



The
University
Of
Sheffield.

Chemistry Newsletter

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ChemSoc Events



The University of Sheffield Chemistry Society, ChemSoc, is one of the biggest of its kind in the country. Run by students for students it arranges activities varying from book sales and guest lectures to sports and social events. One of the highlights of its calendar is undoubtedly the

annual ChemSoc Ball. In academic year 2005/06 it was held in Hillsborough Stadium, the home of Sheffield Wednesday football club. As usual undergraduate and postgraduate students (as well as lecturers) had a wonderful time and we have the pictures to prove it!



Contents

ChemSoc Events	1
Royal Honours for Member of Department	2
Prof Sir Harry Kroto unveils a sculpture	2
Fellowship for Academic Staff member	3
Undergraduate Teaching Labs	3
School Teaching Labs	3
Not Just straight chemistry	4



More information on ChemSoc activities of can be found on its website:

chemsoc.sheffield.ac.uk/

Royal Honours for Member of Department

Our ICI Professor of Physical Chemistry, Prof. Tony Ryan, is a busy man. He leads a research group investigating the structure and properties of polymers and more recently he has been exploring nanotechnology - studying how polymer molecules change shape in response to their environment and putting this knowledge to use in building molecular valves and motors. But he also has a high public profile: he was the Engineering and Physical Science Research Council's first Media Fellow and has made many radio and television appearances, including the 2002 Royal Institute Christmas lecturers.

However, even Prof. Ryan can find a gap in his hectic timetable to visit Buckingham Palace: in March 2006, he was awarded an OBE for his services to science by The Queen. "It was a great honour for the university and for the department to go to Buckingham Palace and receive my award from the Queen," said the newly ennobled Prof. He quipped that; "shortly after this picture was taken we discussed the burgeoning field of nanotechnology."



Prof. Tony Ryan OBE!

Prof Sir Harry Kroto unveils a sculpture



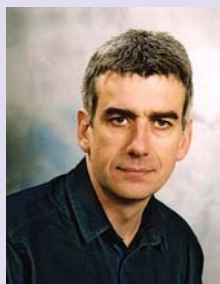
Sir Harry and the Buckyball

Prof Sir Harry Kroto, the 1996 Nobel Laureate for Chemistry and Sheffield chemistry graduate recently returned to the university to unveil a sculpture that portrays the molecule that brought him worldwide fame. Scaled so that one metre of the sculpture represents one nanometre in the molecular world, the model of a

Buckminsterfullerene "Buckyball" now stands outside the Kroto Research Campus. This centre, which is the UK's largest dedicated multi-disciplinary research facility, has a large input from Department of Chemistry research staff. At the unveiling, Sir Harry said that the statue was an emblem of; "the importance of the

Nanoscience and Nanotechnology research being undertaken in the Institute and the exciting promise of these cutting-edge research areas for combating the major socio-economic and humanitarian issues that now confront us."

FELLOWSHIP FOR ACADEMIC STAFF MEMBER



Dr Stephen Rimmer, a Reader in polymer Chemistry, has recently been awarded an MRC Discipline Hopping Fellowship. During

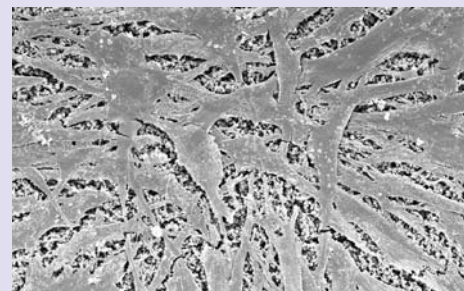
the Fellowship he will be carrying out biological experiments on new class of polymer materials that designed as scaffolds for growing tissue. Dr Rimmer says that the long-term aim of his team's work is; "to be able to

regenerate diseased human tissues and organs such as the cornea of the eye, skin, bone and cartilage."

The picture on the right shows human skin cells that have grown onto one of these materials.

Dr Rimmer is not the first member of staff to gain a prestigious fellowship. Both Prof Steve Armes and Prof Patrick Fowler are current recipients of five year Royal Society/Wolfson Research Merits Awards for "key researchers, with great potential or

outstanding achievement," while Prof. Chris Hunter holds an EPSRC Senior Research Fellowship awarded to; "outstanding academic scientists of international repute."



Undergraduate Teaching Labs

The 2006 summer vacation sees the final stages in the complete refurbishment of the department research labs and the first phase of a proposed major £5M refurbishment of our three undergraduate teaching laboratories.



New Research Labs opened in summer 2006

The £1.15M initial part of the project is scheduled to be in place for the 2006/07 academic year and includes the upgrading of lighting and electrical infrastructure, replacement of 26 fume cupboards and provision of new vacuum systems. Green issues have been a priority during the work, for example the fume cupboards are designed for low energy consumption and have glass backs to ensure that maximum daylight enters the labs, while all the artificial lighting will be switched on and off by sensors that detect when the labs are not in use. Additionally, a network of diaphragm pumps will replace traditional water vacuum pumps, reducing to a fraction the previous water consumption of around six litres of water per minute per pump.

School Teaching Labs



Dr Simon Jones (left) and his School Liaison Team: Lilly (centre) and Ben (right)

The Department is creating the UK's first dedicated schools laboratory. Thanks to funding from the National Endowment for Science, Technology and the Arts (NESTA) and HEFCE through the Royal Society of Chemistry, school pupils will get to learn more about the world of chemistry and get a taste of the University experience by conducting science experiments outside of the classroom. Opening in early 2007, the modern, fully equipped science laboratory dedicated to school outreach projects will be available for use all year round.

Dr Simon Jones, senior lecturer in organic chemistry and departmental coordinator for

school outreach projects said; "The schools outreach programme has been extremely popular. The labs are constantly booked out by schools, and the students who come to use the facilities are always enthusiastic about the experience. School pupils who visit the laboratory will not only be given the opportunity to stretch themselves and conduct challenging experiments, but they will also see that chemistry can be fun and exciting." Dr Jones now heads a team of three staff dedicated to these activities: two school liaison officers, Lilly Phoon and Ben Jefferies, were recently appointed to this pioneering project.



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NOT JUST STRAIGHT CHEMISTRY

Students studying chemistry at Sheffield have a wide choice of course options; indeed, some of the courses on offer are unique to this university. One of the more unusual courses on offer at Sheffield is Chemistry with Study in Japan. In this M.Chem programme you take the Chemistry core course in your first two years, alongside additional Japanese language and culture modules. While no prior knowledge of Japanese is required for this course, an aptitude for languages is essential as the third year of the course is spent in Japan either at The Universities of Okayama or Kyushu, or in Industry.

Chris Adriaanse is a recent graduate from the course and he says that as a sixth former he was surprised at how many choices the department offered; "When I was first deciding which degree to do I thought about Chemistry with study in Europe, because I was doing French at A level. It wasn't until I read the Sheffield brochure that I realised that I could also go to America, Australia or Japan, and Japan seemed like the most interesting option." In Chris's case he spent time at the University of Kyushu and a company in Tokyo.



Enjoying a meal with Japanese Colleagues

When asked how he coped with learning a new language from scratch Chris responded; "I did struggle with the Japanese at first as it's a complex language and so different, but when I went out to Japan I picked it up really quickly." You can read more about Chris's experiences in Japan, amongst other chemistry students at:

www.sheffield.ac.uk/purescience/student/chem/

While further information on all the courses the department offers can be found at its web site:

www.sheffield.ac.uk/chemistry/



Contact: Admissions Office

Email: admissions-chemistry@sheffield.ac.uk

Department of Chemistry
Brook Hill
Sheffield
S3 7HF