

The **SALTERS'** *Institute*

Annual Review 2012



The Salters'
Company



Chemistry
Camps



Chemistry
Club



Festivals of
Chemistry

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The Salters' Institute is the flagship charity of the Salters' Company which ranks ninth in the order of the Twelve Great Livery Companies in London.



A MESSAGE FROM THE MASTER OF THE COMPANY

It was the Institute that introduced me to the Salters' Company, back in the 1980s when I was a teacher of chemistry at Watford Grammar School. The first Salters' curricula were just getting off the ground then, and the experience of writing a new chemistry course linked to everyday life was hugely stimulating. Much later, when I went to the University of York in 2000, I was very proud to be the first Salters' Professor of Chemical Education. I felt even more honoured to become, 12 years later, Master of the Company that sponsored my chair.

During my year as Master I have met many other people from Livery Companies and I have come to realise how much admired the Salters' Company is for our unique work through the Institute to support chemistry and science education. This is work of national importance and impact – if you talk to almost any chemistry teacher they will associate the name of 'Salters' with our Camps and Festivals and our inspirational approach to teaching the subject within its everyday context. This work goes from strength to strength and is developing all the time: this year, for example, the Institute has been looking at the skills needs of chemical industry, and how the Chemistry Camps can be extended to reach more disadvantaged schools and pupils.

The Company owes much to the Institute Manager, Audrey Strong and her staff who drive our programme with the expert guidance of Sir David Harrison, the Institute Director, and to Dr Peter Doyle who has chaired the Institute Board with such skill and wisdom for the past 13 years.

Professor Sir John Holman



A MESSAGE FROM THE CHAIRMAN OF THE INSTITUTE

Tight financial control of the Institute expenditure has been a recurring theme in recent years, so it will come as little surprise, given the Company's commitment to developing and refurbishing our Hall, that we will be in a period of "austerity", to coin a word much in vogue, for the next few years.

This will pose a significant challenge in the maintenance of our already well focused core activities, in preserving key curriculum development initiatives at York and above all in preserving relationships with longstanding partners, who remain crucial to virtually everything we undertake.

Appropriately, we are keeping our forward strategy and the scope of our core activities under continuous scrutiny, while at the same time seeking to draw in more external support for those activities we want to preserve and extend, through outreach initiatives to involve a broader spectrum of participants.

Undoubtedly a major advance this year has been the creation and launch of the Institute's new website which is enabling more management of our activities to be done online with a consequent further improvement of our efficiency.

Dr Peter Doyle CBE FRSE



A MESSAGE FROM THE DIRECTOR OF THE INSTITUTE

The Institute's curricular work is carried out at the Centre for Innovation and Research in Science Education (CIRSE) at the University of York under the leadership of Professor Robin Millar. The York Centre celebrates its 30th anniversary in 2013. A greater degree of clarity is now emerging as to the future direction of national policies with regard to A level specifications, with AS level becoming a stand-alone qualification. These developments will lead to revisions during the next two years to three (Salters) A level specifications – Salters Chemistry, Salters-Horners Physics and Salters-Nuffield Biology. The position of GCSE's *Twenty First Century Science* is not yet clear.

The extensive programmes of Salters' Festivals of Chemistry and Salters Chemistry Camps has continued this year in Universities throughout the United Kingdom. These are designed to give pupils of pre-GCSE school age hands-on experience of laboratory work, and they are very popular.

Following the very positive report on the Institute's activities provided last year by Anthony Tomei, formally Director of the Nuffield Foundation, the Institute is examining all aspects of its work with a view to achieving the best value for money in difficult times. The Institute is nevertheless determined that any necessary retrenchment should not remove the Institute's longstanding capacity to support new initiatives. The Institute much values working with partners, for example the Horners Company on A level Physics and the Royal Society of Chemistry on Festivals and Camps.

As always, all Institute's work is underpinned by the high standard of work and service provided by the Institute's staff at Salters' Hall.

Sir David Harrison CBE FEng

SALTERS' Festivals of Chemistry

in partnership with

RSC | Advancing the
Chemical Sciences



53 Salters' Festivals of Chemistry took place between mid March and mid June at 40 Universities throughout the UK and Ireland. For the eighth year running the Festivals were run in partnership with the **Royal Society of Chemistry**. Please [click here](#) for a list of the **2012 Salters' Festivals of Chemistry** dates and locations.

The Salters' Challenge, "Money, Money, Money...", was a forensic activity involving chromatography and test tube reactions. This took place during the morning at each Festival. The second practical activity, during the afternoon, was **The University Challenge**, which was chosen by the University. At most Universities, the challenges were followed by a fun "**chemical magic**" demonstration which preceded the **Prize Giving Ceremony** during which prizes were presented to winning schools, and fun prizes and certificates were

presented to all participants.



Below are some quotes from teachers, parents and students regarding the **Salters' Festivals of Chemistry 2012:-**

"The Salters' Festival has become one of those keystone events in our pupils' experience..."

"It is an amazing experience for our special youngsters as it is often the first contact that they have had with a University and the world of 'real scientists'..."

"My pupils had an excellent experience - it was well worth the trip..."

"My daughter had the most fantastic time and enjoyed every minute of it...the day really did spark her enthusiasm and interest in chemistry and science..."

For further information about the Salters' Festivals of Chemistry please visit:

www.festivalsofchemistry.co.uk

or contact the Festivals Administrator on:-

Tel: 020 7628 5962 ext. 224

Email: festivals@salters.co.uk

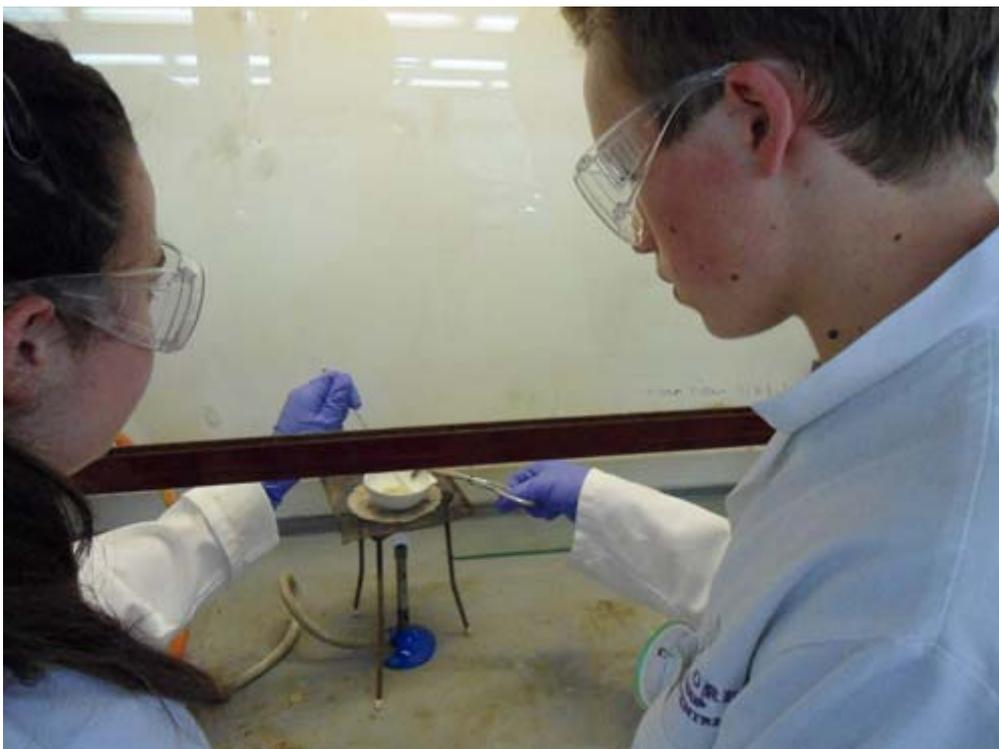
SALTERS'

Chemistry
Camps



14 Salters' Chemistry Camps took place at 7 Universities across the UK in 2012. Please [click here](#) to see a list of the **2012 Salters' Chemistry Camps** dates and locations.

All the Universities hosted 2 Camps and they each had a varied programme of chemical practical activities, fun lectures, chemical demonstrations and time to relax or socialise. The participants stayed in the University Halls of Residence. The Camps at Heriot-Watt, Manchester and York included a Materials activity, sponsored by the Worshipful Company of Armourers and Brasiers.



Below are some quotes from teachers, parents and students regarding the **Salters' Chemistry Camps 2012**:-

"She came back enthused and could not stop talking about the various experiments she had undertaken, she met some wonderful people and the University looked after them so well!..."

"Everyone was kind, friendly and helpful. I learnt a lot from the Camp and met lots of new people..."

"Having the opportunity to use the extensive facilities in University labs gave me a great insight into chemistry beyond school..."

"The four challenges we did were amazingly thought out and planned and I really enjoyed all of them..."

"Recently four girls from my school attended your Camps at both Heriot-Watt and Nottingham Universities. They all had a fantastic time and have encouraged many of our younger years to apply when they are old enough..."

For further information about the Salters' Chemistry Camps please visit:

www.chemistrycamps.co.uk

or contact the Camps Administrator on:-

Tel: 020 7628 5962 ext. 213

Email: camps@salters.co.uk

Salters' National Awards for Science Technicians 2012



2012 Awardwinners pictured above from l to r, Anne Helliar, Amit Nagrani, Michel Acreman and Nikki Heber

In 2012, eight technicians were visited in their schools or colleges by the Awards Committee. Four of these technicians were selected for Awards and the Winners of the **Salters' National Awards for Science Technicians 2012** were Michel Acreman, Rosebery School; Nikki Heber, Caterham School; Anne Helliar, Gordano School and Amit Nagrani, Winchmore School.

The aim of these Awards is to acknowledge the immense contribution that science technicians make to the success and well-being of their schools, and in particular, their science departments. The Awards are **open to science technicians in schools or colleges within the UK who have a total of five or more years experience in schools or colleges (either full or part-time)**.

To view the selection procedure that the Awards Committee used for these Awards, please [click here](#).

The 2012 Awards were supported by:-

The Association for Science Education

CLEAPSS

The Institute of Physics

The Nuffield Foundation
The Royal Society
The Royal Society of Chemistry
The Society of Biology

For further information about the **Salter's National Awards for Science Technicians** please visit our website by clicking the link below:-

Salter's National Awards for Science Technicians

or contact the Publicity Co-ordinator on:

Tel: 020 7628 5962 ext. 260

Email: publicity@salters.co.uk

Curriculum Development



The University of York Science Education Group (UYSEG) continued to support the

Salter's Institute with their curriculum development. Read on for details of how that development took shape in 2012.

SALTERS-NUFFIELD ADVANCED BIOLOGY

The Salters-Nuffield Advanced Biology course for 16-19 year old students offers an innovative approach to the teaching and learning of Biology, which is studied through real-life contexts such as cardiovascular disease, climate change and forensic biology.

In 2012, the number of students completing the A2 course was approximately 9,015 (14.3% of national total) and the number completing the AS course was approximately 14,834 (14.5% of national total).

SALTERS ADVANCED CHEMISTRY

The Salters Advanced Chemistry course for 16-19 year old students provides an innovative approach to teaching and learning chemistry in which chemical principles are developed in the context of modern applications of chemistry and the work that chemists do.

In 2012, the number of students completing the A2 course was 6,840 (13.9% of national total) and the number completing the AS course was 11,600.

SALTERS HORNERS ADVANCED PHYSICS

Salter's Horners Advanced Physics is a context-led course placing students' learning in the environment and in situations in which physics is met in real life.

In 2012, the number of students completing the A2 course was approximately 2,500 (7.2% of national total) and the number completing the AS course was approximately 4,345 (7.3% of national total).

TWENTY FIRST CENTURY SCIENCE

An innovative suite of GCSE courses, designed to enhance the scientific literacy of all students while providing a sound foundation for those who want to progress to A level sciences.

In 2012, its share of the GCSE market was 20%

YORK SCIENCE (FOR KEY STAGE 3)

Work continued on the development of assessment resources for six Key Stage 3 science topics. During 2012, draft materials were sent out to interested schools and local authority advisors. A workshop for 25 teachers and other interested science educators was also held in York to get feedback on the materials so far developed.

The York Science project aims to develop a complete package of support materials for science teachers at Key Stage 3. The new and distinctive features of the teaching materials we aim to develop are:-

- an emphasis on science as the search for explanations of the behaviour of the material world that are based on evidence and careful reasoning.
- a central role for the 'big ideas' of science - which shape the way we look at and think about the material world. These are of intrinsic interest and cultural significance, and provide a basis for further learning.
- a focus on learning outcomes - the things we want students to be able to do as a result of their science learning. Learning outcomes include knowledge and

understanding, the ability to apply and use ideas, to analyse and evaluate information, to present and evaluate arguments and knowledge claims, and to plan and carry out investigations to answer questions or solve problems.
For further information on **Salters' Curricula** please [click here](#)

Institute Awards Ceremony

Friday 23 November 2012

The Salters' Institute Annual Awards Ceremony took place on Friday 23 November 2012 in Salters' Hall. This prestigious event celebrates high levels of excellence within the science education sector. HRH Princess Sumaya bint El Hassan, President of the Royal Scientific Society of Jordan, presented the Prizes, alongside Sir John Holman, Master of the Salters' Company, and addressed the audience.



HRH Princess Sumaya addresses the audience

The following extracts are taken from the address Princess Sumaya made to the audience:

"I am delighted to address such an august gathering of young graduates, scientists and technicians. You all deserve such congratulations on your achievements and I can only say that we wait with bated breath to hear of your future successes. I am also pleased to be in the company of so many not so young scientists who have dedicated so much of their energies to the cause of science education..."

"...Events such as this wonderful Awards Ceremony show that science can unite generations in a quest for knowledge and a shared vision of progress. Working together, you have the capacity to build bridges and not destroy them, to grow communities and not to make them the casualties of reckless and unplanned progress. Indeed, a long term commitment to science is humankind's only possible defence from

decline and destruction..."

The following Prizes and Awards were presented:-

SALTERS' GRADUATE PRIZES

Ten Prizes are awarded to ten outstanding final year Chemistry and Chemical Engineering candidates who will ultimately be able to occupy leading positions in the UK chemical and allied industries.

[Click here](#) to see a list of the **2012 Graduate Prizewinners**.



Graduate Prizewinners 2012

SALTERS' NATIONAL AWARDS FOR SCIENCE TECHNICIANS

Awards to recognise the hard work and dedication that science technicians provide to science departments in schools and colleges across the country.

[Click here](#) to see a list of the **2012 Technician Awardwinners**



Amit Nagrani is presented with his Award by Sir John Holman and HRH Princess Sumaya

SALTERS' A LEVEL PRIZES

Prizes were presented to the highest achievers in Salters-Nuffield Advanced Biology, Salters Advanced Chemistry and Salters Horners Advanced Physics.

[Click here](#) to see a list of the **2012 Salters' A Level Prizewinners**



A 2012 Salters-Nuffield Advanced Biology Prizewinner, Catriona Law collecting her Prize



Salters Advanced Chemistry Prizewinners 2012



Salters Horners Advanced Prizewinners 2012 with Georgina Scott, Master of the Horners' Company

SALTERS' CITY & GUILDS PRIZES

Prizes are allocated to the top students in the City & Guilds Process Technology Scheme - Chemical Process.

[Click here](#) to see a list of the **2012 Salters' City & Guilds Prizes**



Mark Donnelly is presented with his Salters' City & Guilds Prize

SALTERS' PRIZES FOR EXCEPTIONAL ACHIEVEMENTS IN PHYSICAL SCIENCES

Prizes are awarded annually by the Salters' Charitable Foundation to two outstanding students at City University London, specifically through the School of Engineering and Mathematical Sciences.

In 2012, the Prizes were awarded to **Jim Hirst and Zaibaa Patel**.



Zaibaa Patel is presented with her Salters' Prize for Exceptional Achievements in Physical Science by Sir John Holman, HRH Princess Sumaya and Professor Sanowar Khan, Deputy Dean, City University London

TODD-SALTERS' SCHOLARSHIPS

Initiated in 1997 by the Salters' Company in support of the Lord Alexander Todd Memorial Fund at Christ's College, University of Cambridge, these Scholarships are awarded to outstanding undergraduate members of Christ's College reading Natural Sciences or Chemical Engineering.

In 2012, these Scholarships were awarded to **Stephen Lovelock, Nick Parker and Daan van Kleef**



Daan van Kleef is commended for his Scholarship by Sir John Holman, HRH Princess Sumaya and Dr The Hon Alexander Todd

Salters' Staff

During 2012, there was one change in the Institute team. Vicky Gray (pictured far right in the photo below) left the Institute in October 2012 after a successful two years as a Camps Administrator. There were no plans to replace Vicky and the team was set to continue with only one Camps Administrator.



The Institute staff in 2012, pictured above from left to right:- Fleur Layzell, Susan Cox, Michelle Milne, Audrey Strong and Vicky Gray

If you have any comments or suggestions please contact F
email: publicity@salters.co.uk

The Salters' Institute, Salters' Hall, 4 Fore Street, London,