemistry's activities, products and services. We would also like to keep non-members informed about future activities. If you are a non-member and you would prefer NOT to receive this information, please tick here. ☐

011537 Registered charity number: 207890

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