And all this too...

This special celebration of IYC 2011 wouldn’t be complete without recognising the huge variety of activities that the RSC, its member networks, and the wider chemistry community have been involved with to raise awareness of the role of chemistry in society. Every effort has been made to list all of the events that were sent to the RSC and any omissions are unintentional.

RSC West India PhD Students Symposium University of Goa, India ∙ RSC West India PG Students Symposium Vaze College, Mumbai, India ∙ International Conference on Chemistry for Mankind Nagpur University, India ∙ Can Chemistry Be Green? University of Nottingham, UK ∙ Captivating Chemistry Sheffield Hallam University, UK ∙ Inauguration of IYC 2011 University of Delhi, India ∙ Elephant’s Toothpaste – A Chemistry Show with a Difference Newcastle University, UK ∙ Marie Curie and Aspects of the History of Radiochemistry RSC, The Chemistry Centre, London, UK ∙ Look What Chemistry Has Done for Me! RSC, Cambridge, UK ∙ Metals, Peptides and Nuclear Medicine St Thomas’ Hospital, London, UK ∙ Why Water is Water RSC, The Chemistry Centre, London, UK ∙ Astrochemistry: Spaced-out Molecules University of Nottingham, UK ∙ RSC Symposium: New Directions in Chemistry Strasbourg, France ∙ IYC Celebration Day Museum of Science and Industry, Manchester, UK ∙ Green Solvents – Alternative Fluids in Science and Application Green Chemistry Special Issue RSC Publishing, UK ∙ The Times Cheltenham Science Festival Cheltenham Town Hall, UK ∙ Physics and Chemistry in a Finite World University of Nottingham, UK ∙ Global Water Experiment London, UK ∙ University of Manchester, UK ∙ Ernest Rutherford’s discovery of the atomic nucleus.

Chemical Landmarks during the International Year of Chemistry:

Chemical Landmarks...

Throughout 2011, the RSC formally recognised historical sites where important chemical contributions have been made. The RSC awarded five Chemical Landmarks during the International Year of Chemistry:

- Unilever Research and Development Laboratory at Port Sunlight, celebrating one hundred years of its outstanding scientific contributions to the home and personal care industry.
- The University of Manchester, for Ernest Rutherford’s discovery of the atomic nucleus.
- The Catalyst Science Discovery Centre in Widnes, close to the IC laboratory where halothane, the first synthetic anaesthetic, was discovered and manufactured by Charles Sutcliff and his team.
- The University of Ghent, Belgium, in recognition of the 150th anniversary of German chemist August Kekulé’s publication of his original textbook on organic chemistry.
- The RSC offices at Thomas Graham House, Cambridge, to recognise 170 years of scientific publishing.

Celebrating a year of international chemistry...

...brought people together from all over the world to share an appreciation of chemistry and its importance to society. Launched in January 2011 by the International Union of Pure and Applied Chemistry (IUPAC), and the United Nations Educational, Scientific, and Cultural Organization (UNESCO), IYC recognised the global significance of chemistry. It also marked 100 years since the International Association of Chemical Societies was founded, and 100 years since Marie Curie was awarded the Nobel Prize for Chemistry.

In this special publication, we’ve captured for posterity some of the activities that the RSC and its members have organised and taken part in throughout 2011.
The Rt Hon David Willetts MP, Cabinet Minister for Universities and Science, officially launches IYC at the Palace of Westminster. He’s joined by co-hosts Mark Lancaster TD MP, Andrew Miller MP and Julian Huppert MP. Guests are treated to some ‘explosive’ chemistry demonstrations by Hal Sosabowski from the University of Brighton. Members watch the event online via a live webcast.

Women scientists from at least 42 countries gather together via video link and social media channels to share a chemical moment in time over breakfast. At the Chemistry Centre, RSC members watch video interviews recorded just a few hours earlier by their counterparts enjoying breakfasts in Beijing and India, and then record their own views to share. RSC members across the UK hold their own breakfast meetings.

Nearly 500 delegates from all over the world attend the South Africa Chemical Institute’s (SACI) IYC launch event at the University of the Witwatersrand in Johannesburg. Supported by the RSC’s South Africa (North) Section, the event also welcomes RSC president David Phillips and RSC manager of international projects, Alejandra Palermo.

The European Association for Chemical and Molecular Sciences marks IYC with a new book celebrating the achievements of women in chemistry, from early pioneers to present day chemists.

The RSC’s Radiochemistry and Historical Groups honour the centenary anniversary of Marie Curie’s Nobel Prize for Chemistry with a lecture that considers her contribution to science and examines other aspects of the history of radiochemistry. Serge Plattard, Counsellor for Science and Technology at the French Embassy, delivers the keynote speech.

The RSC hosts a visit to the UK by the Director General of the Organisation for the Prohibition of Chemical Weapons (OPCW), HE Ambassador Ahmet Üzümcü. The Ambassador highlights the work of the OPCW and its unique role in ensuring that chemistry is used only for peaceful purposes. The audience of invited guests include foreign embassy ambassadors, senior representatives from the FCO and Defence Science and Technology Laboratory (DSTL) at Porton Down and the Ministry of Defence (MOD), as well as industry and academia representatives.

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Pupils from 16 junior colleges in the Hyderabad area of India take part in a two-day practical workshop organised by the RSC Deccan Section. Students try a variety of hands-on activities, including testing the pH of household items and separating plant pigments.

At the Sci Bono Centre in Johannesburg, South Africa, over 200 primary and secondary school children are treated to a morning of chemistry demonstrations on household chemicals, the periodic table and the IYC global experiment on water. The event is supported by the RSC South Africa Section.

RSC student members at the University of Edinburgh take their activities out of the laboratory and onto campus with a series of demonstrations. They engage with others at the university who do not have a connection with chemistry.

The RSC hosts a panel of experts and members of the public at the Chemistry Centre to debate whether or not the UK can meet targets for reducing carbon emissions without the use of nuclear power. The panel of experts include author and journalist, George Monbiot, research fellow at Imperial College, Malcolm Grimstone, chief scientist at Greenpeace, Doug Parr, and energy consultant, Roger Levett. The event is oversubscribed and attracts over 4,500 online viewers to watch the event on the RSC website, The Reaction.

RSC president, David Phillips, is Kirsty Young’s guest on BBC Radio 4’s Desert Island Discs. In between his music selections (which included Schubert’s Quintet in C Major, First Movement), David highlights the importance of chemistry as he talks about the International Year of Chemistry, his work and his life.

Michael Moore MP, Secretary of State for Scotland, visits the RSC stall at the ‘Bang Go the Borders’ school science festival at St Mary’s Primary School in Melrose. Children are entertained with chemistry-based activities and encouraged to take part in the IYC Global Experiment.

St Stephen’s College in Delhi promotes chemistry to students with a lecture, ‘Chemical Science: The Glorious Past and Exciting Future’. The talk is given by one of India’s most prominent chemists, CNR Rao, and the event is co-sponsored by the RSC.

At the Chemistry Centre, Thames Water’s Rob Casey navigates the twists and turns of the history of London’s water supply, going back almost 2,000 years to when the Romans originally founded the city.

The work of two famous Poles is celebrated at King’s College, London. Readings about the life of Marie Curie, who was born in Warsaw, are set to the music of Frederic Chopin. The evening is followed by a one-day symposium which celebrates the life and work of Curie and of Helmut Maechke, who is seen below being presented with the RSC Becquerel Medal.

RSC’s own interpretation of Pan-Galactic Gargle Blasters, the fictional cocktails from Douglas Adams’ Hitchhiker’s Guide to the Galaxy, are served to guests at the Chemistry Centre as part of the RSC’s Science on the Silver Screen event. The audience doesn’t find the answer to ‘life, the universe and everything’ but are treated to an informative talk by journalist and author Michael Hanlon and a screening of the 2005 film adaptation.
JUNE

The highlight of IYC – the Global Experiment – kicks off in the UK. Children from all over the world take part in the biggest chemistry experiment based on the themes of water measurement and purification. They test the acidity of their local rivers, lakes and waterways. The RSC coordinates efforts in the UK where more schools take part than in any other country in Europe. It attracts a huge amount of media interest including the BBC’s One Show, BBC TV and radio news bulletins and regional newspapers.

Four hundred school children enjoy an exciting programme of events at the Charterhouse School IYC Day, supported by the RSC Downland Local Section and the Society of Chemical Industry. Speakers include RSC Past President and Nobel Laureate Sir Harry Kroto, Peter Wothers from the University of Cambridge and Reverend Lancaster of Kimbolton Fireworks.

RSC president David Phillips speaks about the importance of chemistry in schools at the Sunday Times Festival of Education. The two-day event features politicians, educationalists, school leaders and think tank experts who come together to discuss the latest issues in education.

At the Chemistry Centre, Chief Scientist at Scottish Water, Richard Allan, pictured right, discusses the challenges we face in securing freshwater supplies at a global level.

JULY

The RSC hosts a competition for Children from eight countries in Africa and Europe. Their thought-provoking artwork draws attention to the role of chemists in industry and academia in providing safe and clean water around the world. The exhibition, Our Children on Water, is officially opened by science presenter Johnny Ball at the Chemistry Centre. It tours major European cities: Frankfurt, Prague, Rome, finishing in Barcelona in November. And its legacy continues beyond IYC with a planned trip to the Chemical Heritage Foundation in Philadelphia in January 2012.

The RSC celebrates the remarkable achievements of women in science at the headquarters of the Organisation for Economic Cooperation and Development (OECD) in Paris.
AUGUST
To celebrate the 350th anniversary of Robert Boyle’s *The Sceptical Chymist*, RSC Fellow Duncan Thorburn-Burns treats a Chemistry Centre audience to an insight into Boyle’s life and works, supported by an exhibition from his own personal collection.

SEPTEMBER
The RSC West India Section supports a series of activities in Nagpur, part of the Vidarabha region in central India. These are held in collaboration with the Institute of Science, and the Indira Gandhi National Open University Regional Centre, both in Nagpur. Over 500 schoolchildren visit a government lab and, for many, it is their first opportunity to experience practical chemistry. At another event, children take part in a poster competition on chemistry in their daily lives.

Can we live without E-numbers? Do ‘functional foods’ like probiotics really work? These are the questions being discussed at Café RSC, a series of free informal evening gatherings, open to everyone, at the Chemistry Centre.

The RSC and GSK launch their series of six lectures with a sports doping debate at the Chemistry Centre. Andy Parkinson, Chief Executive of UK Anti Doping, was there to debate and answer questions from scientists and the public.

Stephen Conlon, HM Consul General at the British Embassy, presents the dean of the faculty of chemistry at Vilnius University with a certificate from the RSC congratulating Lithuanian scientists and teachers for their efforts to promote chemistry.
OCTOBER

Leading industrialists set out their sights for the future and discuss how companies can gain a competitive edge in a one-day conference, ‘Innovation to Transform the Chemical Industry’, jointly organised by the Society for Chemical Industry and the RSC’s Management Group.

The RSC awards the first Chemical Landmark in a European country outside the UK. The University of Ghent, Belgium, is recognised for the 150th anniversary of German chemist August Kekule’s publication of his original textbook on organic chemistry. (See the back page for more on RSC Landmarks.)

The world of fashion and chemistry collides in front of passersby in Euston Square, London. The ‘Field of Jeans’ outdoor exhibition forms part of the Catalytic Clothing project. The brainchild of artist and designer Helen Storey MBE and chemist Tony Ryan OBE, the project demonstrates how clothes treated with a catalyst can clean the air around them. With help from the Belgium Section, the RSC also sponsors a lecture on catalytic clothing at the European Economic and Social Committee Chemistry and Culture Week in Brussels. This major IYC event is also supported by the RSC Belgium Section.

NOVEMBER

For the year, the RSC and the World Gold Council team up to develop a unique online microsite offering free access to some of the RSC’s best gold-related publications throughout 2011. The site features a spread of historical and cutting edge papers, spanning catalysis, nanotechnology and novel materials.

Sir John Meurig Thomas, Honorary Professor at the Department of Materials Science and Metallurgy, University of Cambridge, explores the genius of Michael Faraday at a free public lecture at Cardiff University.

DECEMBER

RSC president David Phillips travels throughout the UK and around the world during 2011, promoting chemistry through a variety of entertaining lectures. In ‘A Little Light Relief’, David uses his expertise in photomedicine to explore the effects of light on the skin. With the help of his 30 year-old glass baby, he demonstrates how light is used to diagnose and treat problems like skin complaints and neonatal jaundice in modern medicine.

The RSC launches its new Visual Elements periodic table as a legacy to the International Year of Chemistry. Gordon Woods, an expert on the periodic table, plays the part of Dmitri Mendeleev at the Chemistry Centre to introduce guests to the fully interactive tool. Artist Murray Robertson explains the inspiration behind his designs for each element. This new table allows you to explore every element, its properties and how scarce it is. It forms part of the RSC’s new online education site, Learn Chemistry, which launches at the start of 2012.

The International Year of Chemistry was brought to an end when the RSC celebrated its own anniversary of 170 years of publishing at a chemical landmark ceremony at Thomas Graham House in Cambridge.