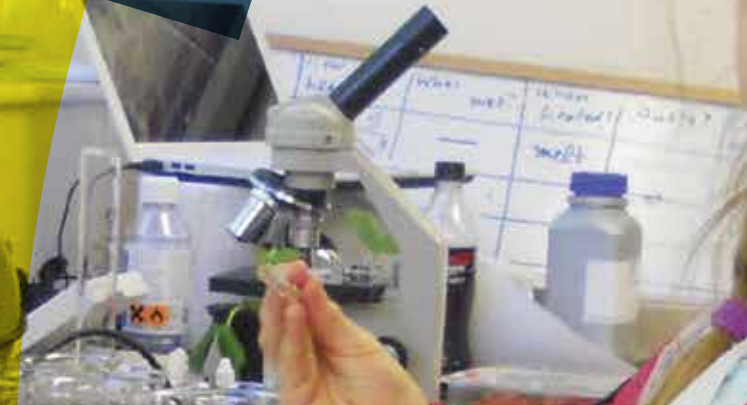




Annual review 2012





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Welcome from the President



Professor Lesley Yellowlees
MBE FRSC FRSE

In a year in which the wettest summer in a century destroyed much of Britain's crops, an acute energy crisis hit South Asia and antibiotic resistance increased at an alarming rate, the challenges that our global society faces became ever more apparent. We took this opportunity to work harder than ever before to champion the vital role the chemical sciences have in addressing them.

Supported by our roadmap, *Chemistry for Tomorrow's World*, we made sure that as many people as possible – from policymakers to the general public – became aware of how important chemistry is to our lives. Our five policy events at the Chemistry Centre stimulated lively discussions and debates between scientist, industrialists and policymakers, and through a variety of government events, we brought science directly to parliaments across the UK.

To ensure that a vibrant chemical science community is in place to address future challenges, we must inspire the next generation of chemical scientists. And we made sure students of all ages had a chance to become excited about chemistry, through our Mpemba effect competition, which asked the public to explain why hot water freezes faster than cold water, our first-ever ChemCareers fair in India, our mobile Spectroscopy in a Suitcase kit and numerous other activities and events.

Picking up the Olympic spirit that gripped the world throughout the summer, we focused several of our activities, such as our global experiment, on science and sport. Triathlon world-champion and Olympic gold medallist Alistair Brownlee MBE launched the project, which saw school children from five continents test whether sports drinks have a positive effect on performance.

But the Olympic and Paralympic games didn't just provide a backdrop for some of our activities. They also powerfully demonstrated and celebrated diversity – a theme that has become an important focus for the RSC. I am proud to have taken office as the first female president this year. But more importantly, I want to make sure I won't be the last.

Promoting diversity in science and inspiring young people with very different backgrounds became the focus of our 175 Faces of Chemistry initiative. Leading up to our 175th anniversary in 2016, we will celebrate 175 chemists with interesting backgrounds, diverse careers and personal stories. Together, they will show that the word 'chemist' represents a vast array of people. And hopefully they will encourage young people to become part of this diverse community.

A strong and diverse chemical science pipeline – alongside support for research and innovation – is critical not only for the science community but for economies across the world. Be it through creating jobs or generating wealth, the chemical sciences are vital, especially during these tough economic times. This is why, at the end of 2012, we successfully brought together the chemical science community to launch a campaign for continued investment in UK science.

I look forward to continue making our case for the chemical sciences, not only to policymakers but also to the public. Our success in 2012 has shown what we can do. Let's make sure we keep up the momentum in the years to come.

We made sure that as many people as possible became aware of how important chemistry is to all our lives.

A message from the Chief Executive



Dr Robert Parker
CSci CChem FRSC

It is an honour to lead an organisation as successful as the RSC. I am especially proud of the way employees, members and partners worked together towards our shared goal of advancing the chemical sciences, delivering fantastic achievements across all of our activity areas.

During the past five years, RSC publishing has grown substantially, and 2012 was no exception to this trend. With two new journals, additional functionalities on our website, the launch of new mobile apps and a growing e-book collection, we clearly demonstrated that we are at the forefront of disseminating chemical science knowledge. Launching our innovative Gold for Gold initiative to support researchers worldwide in the transition to open access publishing, we showed that the RSC truly is a world-leader in scientific publishing.

By opening our sixth international office in São Paulo, Brazil we were able to support and lead the global chemistry community even more successfully. Thousands of scientists, industrialists and policymakers attended our conferences and events, ranging from the Pan Africa Chemistry Network (PACN) conference on health, water and waste to our policy debates at the Chemistry Centre in London, to discuss how chemistry can help address many of the challenges our global society faces.

With the help of our growing community of 47,000 members and more than 7,000 e-members, we promoted chemistry to a worldwide audience throughout the year. Taking on the challenge of creating a lasting legacy for the International Year of Chemistry in 2011, 60 of our member groups turned small £1,000 grants into extraordinarily creative events and activities to showcase chemistry to children and adults in the UK and beyond.

Making the most of today's digital world, we now support thousands of individuals learning and teaching chemistry. In its first year, more than 350,000 students and teachers made use of the educational resources on our Learn Chemistry platform. Many of the 3,500 resources were created in association with partners like BASF and Reckitt-Benckiser and are an excellent example of how our partnerships support our mission.

It is the successful partnership between our employees, trustees, members and partners that makes these remarkable achievements possible. So I would like to take this opportunity to thank them all for their dedication and commitment to the RSC and the chemical science community. And I look forward to making the forthcoming year even more successful.

Looking ahead, we want to build on our past achievements to accomplish even greater things. With this in mind, we have developed a new strategy and vision that will lead all of our activities, focusing on cultivating the chemical science skills and knowledge pipeline, strengthening our community's voice and becoming the global advocate for and authority on chemical science.

To mark this change, we have invested in changing the way we look by refreshing our brand, and I hope you enjoy getting a first taste of it in this document. It's bold, it's innovative, it represents who we are and where we are going – and it will support our ambitious goals for the future.

It is the partnership between our employees, trustees, members and partners that makes remarkable achievements possible.





Supporting a strong membership

Our members, whether in the UK or abroad, are at the core of our activities to advance the chemical sciences and we are continually improving the support that we provide for them.



The RSC's new strategy supports a bold vision: to be the leading voice and trusted partner for science and humanity. Our membership is vital to the organisation realising this ambitious goal and our strategy places a strong membership at the heart of our activities.

The RSC community grew substantially throughout 2012: in addition to 46,870 members, it now also encompasses approximately 7,000 e-members. Our members represent the breadth of the chemical sciences, from academia to industry and teaching. But perhaps more importantly, they provide key contacts in and understanding of the global chemistry community, with almost 20% of them being based outside the UK.

Through scientific Divisions, Interest Groups, Local Sections and networks our members take a major part in the RSC. By organising 621 events – many of which were educational events and public lectures and 95 were organised by our international sections – our members heavily supported our goal of promoting the chemical sciences to a wide and varied audience.

Our annual General Assembly provides an opportunity for members to find out more about current activities and to provide feedback on and input into our strategy. It also provides an important opportunity for representatives from all groups including the international sections to network with each other as well as with RSC staff and Council members. 2012 also saw the introduction of ten regional steering groups – nine UK-based and one international – to maximise the impact of our activities by encouraging communication and collaboration between all RSC networks within the geographical regions.

With an increasing number of our members based abroad, we have continued to develop the way we provide support for and engage with them. Our e-membership makes it easy for anyone with an interest in the chemical sciences to connect with the RSC through MyRSC. Our online chemistry community grew to a record 39,500 users, with more than 60% of member groups now having a presence on the site to discuss activities and share experiences.



Members from around the world had a chance to meet each other, RSC employees and Council at the annual General Assembly.

MyRSC now has more than 39,500 users. Here, RSC employee Robert Bowles explains how members can use the online community to network.

Our members organised 621 events, including the Younger Member Network symposium that allowed members to share experiences.

Expanding our popular online ChemCareers careers fair on MyRSC, we held three events that attracted a total of 2,350 visitors over five days. And for the first time, we specifically supported our international members: we dedicated one day to speaking with those living in India, China and the USA and offered a session on working abroad. The careers service also supports members through a variety of other services and activities. In 2012, 79 members received advice at in-house appointments, 68 attended careers workshops, and almost 400 received support via email and MyRSC.

The RSC Benevolent Fund provides members and their families with financial and non-financial support to assist them in times of difficulty. In 2012, the RSC was able to help 136 members experiencing difficult situations like financial hardship, employment difficulties or illnesses; 19 applications for financial assistance were agreed, and many more members were supported locally through our network of 100 member volunteers. Raising awareness that such support exists for members is of the highest priority for the fund.

We aim to develop and support a chemical science community that represents all aspects of diversity, including diverse professional backgrounds and different professional routes.

To achieve this goal, we contributed to the development of two new Science Council professional registers, Registered Science Technician (RSciTech) and Registered Scientist (RSci). After having successfully applied for licences to award these, we admitted a total of three Registered Science Technicians and 48 Registered Scientists in the first year.

46,870

members in 2012

621

member-led events

48

RSci certificates awarded

By organising 621 events our members heavily supported our goal of promoting the chemical sciences to a wide and varied audience.





GATSBY



We continue to support the professional development of our members. Here, Lord Sainsbury presents a certificate to Harry Fox from EDF Energy, who was one of the first to achieve RSciTech status.



Tara O'Neill

Assistant scientific officer at
Northern Ireland Water



Tara O'Neill was one of the first RSC members to join a new Science Council professional register by obtaining a Registered Scientist (RSci) award. Here, she explains how it has helped her professional development.

I've had a strong interest in all aspects of science from a young age, which led me to completing a degree in Biological Sciences at Queen's University Belfast. By taking a gap year during my studies, I was able to put what I had learned into practice, gaining hands-on experience working at the Public Analyst Laboratory in Belfast.

After completing my degree in 2005, I worked for a private-public partnership initiative at a wastewater treatment works for a year and a half, but began to feel that I never really had a break. Most of my friends had gone on world trips or travelled around Europe; and I got itchy feet. So in February 2007 I decided to travel around Canada. Unfortunately, when I returned the economic boom seemed to have all but faded away.

I had come back to a country that was very different from the one I left and found it impossible to get a job in science – even with my experience. I applied for numerous posts, but every letter came back saying “unfortunately, your application has been unsuccessful”. It was after two years of searching that a perfect job appeared in a local newspaper: Northern Ireland Water was hiring an assistant scientific officer for their wastewater laboratory.

My application was successful and I started work in September 2010. The laboratory is accredited for water and wastewater analysis and has a well-established quality assurance programme – with the main objectives targeted towards the chemistry of water analysis.

Northern Ireland Water works in partnership with the RSC to assist and support those with a keen interest in developing their chemistry skills.

Having never shied away from an opportunity, I armed myself with all the details and made some enquiries about the Science Council's new register for professional scientists (RSci). It sounded like an ideal way for me to improve my personal and professional development, kick-start my career and keep in touch with the industry's best practice.

The process of applying for this accolade was very straightforward. I submitted my CV to the RSC, detailing my education and work-experience, on the basis of which my eligibility for the award was assessed. I then completed a competency form, detailing how I attained certain skills and expertise. I had to demonstrate how I have developed communication, technical, organisational, behavioural, interpersonal and safe working skills. I already maintained a log of my continuing professional development and I also employed the help of my mentor, Gillian Williamson CChem, to help me demonstrate how I met the competencies required. I was amazed when I realised how many skills I had already acquired within my working career.

The RSci was perfect for me and highlighted to my employers how dedicated and willing I am to progress with both the chemistry profession and its advancement. I would greatly encourage experienced technicians to apply. In addition, I became an associate member of the RSC, meaning that I can enjoy other benefits the RSC has to offer, including networking opportunities and access to its Virtual Library. I am now using the RSci as a firm foundation for setting me up with the necessary skills to work towards achieving Chartered Chemist (CChem) status in the future.

The RSci was perfect for me and highlighted to my employers how dedicated and willing I am to progress.





Leading the global chemistry community

The RSC brings together scientists from academia and industry to support collaboration, share new ideas and encourage best practice.



With eight offices in five countries and 8,764 members outside the UK, the RSC is truly an international organisation. In 2012 we successfully strengthened our international presence and influence to support the chemistry community in tackling global challenges.

In 2012, we opened our sixth international office in São Paulo, Brazil and renewed our cooperation agreements with the chemical societies of Brazil, India and South Africa. Through having a physical presence in different countries and developing strong collaborations across the world, we are able to tailor our activities to effectively support chemical scientists globally.

We made a substantial contribution to fostering interaction and collaboration between scientists and industrialists across the world by hosting 2,105 delegates at 14 major scientific conferences across the world. Now in its third year, the International Symposia on Advancing the Chemical Sciences (ISACS) series continued to attract top-class international researchers, and

this year's symposia on organic chemistry and chemical biology in Edinburgh, inorganic and materials chemistry in Toronto, and nanoscience in Xiamen firmly established ISACS as a major conference series.

Through the Pan Africa Chemistry Network (PACN) we strengthened our relationships across Africa. Two new analytical chemistry centres of excellence in Nigeria, which were set up with the help of our partner Procter & Gamble, will make an important contribution towards creating a self-sustaining African science base. We also hosted several conferences, including the 5th Annual PACN Congress in Addis Ababa, Ethiopia, which brought together 120 participants from 20 countries, and scientific writing workshops to enable African researchers to share their knowledge effectively.

The RSC has had close connections with the Indian chemical science community for over 60 years. Through meetings, workshops, school events and public lectures our five Local Sections actively promote the chemical sciences across



The PACN supports African scientists – like this student at the University of Lagos – in developing their skills and sharing knowledge.

Global experts, such as Nobel Prize winner Ei-ichi Negishi, come together at our events, conferences and workshops.

Being recognised for their exceptional work, our Prize winners from across the globe had a chance to celebrate at the General Assembly.

the country and support scientists at all career stages. Our first Indian ChemCareers event was highly successful, and attracted more than 1,000 students.

Together with the National Natural Science Foundation of China (NSFC) we held the International Workshop on Natural Products Chemistry in Beijing. With speakers from Africa, Brazil, China, South East Asia and the UK, it provided Chinese researchers with the opportunity to discuss their work and form collaborations with international colleagues. Unilever, General Electric and Wacker supported our activities in China by sponsoring meetings like the International Symposium on Silicones and Polymers, which attracted 250 delegates.

To promote good practice in university chemistry education internationally, we accredited programmes at the University of Malaya, Malaysia and the Institute of Chemistry, Ceylon, Sri Lanka. Following submissions from universities in Indonesia, the United Arab Emirates and Saudi Arabia, we will continue expanding our international accreditation programme throughout 2013.

Throughout the year, our members lent fantastic support to our international activities and created a lasting legacy to the International Year of Chemistry in 2011. With £1,000 grants our Local Sections and Interest Groups across the globe developed an enormous variety of activities to promote the chemical sciences. Ranging from workshops for migrant children in Beijing and a science fair on water chemistry in southern India to supporting chemistry education in tsunami-affected areas in Sri Lanka and an educational resource based on the zinc seam in North Wales, the activities arranged by 60 of our member groups succeeded in bringing chemistry to a global audience.

8,764

RSC members outside the UK

2,105

delegates attended
RSC conferences

1,000

participants at
ChemCareers India

Through having a physical presence in different countries and developing strong collaborations across the world, we support chemical scientists globally.



Migrant children in Beijing had a rare chance to experience hands-on chemistry during the weekend science workshops set up by the Beijing Local Section as part of the IYC challenge competition.



David Evans

Chair of the Beijing
Local Section



David Evans is one of the almost 9,000 international RSC members. Here, he describes how the Beijing Local Section complements the RSC's activities in China and why engaging school children with chemistry can be hugely rewarding.

The RSC's Beijing Local Section was formed in 2008 and now has around 50 members. Employees in the Beijing office organise many academic lectures and symposia in China, so we decided that the Local Section should focus on outreach activities.

As part of our activities, I give demonstration lectures to audiences ranging from primary school pupils to non-chemistry undergraduates. I particularly enjoy giving lectures to students who are beginning to study science in depth. After a recent lecture as part of the Beijing Science Festival, year 8 student Zheng Yufeng wrote on his school's website that "this unforgettable lecture really inspired our interest in science and left us longing to study more physics and chemistry". Encouraging comments like this make me feel that even in the digital age, live science lectures really can make a difference.

It was thanks to the International Year of Chemistry Challenge (IYC) grant from the RSC that we were able to expand our outreach activities from one person (namely me, standing at the front of a lecture theatre) doing experiments to many.

In collaboration with the Migrant Children's Foundation (MCF) charity, we set up the *Fun with Science* programme for children of migrant workers from the Chinese countryside working in Beijing. Many of these children are unable to obtain a place in a state school and attend poorly-funded migrant schools that don't offer the chance to study science.

We began by running monthly Saturday morning practical chemistry classes for primary school students in one migrant school. The children's excitement and thirst for knowledge, once kitted

out in their lab coats and safety glasses, is always palpable. In addition to giving migrant children their first exposure to hands-on science through simple chemistry experiments, the classes allow them to learn in a new and exciting way. Doing experiments in the garden shed at a similar age was what sparked my interest in chemistry and I hope one or two of our pupils will be similarly enthused and inspired.

We were absolutely delighted when our project was announced as one of the winners of the RSC's IYC Challenge competition. With the prize money we are now able to run three classes a month in different migrant schools and hope to organise even more in the future. In order to run these classes, we are training an expanding group of enthusiastic high school and university students as demonstrators, all of whom have found it enjoyable and rewarding – not only inspiring pupils but being inspired themselves.

Together with the Institute of Physics, we also organize 'Understanding Science' – a series of monthly Café Scientifique-style talks – where leading scientists from China and abroad talk about their work in a way that makes it accessible to everyone. These covered topics such as chemistry for a sustainable society, the structure of the universe, 'Why don't bacteria get Alzheimer's disease?' and photomedicine and attracted audiences of up to 80 people.

Outreach activities are at the core of the RSC's mission, and the employees in the Beijing office have been an invaluable help with many of our activities. So on behalf of the Beijing Local Section committee, I not only thank them for their support, but also look forward to working together on more initiatives in the coming months and years.

Even in the digital age, live science lectures really can make a difference.





Engaging

people with chemistry

We help teachers to inspire the next generation of chemical scientists and engage with the public to demonstrate the vital role of chemistry in our society.



Inspiring and supporting the next generation of talented chemical scientists is essential to ensuring that a vibrant and diverse science community is in place to face the future.

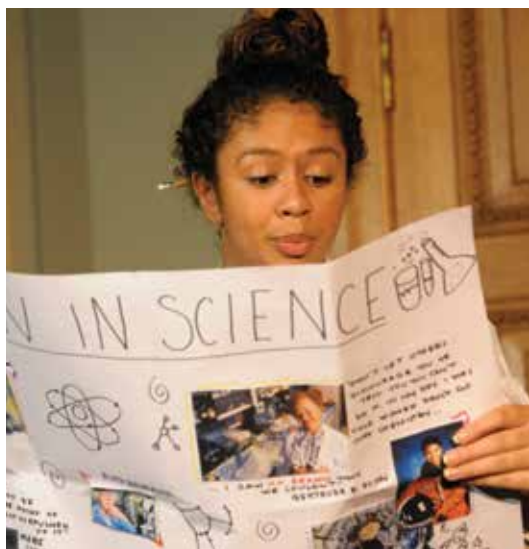
As the largest non-governmental supporter of chemistry education in the UK, we help to make sure that teachers are fully equipped to teach chemistry engagingly and effectively by offering training and development opportunities. More than 15,000 students benefited from this year's twelve Chemistry for Non-Specialists courses, which provided 172 teachers without a chemistry background with enthusiasm and confidence in teaching the subject.

Because we are committed to raising the status of teaching as a profession and encouraging talented chemistry graduates to go into teaching, we worked with the government to develop a new teacher training scholarship scheme that will fund 130 individuals to become inspirational chemistry teachers.

The launch of our Learn Chemistry platform positions us at the cutting-edge of disseminating

chemical knowledge online to a wide audience. In its first year, it provided 350,000 students and teachers with thousands of resources and established its reputation as a high-quality service by being shortlisted for British Educational Training and Technology (BETT) and Education Resources awards. Partnering with companies like BASF, Reckitt-Benckiser and BOC we created exciting new resources, and our interactive *On This Day in Chemistry* calendar provides curious users with an interesting chemical history fact on each day of the year.

This year saw the conclusion of the National HE STEM Programme, of which we were a partner. Funded by the Higher Education Funding Councils for England and Wales, its aim was to widen participation and enhance skills and knowledge in science, technology, engineering and mathematics (STEM). Following its success, a number of RSC activities such as Spectroscopy in the Suitcase (SiaS) will continue in the future. So far SiaS has allowed 26,000 pupils to get a taste of hands-on chemistry and, having secured additional funding for two sets of equipment in Wales, even more will be able to do the same.



The Chemistry Centre became a theatre for the first time for a performance of *If Chloe Can...* to champion female role models in science.

Students interested in taking up chemistry at university were able to find out more about it at our Meet the Universities event.

Hundreds of children and adults had fun with chemistry at the Cambridge Science Festival, where we combined chemistry and sport.

A personal story can be a powerful way to inspire others. Our ChemNet ambassadors are RSC members who share their experiences in chemistry with school students to capture their enthusiasm. By training an additional 230 members as ambassadors we now reach students across the UK. We also held 91 Chemistry at Work events, which gave 946 teachers and 14,195 students the opportunity to find out more about chemistry in everyday life and different careers.

Only two years after its opening, 2012 saw the Chemistry Centre at Burlington House host more than 1,000 events, including scientific conferences, award ceremonies and product launches. To engage the public with chemistry, we held twelve sold-out public lectures on topics like chemistry and art, genetic fingerprinting and science in the Olympics.

The Mpemba effect competition – which offered £1,000 for the best explanation of why hot water freezes faster than cold water – became the most successful public engagement activity in the history of the RSC, attracting more than 22,000 entries and media coverage spanning the globe, from the BBC's *Newsnight* to the Chinese national press. Shortlisted candidates were invited

to a special prize-giving ceremony with Erasto Mpemba – patron of the still-unsolved question – at Burlington House.

Throughout the year we also generated media coverage on a variety of topics, including a molecule shaped like the Olympic rings and the chemistry behind Yorkshire puddings. We also used the media to promote studies published in our journals – for example on using a nasal spray to administer insulin – and to influence and raise awareness of topics such as women in science.

Inspiring and supporting the next generation of chemical scientists is essential to ensuring that a vibrant and diverse science community is in place to face the future.

350,000

individual visitors to Learn Chemistry

22,000

Mpemba effect competition entries

91

Chemistry at Work events



172 teachers without a chemistry background attended our Chemistry for Non-Specialists courses, which help them to teach the subject with more confidence and enthusiasm.



Peter Banks

Chemistry teacher,
the Purcell School



The Learn Chemistry platform pulls together the RSC's many trusted, teaching and learning resources. Peter Banks explains how he uses them in the classroom to create fun and engaging chemistry lessons.

During the first three years of my teaching career, I have benefited greatly from the large array of the RSC's fantastic educational resources and facilities. After having completed my chemistry degree and teacher training at Bangor University I was appointed as the only chemistry teacher in a small independent school just outside Watford. As a result, it was up to me to design the curriculum and work schemes and to plan classroom investigations and demonstrations. So for me, the RSC resources provided a vital link to the world of chemistry education! The most useful of these is the new Learn Chemistry site. It serves as a real 'one-stop shop' for chemistry teachers and students alike. When time is tight the ability to simply pull up the Learn Chemistry page and find something quickly is, frankly, a lifesaver!

My current favourite is *On This Day In Chemistry*, which I often bring into the classroom as an introduction to a topic or simply as a bit of fun at the end of a lesson. When teaching pH, for example, I noticed that Danish chemist Søren Sørensen – who developed the pH scale – was born on that particular day, and shared this chemistry fact with my students. Historical references work well to highlight areas that potentially wouldn't be visited in the curriculum and the resource provides another angle through which to teach chemistry and even my least enthusiastic chemistry students are keen to find out what happened on their birthday!

I also really like the *Classic Chemistry Practicals* and *Classic Chemistry Demonstrations*. These fundamental resources are absolutely packed full of fail-safe practicals and I encourage all chemistry teachers to find and make use of them.

Being the only chemistry teacher in a school can be tough. There is no one else to bounce ideas off, check though tricky topics and chat about recent changes or how to improve specific practicals. The RSC, in conjunction with the Science Learning Centre, have provided several amazing courses that have given me much needed ideas for the classroom and put me in touch with other chemistry teachers. Simply networking with others helps to generate an enormous number of ideas, and the training sessions really got my imagination for practicals firing, preparing me to return to my school with a whole new toolkit.

My interest in chemistry was sparked by my school chemistry teacher; the obvious enthusiasm and love for his subject rubbed off on many of his pupils. Out of university, I still have a thirst for learning, and the RSC also helps to extend and revitalise my own interest in and knowledge of chemistry. I regularly visit the Chemistry Centre to take part in lectures on many different subjects by highly distinguished speakers. Recently, I was lucky enough to hear Professor Hasok Chang give a fascinating talk on Joseph Priestley. What's best is that I not only enjoy these lectures on a personal level, but that I am always able to pick up nuggets of information which I bring back and apply in the classroom.

I hope that, like my chemistry teacher, I'm able to enthuse my pupils (or at the very least give them a good working knowledge of chemistry). I look forward to seeing new additions to Learn Chemistry – I will certainly continue to make use of them to help my pupils to enjoy their lessons.

When time is tight the ability to pull up Learn Chemistry and find something quickly is, frankly, a lifesaver!





Influencing the future of chemistry

The RSC's experience, knowledge and understanding of the benefits of chemistry to society is sought and trusted by senior policymakers, nationally and internationally.



Years after the global economic downturn, the world economy remains slow and governments are looking for ways to stimulate economic growth. We made sure that our activities clearly demonstrated the value and benefit of chemistry to the economy and in addressing a variety of societal challenges.

In collaboration with the Northern Ireland Assembly, we extended our parliamentary activities by hosting our first ever Science and Stormont event, providing an important opportunity for Assembly Members to discuss the importance of science and innovation as drivers of Northern Ireland's economy with members of the scientific community. Fostering interactions between these communities is a key aspect of our work to support the development of government policies.

Our engagement with devolved governments in the UK continued with our annual high-profile events in the Welsh and Scottish parliaments. The Science and the Assembly event in Cardiff focused on science and sport and attracted a record number of attendees, and the 250

participants at Science and the Parliament in Edinburgh were able to interact with representatives and exhibitors from 25 scientific organisations and companies.

Throughout the year, we also brought science straight to Westminster. During Parliamentary Links Day in June – the largest scientific event in Parliament – 40 of our members had the opportunity to discuss science and sport with Rt Hon David Willets MP, Rt Hon John Bercow MP, Chi Onwurah MP and other politicians before the London 2012 Olympics.

In addition to stimulating discussions between scientists and policymakers, we also focus on building and developing direct relationships with politicians. Acting as trusted advisors to the government, we responded to 25 consultations on a variety of topics, including the development of doctoral training centres, A-level reform, nuclear research and development and other topics related to energy. We attended all three major party conferences and held a number of personal meetings with government officials to discuss a variety of topics related to our work.



To increase awareness of chemistry's vital role in society, the Materials Chemistry Division organised a schools lecture on energy.

Bringing together scientists, industrialists and policymakers, our policy lectures opened up interesting discussions.

Alain Fuchs, President of the French National Centre for Scientific Research, examined policies for science and technology at a special lecture.

Our roadmap for the chemical sciences, *Chemistry for Tomorrow's World*, outlines how chemistry can help to address many of the societal challenges – ranging from new drugs and diagnostics to clean water and food supplies. To support the development of the areas outlined in the roadmap, we published key recommendations in the priority areas of human health, sustainable energy and resource efficiency in five policy reports.

To increase awareness of these priority areas amongst policymakers, we also held five policy events at the Chemistry Centre. Bringing together audiences of around 100 scientists, industrialists, journalists and policymakers, they generated lively debates and discussions about topics ranging from cancer treatments to solar fuels. We also successfully opened up the discussions to a wider audience by broadcasting the debate on synthetic biology to a second audience in Bristol, which doubled the number of participants.

The RSC's Council, Boards and Divisions play a central role in creating our policies by providing feedback on government consultations and identifying relevant priority areas. For the first time, all RSC Divisions also delivered roadmap-related activities, such as the schools lecture titled 'Your solar-powered future' that was presented by the Materials Chemistry Division, which help us increase awareness of chemistry's vital role in society.

250

people attended Science and the Parliament in Edinburgh

25

consultation responses put together

5

policy events held at the Chemistry Centre

We made sure that our activities clearly demonstrated the value and benefit of chemistry to the economy and in addressing a variety of societal challenges.





www.ukti.gov.uk

*Touch Bionics
Livingston, Scotland*

ATION TECH

Throughout the year we engaged in discussions with policymakers. Here, UK Foreign Secretary William Hague, addresses the audience at a launch event for one of our policy reports.

Basil McCrea

Chair of the Northern Ireland
Assembly All-Party Group on
Science & Technology



We encourage the dialogue between politicians and scientists. Basil McCrea MLA, who chaired our inaugural Science and Stormont event, describes how the RSC has helped to raise the profile of science amongst Northern Ireland's policymakers.

Northern Ireland was once a heavily industrialised country, famous for – amongst other things – building the Titanic, producing linen and the Ferguson tractor. But the civic unrest of the 1970s and 1980s destroyed much of its economic investment. Although we have a large number of companies and an excellent academic base, approximately 70% of the economy originates from the public sector.

Strategically, we should invest in sectors in which Northern Ireland once excelled: science, engineering and innovation. We have a vibrant science community, and science and technology are key drivers for our economy. To make the most of this potential we must make sure that scientists, businesses and politicians engage with each other.

This is why I am delighted that we brought the All-Party Group (APG) on Science & Technology to life in February 2012. Through it we can bring together Members of the Northern Ireland Assembly with others that have an interest in science, technology, engineering and mathematics. This means we can raise awareness among Members of the Legislative Assembly (MLAs) of how important science, engineering and innovation are and how different policies affect the scientific communities.

The RSC administers the APG and has been a great help in strengthening the links between scientists and politicians. So I was very pleased to see that it extended its activities in Northern Ireland. Throughout a variety of events and activities, I have been able to draw on the organisation's experience in bringing these communities together and promoting the importance of science in the political landscape.

The RSC organised its first ever Science and Stormont event in October 2012 to put science firmly on the Assembly's agenda. This made it possible for MLAs to directly discuss many important topics with scientists and engineers.

Many of the challenges facing government today are contentious and highly emotive. Important decisions are best considered on the basis of facts and evidence, in short the scientific process. Few of our MLAs have a background in science, which meant that events like this are particularly valuable to provide the information and context to inform decisions.

Just how important it is to consider expert scientific evidence when making political decisions became clear during a public debate on hydraulic fracturing, or 'fracking', which the Assembly and the RSC hosted in collaboration. Fracking is an important environmental issue for the people of Northern Ireland. This discussion not only provided a platform for expert scientific views to be aired. It also enabled the public to make their voices heard in the debate.

For me, the debate was another great example of how working together with a society like the RSC can help foster dialogue. As trusted advisor, the organisation not only raises the profile of science in the political environment. It also helps bring together the relevant people to start important conversations.

All political institutes should engage with a wide range of stakeholders. A two-way dialogue between the government and the scientific community is essential, and the RSC is at the heart of it.

A two-way dialogue between the government and the scientific community is essential, and the RSC is at the heart of it.





Enhancing knowledge

We are at the forefront of science publishing, developing products to promote understanding of emerging areas and launching new services that enable scientists to access this knowledge.



With 37 journals, an extensive book portfolio and a network of databases, the RSC is one of the leading scientific publishers in the world – a position that we successfully reinforced throughout the year.

Disseminating chemical knowledge is one of the key objectives laid out in our Royal Charter. Supporting our aim of reaching an even wider audience across the world, we succeeded in increasing both the quantity and the quality of our publications. Continuing the tremendous growth that allowed us to substantially increase our market share in chemical science publishing, we published almost 23,500 articles in 2012 – an increase of 15% compared with the previous year.

At the same time, our journals remained highly influential, with Impact Factors – commonly used to assess journal quality – across our portfolio increasing again, reaching an average of 5.46, which is more than twice the average of 2.67 for a chemistry journal.

More researchers than ever submitted articles to our journals and made use of our content. With more than 2 million article downloads per month, the scientific community is clearly appreciative of the quality of our products and content. Exemplifying the popularity of our journals, RSC Advances published its 2,000th article only 18 months after being launched and *Chemical Communications* became the first chemistry journal to publish one hundred issues in a single year.

Building on these encouraging trends, we continued to develop our product portfolio to remain at the forefront of scientific publishing. Two new journals, *Biomaterials Science* and *Toxicology Research*, will ensure that authors working in all areas of the chemical sciences and in multidisciplinary areas can publish their best work with us.



2012 saw the introduction of a mobile app for Android users and the addition of new functionalities to our online publishing platform. This means that people can browse, search and access our publications even more easily to ensure that our chemical knowledge reaches the widest global audience possible.

With the number of visitors to our ChemSpider platform more than doubling, we also invested in database development. Securing a five-year contract to host the National Chemical Database Service, we plan to develop it into chemistry data repository that enables data management and sharing.

Our flagship magazine *Chemistry World* grew ever more popular. Following the introduction of our e-membership, it now informs more than 55,000 readers worldwide of cutting-edge research and the latest business and policy news. The magazine also saw its popularity increase among non-RSC members: with more than 235,000 followers on Facebook, Twitter and LinkedIn, it clearly reaches a wide and varied international audience.

Our journal symposia provide researchers with the opportunity to present and discuss their latest research. By expanding this global series to Brazil, we not only supported our activities in South



America but also widened the audience for our publications and products. In addition, a team of RSC employees visited 16 universities in the USA to share our experience in publishing with researchers in this region.

Throughout 2012, a number of funding bodies and governments announced that all publications arising from research they funded must be made publically available. We introduced our innovative Gold for Gold initiative to support researchers across the world in this transition to Open Access publishing, and it has proved very popular so far: 58 institutions in the UK, 20 in Australia and six in New Zealand have already taken it up.

Readers of our flagship magazine *Chemistry World* can now access the latest news on the go with our mobile app.

A team from the RSC visited 16 universities across the USA to share our experience in publishing with students and researchers.

Successfully expanding our series of journal symposia, we held the first Organic and Biomolecular Chemistry international symposium in China.

Supporting our aim of reaching an even wider audience across the world, we succeeded in increasing both the quantity and the quality of our publications.

235,000

social media followers
for *Chemistry World*

23,500

articles published in
RSC journals

5.46

the average Impact
Factor for RSC journals



Professor C. Akbar
Chairman
Pakistan Society for
Management Education

We have continued to develop our book and journal portfolio to ensure that our content reaches a global audience.

Andrew Wilson

Professor of Organic Chemistry,
University of Leeds



The RSC launched its Gold for Gold initiative to support the scientific community during the transition to Open Access publishing. RSC author Andrew Wilson explains how the scheme offers researchers much more than financial support.

In my experience, the RSC has always produced high-quality publications that benefit from rigorous peer review and rapid manuscript processing, and I have always found that RSC publishing has responded in an innovative manner to the needs of those who publish and read its journals. For example, I welcomed the introduction of practising researchers as editors during the last few years. It is reassuring to know that leading academics handle your manuscript and make the editorial decision on the outcome of your submission.

The publishing landscape is currently undergoing major changes, with several funding agencies mandating that all publications arising from research they fund are made publically available as Open Access (OA) articles – yet each has a different definition of exactly what this means. To make matters more confusing for authors, many publishers offer a range of OA options, and some universities have signed deals with different publishers for discounted OA rates or receive support from funding agencies to manage the transition. Caught in the middle are authors like myself. Asking any of the groups above on what should be done about your latest paper going OA, you are likely going to get three very different answers.

During the last year and a half, I found that I had to do something different for virtually every manuscript my research group wanted to publish, ranging from making sure that we adhere to the funding agencies' requirements, finding or claiming money to pay for OA processing charges or attempting to work out what the copyright agreement means.

The RSC has succeeded in making OA publishing simple, and I really like the Gold for Gold model. Our university subscribes to RSC Gold – the RSC's collection of journals, databases and magazine – which means that we were able to take up this new initiative. It has made our lives immeasurably easier.

Publishing through the Gold for Gold process is easy. You simply redeem your voucher online and then complete a revised publishing agreement by e-mail. Finally, as soon as your article appears online it is publically available, and there is no need to worry about depositing the manuscript in an institutional repository after an embargo period.

My group and I used Gold for Gold for manuscripts published in different RSC journals. What appeals most to me is that the initiative means that universities can offer staff and students subscriptions to a lot of different content as well as supporting them during this period of change in publishing.

As someone who not only publishes papers but also reviews other researchers' manuscripts, I also really like the fact that the scheme gives something back to the community. Many of us give up time to carry out peer review. So among the discussions about who should pay for OA publications, it can be frustrating to think that we need to use money we could spend on research to pay for publishing after we already produced and reviewed papers. Receiving the Gold for Gold vouchers not only offers financial support, it also feels like a 'thank you' for the work we do for publishers. For me, this represents a genuine effort from the RSC to work with and listen to its community.

The RSC has succeeded in making Open Access publishing simple, I really like the Gold for Gold model.



Summary

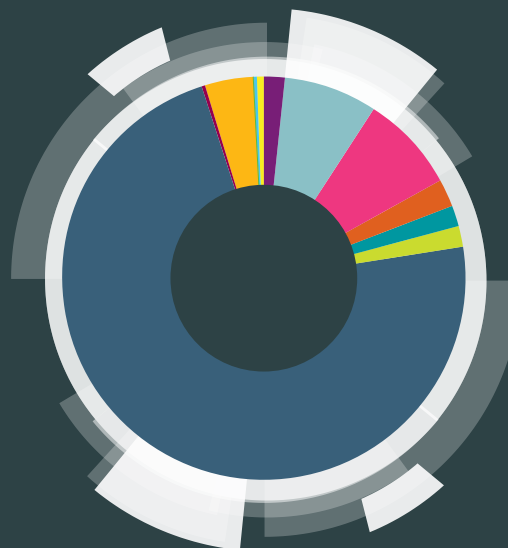
of financial information

Thanks to sterling efforts by RSC employees and members, in 2012 we were able to devote resources of £41.7 million to our charitable activities. Furthermore, an operating surplus of £6.7 million was achieved. RSC Publishing revenues increased, returning a surplus of £9.9 million. Membership revenues reached £3.9 million, and investment income £3.6 million.

Income (£000)

Voluntary Income	881
Investment Income	3,648
Membership	3,873
House Journal	1,097
Conferences	853
Qualifications and Education	730
Publishing	35,697
Library	33
Scientific Affairs	2,022
International Development	10
Other	31
Generated Funds	251

Total income 49,126



Expenditure (£000)

Voluntary Income	279
Investment Management Costs	84
Membership	3,354
House Journal	1,548
Conferences	1,248
Qualifications and Education	2,761
Publishing	25,823
Library	905
Scientific Affairs	5,471
International Development	573
Governance Costs	162
Costs of Generated Funds	222

Total expenditure 42,430



Consolidated Net Assets 86,887

The Defined Benefit Pension Scheme liability has reduced to £7.0 million from £8.3 million, resulting from an increase in the value of the Scheme assets and additional contributions from the Society. During the year, £4 million was transferred from cash deposits into the investment portfolio with the aim of generating increased returns. In addition to the £4 million investment the value of the portfolio benefited from a favourable investment performance during the year, resulting in an increase of £7.7million to £78 million. Overall, The RSC's reserves increased from £73.6 million to £86.9 million.

I am confident that the RSC will continue to have the financial resources to play a major charitable role in advancing the chemical sciences.

Dr P J Machin, Honorary Treasurer

Trustees' statement

This financial information is taken from the audited and published statements for 2012 which were approved on 25 April 2013. The full financial statements contain an unqualified audit report and will be submitted to the Charity Commission after the RSC's AGM. This summary information may not contain sufficient information to allow a full understanding of the financial affairs of the group and parent charity, RSC. The 2012 Trustees' Report is available for download from www.rsc.org/aboutus/corppubs

Members who require a print copy or who have any questions regarding the financial statements should contact the RSC Finance Department in Cambridge (finance@rsc.org).

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