

UNIVERSITY OF  
BIRMINGHAM

## School of Chemistry Community

Part of  
THE EPS COMMUNITY



### Autumn/Winter 2013

#### Greetings

I'm not one to boast, but the School has had several spectacular awards and successes this year which I would like to share with you all. These include with regards research:

1. Winning £1.5M from EPSRC in a national competition to secure state-of-the-art x-ray diffraction and mass spectrometry equipment which will allow us to carry out cutting edge research in materials chemistry, with an emphasis on energy applications, as well as drug discovery.
2. Winning £3M+ from EPSRC for a Centre for Doctoral Training (CDT), called Physical Sciences for Health (Sci-Phy-4-Health, for short). This Centre will bring together physical scientists with medical and life scientists, from both academia and industry, to tackle big health challenges and will train about 50 PhD students over the next 8 years.
3. Notching up our 4<sup>th</sup> successive year of increasing research awards, topping almost £2.5M for the last financial year (31<sup>st</sup> July 2013).

The EPSRC awards allow us to continue to push forward our strategy of carrying out research under the banner of *Chemistry for Health and Sustainability* and make an impact not only academically, but also more broadly, and ensure we are an engaged School with challenges that society needs addressing urgently.

Then at an educational level we:

1. Have not only maintained our 90% or better score in the National Student Survey for overall satisfaction, over the last 4 years, but this year achieved our highest ever score of 96% which ranks the School number 1 out of the Russell Group. Indeed our 4 year undergraduate masters students all said that they were completely satisfied with their degree overall,
2. Have seen our graduates' employability sustain a top 10 position amongst all of the Russell Group and 1994 Group institutions for the second year running,
3. Have increased student numbers once more with this years intake, such that the School has grown by 50% in the last five years with an amazing 20% increase in the average A level tariff of year 1 students, and;

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#### Your School needs you...

Would you be able to share some of your time, expertise or connections to help Chemistry to succeed? There are many ways in which you can give a little back, from providing a career profile, to speaking to students.

Details can be found [online](#) and [email us](#) if you would like to get involved.

4. Have been extremely radical and adopted a model in which some staff have moved to teaching focussed positions, in order that they can develop more effective and engaging ways to deliver taught material to students and/or lead on large School portfolios, such as admissions.

It is particularly rewarding for the School to see that not only are our students enjoying the rigour of their academic degree, but also the academic knowledge and transferable skills that they learn is subsequently seeing them in good stead when they enter the job market.

All these successes have seen us for the third successive year rise up the *Complete University Guide* and *Times University Guide* league tables, which has helped augment the overall position of the University of Birmingham as the *Times and Sunday Times University of the Year*, of which we are all extremely proud

Finally, we have won Athena Swan bronze status, in recognition of our efforts on equality and diversity, in particular advancing women in the STEMM (Science, Technology, Engineering, Mathematics and Medical) subjects.

So with one month of the calendar year left we can look back and feel proud of our achievements, and indeed hope for may be a grant or two more success in the next 5 weeks before we enjoy a well-earned end of year break.

However, science frontiers move forward and the educational agenda marches on, so we have no time for complacency. Therefore, as this calendar year draws to a close, we look forward with a great deal of anticipation to 2014, with the success and changes that it will surely bring the School, in which all of you - *our alumni* - have helped shape over the years. So may I take this opportunity to thank you for helping to make the School what it is today, and for your continued support into the future.

I wish you and your families a Merry Christmas and a prosperous New Year.

With best wishes,

**Professor Jon Preece**  
Head of School  
Chemistry

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## News from the School of Chemistry

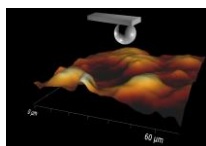
### Global ranking reinforces Birmingham's position as a world-class university

The University of Birmingham has made an impressive 15 place rise to 62nd in this year's QS World University Rankings, cementing its position in the top 100 universities globally and placing it 10th in the UK. **To read more [click here](#).**

### New jelly substance could replace platinum in fuel cells

A substance made from gelatin could be used to replace platinum in fuel cells. Dr Zoe Schnepf and her team have combined gelatin - the same gelatin that is used to make jelly - with iron and magnesium to create a material that performs almost as well as a commercial platinum catalyst, but is considerably cheaper. **[Read more about her research here](#).**

### Accurately probing cells and tissues



Drs James Andrews (Chemical Engineering), James Bowen (Chemical Engineering), and David Cheneler (Mechanical Engineering) have developed a model and methodology which ensures accurate measurement of the mechanical properties of soft materials. Description of the behaviour of biological tissues, individual cells, and organic polymers has applications in cancer detection, tissue engineering and biomedical research. Their model applies to a wide range of instrumental techniques, from millimetre-scale mechanical testers to nanometre-scale optical tweezers. **[Read more here](#)**

## 'Better detection' for Alzheimer's and cancers

A new chemical discovery will lead to better monitoring and treatment for cancers and degenerative diseases, according to latest research by scientists. In a paper published in August in [ChemComm](#), an international team of researchers from the Universities of Birmingham, Bath and the East China University of Science and Technology in Shanghai outline a new approach to detecting 'reactive oxygen' using fluorescence. [Read about their research here.](#)

## News from ChemSoc

Want to hear about what the Chemistry Society are up to this year so far? [Read what the ChemSoc President Caitlin Smith has to say.](#)

## Chemistry at Birmingham - the view from an undergraduate



Emily Doyle, 2nd Year Chemistry with Industrial Experience student, writes about what it's like being an undergraduate today. [Read more.](#)

## Chemical warfare: It's nothing new

As millions flee Syria and the international community continues to consider its response to claims that chemical weapons may have been unleashed on civilians there; it is worth reflecting that in the science of modern warfare, truly, there is nothing new under the sun. Dr Simon Cotton comments on chemical warfare for the Birmingham Brief. [Read more.](#)

## Irresistible Materials



[Irresistible Materials](#) is a spinout company from the University of Birmingham that began operations in 2010 and aims to commercialise novel fullerene materials for applications in the semiconductor industry. It was formed by the entrepreneur and alumnus David Ure together with the three academic founders: Dr Alex Robinson, Professor Jon Preece, and Professor Richard Palmer. [Dr. Robinson explains the team's research and the journey from idea to business.](#)

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## New staff in 2013

There have been a number of appointments in the School this term. [Read a summary of our new staff online here.](#)

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## Events taking place shortly...

### School events

#### *EPS Inaugural Lecture Series*

The EPS Inaugural Lecture series celebrates the promotion of leading academics across the College of Engineering and Physical Sciences.

13/03/2014 [Professor James Tucker's Inaugural Lecture](#)

For more information on other lectures in the EPS Inaugural Lecture Series please visit [www.birmingham.ac.uk/eps/inaugural](http://www.birmingham.ac.uk/eps/inaugural)

## University events

### 09/12/2013 [University Carol Service](#)

6:15-7:30pm, on campus

This annual event, organised by University Chaplains and the Department of Music, is a joyful Christmas celebration for staff, students and families.

### 11/12/2013 [Festive Drinks at the Birmingham Frankfurt Christmas Market](#)

6-9pm, Victoria Square, Birmingham City Centre

Join fellow alumni for a festive drink at the largest authentic German market outside Germany and Austria.

### 12/12/2013 [USA Christmas Gathering in New York](#)

6:30-9:30pm, Revival, New York, USA

You are invited to the annual alumni holiday party. This is always the busiest get together of the year and we are looking forward to another fun evening.

### 14/12/2013 [USA Christmas Gathering in California](#)

5:30-7:30pm, California, USA

You and your partner are invited to join fellow alumni at a winter gathering cocktail party with UK University alumni from Birmingham, Nottingham and Sheffield.

### 27/03/2013 [Leaders of Tomorrow Reception](#)

6:30-8pm, London

Meet with current student recipients of the Access to Birmingham (A2B) scheme and students involved with the Academic Enrichment Programme at this drinks and canapés reception.

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## Do we have the right details for you?

According to our records your current business details are as follows: **Position** at **Organisation Name**. If this is not correct, please visit [your.bham](http://your.bham) or email [alumnioffice@contacts.bham.ac.uk](mailto:alumnioffice@contacts.bham.ac.uk).

**You have received this email from the University of Birmingham because we believe that it is relevant and of interest to you.** If you would like to opt-out of receiving information from your College, School or Department by email, please opt-out by visiting [your.bham](http://your.bham), emailing [alumnioffice@contacts.bham.ac.uk](mailto:alumnioffice@contacts.bham.ac.uk), or telephoning +44 (0)121 414 2773 / 2744 / 4724. In order to further tailor the communication we send, all emails are tracked and processed; further information regarding our use of data, is available by looking at our [data protection statement](#)