

## School of Chemistry Community

Part of  
THE EPS COMMUNITY



### Spring 2017

Greetings,

The last few months have been a very busy and exciting time for the school with (i) the announcement of a former professor in the School winning the Nobel prize in Chemistry, (ii) new academic appointments, (iii) the commencement of the build for the new Chemistry teaching labs, (iv) an Higher Education Award for Teaching Excellence, (v) a member of staff being in the news for a breakthrough in diabetes research, and (vi) another member of staff landing a €1.5 million grant from the EU for research into drug discovery.

As I guess you probably know by now Professor Sir Fraser Stoddart, FRS won the Noble Prize back in October last year for the pioneering work that he conducted in the 1990s on the design and synthesis of molecular machines. Fraser was a Professor in the School of Chemistry from 1990 to 1997, at which point he moved to UCLA in the US to take-up the Saul Winstein Chair, which was vacated by the 1987 Noble Prize winner (Professor Donald Cram). I was fortunate enough to have carried out my PhD in Fraser's group in the 1990s, so this news was extremely thrilling. Fraser was visiting the UK in November to receive the Haworth Medal from the RSC, and was kind enough to drop by Birmingham for a whirlwind 15 hours in which he hosted a number of his past group members from the Birmingham era, gave a lecture to 700 staff, students, and alumni, posed for many selfies after the lecture (!), was interviewed by the student magazine SATNAV, and had a formal dinner with staff from the School, past group members, alumni and University Executive Board members hosted by the Provost (Professor Tim Jones, who is also a Chemist). It was a fantastic afternoon and evening, even if I had to get up at 4 am the next morning to get Fraser to Heathrow! Fraser, thank you for such a memorable day. SATNAV's interview and a link to the lecture he delivered are included in this newsletter.

The School has appointed two new members of academic staff. [Dr Ruchi Gupta](#) started at the beginning of the year as a University of Birmingham Research Fellow and Senior

Lecturer, joining us from Hull University. Ruchi's research is largely focused on developing high performance optical sensors for applications in healthcare and life sciences. Her research vision is to develop revolutionary wearable, implantable and point-of-care systems that can be seamlessly integrated into daily life of individuals while monitoring health and using the information to create feedback loops for fully optimised treatments tailored to individual patients.

In addition the School has appointed a new Chair in Physical Chemistry, [Professor Tim Albrecht](#), who will join the School in September from Imperial College London. Tim's research interests focus on electrochemical processes on the nanoscale.

The Collaborative Teaching Lab (CTL) building broke ground at the beginning of the year, in which Chemistry undergraduate students will be taught. This space will transform the way we teach Chemistry and indeed STEM (Science, Technology, Engineering and Mathematics) subjects. It will be used by disciplines from across the Engineering and Physical Sciences, Medical and Dental Sciences, and Life and Environmental Sciences Colleges and will facilitate experiments that will require students from more than one discipline to be involved, giving the students a greater breadth of experience and better preparing them for the world of work.

[Dr Natalie Rowley](#) has been awarded a National Teaching Excellence Award from the Higher Education Academy for her use of innovative teaching methodologies in the undergraduate Chemistry curriculum. It is transforming our understanding of how students learn, and helping to ensure that the University continues to be an exceptional place to study. It's one of the reasons why as a School we are only of four Russell Group Schools of Chemistry that has had a 90 per cent or better overall satisfaction in the National Students Survey over the last six years.

Dr John Fossey was recently interviewed on the BBC and the Daily Telegraph for his work on 'smart' insulin, which could drastically reduce injections for patients suffering from type 1 diabetes. The development of smart capsules that would pass through the body and release insulin when it detects blood sugar levels are high could dramatically reduce the invasive and time-consuming daily chore.

[Dr Liam Cox](#) has just won a €1.5 million grant from the "EU entitled Delivering Better Starting Points for Drug Discovery" and represents an exciting opportunity to work with two European companies to establish a basis for developing new innovations in drug design.

Once again you will see from the selection of highlights that the School is moving from strength to strength across all of its activities in education and research, and I forgot to mention our 10 per cent increase in undergraduate applications this year, against a decline nationally.

You may recall that May is the time of end-of-year exams and finals! So with those pleasant memories(!) I will bid you farewell as I go and find my red pen to start my marking of my third year pericyclic reaction course questions. I wish you all a good

summer and I look forward to reporting on other achievements of the School to you later on in the year.

With best wishes

**Professor Jon Preece**  
**Head of School**



## Innovative insulin research

Researchers at the University are working on developing 'smart' insulin which could drastically reduce injections for patients suffering from type 1 diabetes.

[FIND OUT MORE >](#)



## The science of liquorice

There are foods that can split families, or even just couples. Love it or hate it foods. Brussels sprouts, blue cheese, chilli peppers, tomatoes (especially the cooked variety)... and liquorice.

[FIND OUT MORE >](#)

# WE ARE BIRMINGHAM

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Our 300,000 alumni all share one thing in common: the University of Birmingham. From recent graduates to industry experts, aspiring leaders to inspirational movers and

shakers, Birmingham alumni are making important things happen. Join the "We Are Birmingham" project and share your story with our students. You can inspire our students and offer an insight into the wealth of opportunities available to them. Plus, anyone who submits a profile before 1 July will be automatically entered into a draw to win a BrumBag full of University merchandise. Share your Birmingham story and help shape otheir future.

[SUBMIT YOUR WE ARE BIRMINGHAM PROFILE >](#)



## Alumni Spotlight

Professor Sir J. Fraser Stoddart received the 2016 Nobel Prize in Chemistry for the design and synthesis of molecular machines. He returned to the University in November to deliver a special lecture on his research.

SATNAV, our journalistic society, had the pleasure of interviewing him.

[FIND OUT MORE >](#)



## How to win a Nobel Prize

As you know, Professor Jon Preece was part of the PhD group taught by Sir Fraser when the world-renowned scientist was working at Birmingham.

Jon reveals that all you need is a broom to explain a ground-breaking scientific discovery...

[FIND OUT MORE >](#)

## University Reunion 2017

The Alumni Reunion 2017 provides a great opportunity to rediscover what made Birmingham "home" for you and to renew your lifelong connection to this special place. It's a fantastic time to reconnect with friends and classmates and see how Birmingham has grown into the university it is today. Join us for a day of reunion celebrations including campus tours, stress-free lectures, a chance to visit some of the latest additions to campus such as the new Library, and a plenty of opportunity to reminisce. There will also be time to visit us in Chemistry to find out how we have changed since you were last with us and to meet some of our current academics and students.



[FIND OUT MORE >](#)



## Societies News

There are now four student societies affiliated with the Chemistry: [ChemSoc](#), [WISE](#), [oSTEM](#) and [SATNAV](#). It's been a busy year with many events, careers activities and new committees, so there's plenty to update you on.

Engineering and Physical Sciences' 25 student groups do fantastic work to promote employment opportunities guest speakers and, of course, social events.

[FIND OUT MORE >](#)



## Microvolunteering

On Saturday 15 April we marked Microvolunteering Day with a range of bite-size activities that support the University in 15 minutes or less. Thank you to those who volunteered. If you didn't but would like to, there's still time!

In Chemistry we particularly want to hear how your careers have developed so we can share your stories and help inspire our students.

[FIND OUT MORE >](#)



## News Round-Up

EPSRC funding has been awarded to Professor Peter Slater and Dr Paul Anderson for the research project "[Reinventing the Solid Oxide Fuel Cell: Towards 200oC operation](#)".

Professor Tim Albrecht, currently at Imperial College London, will be joining the School of Chemistry as a [Chair in Physical Chemistry](#).

Landmark signing provides boost to [Birmingham Life Sciences](#).

Alumnus Dr Amrit Chandan has been highlighted as a standout entrepreneur through his inclusion the prestigious [Forbes 30 under 30 Europe](#) list.

[Full steam ahead for Collaborative Teaching Laboratory](#): construction work at the £40 million Collaborative Teaching Laboratory (CTL) has commenced at the heart of its main Edgbaston campus.

Dr Natalie Rowley has been awarded a [National Teaching Fellowship](#), the most prestigious individual awards for excellence in teaching in higher education.

Why that '[clean swimming pool](#)' smell is actually bad for your health.

Usain Bolt has lost an Olympic gold medal thanks to a team-mate on methylhexanamine – [here's what it is](#).

Osman Kent, alumnus and serial entrepreneur, delivered the latest EPS Distinguished Lecture entitled "[Success gives you the credibility to talk about your failures](#)".

## Events

### Monday 15 - Wednesday 17 May

#### [Pint of Science](#)

Leading University of Birmingham academics will be speaking about their cutting-edge research. We aim to bring some of the most brilliant scientists to discuss their latest findings with you. You don't have to have any previous scientific knowledge or training, and this is your chance to meet the people responsible for the future of science.

**Venue:** Various locations across Birmingham City Centre

### Wednesday 17 May

#### [Birmingham - Fraunhofer Joint Research Platform Launch](#)

The University of Birmingham is set to host the Birmingham – Fraunhofer Joint Research Platform Launch to establish closer ties with cutting-edge renewable energy technology in the UK and Europe.

**Time:** 9am-7:30pm

**Venue:** Elgar Concert Hall, University of Birmingham

### **Wednesday 7 June**

#### **EPS Societies' Awards**

Celebrate with your student society as we recognise their extraordinary achievements with a gala, black-tie evening.

**Time:** 7pm-11pm

**Venue:** Edgbaston Campus

### **Saturday 17 June**

#### **UBRacing 20th Anniversary**

Team members past and present, and motor sport enthusiasts are invited to join UBRacing in marking their 20th birthday and two decades of Formula Student at Birmingham. Join us for an afternoon of celebrations, take a peek at the 2017 car and be prepared for a few surprises.

**Time:** 1:30-6pm

**Venue:** Edgbaston Campus

### **Saturday 17 June**

#### **Geotechnical Engineering 60th Anniversary Reunion**

We are delighted to announce that the Geotechnical Engineering masters degree programmes are celebrating their 60th year. To celebrate this notable achievement the University will host Geo60, a celebration and reunion of the programme to which all alumni and interested persons are invited to attend.

**Time:** 9:30am-5pm

**Venue:** Edgbaston Campus

### **Wednesday 28 June**

#### **Mathematics Taster Day**

The School of Mathematics holds a Mathematics Taster Day for Year 12 pupils in the second half of the summer term. As well as information on studying mathematics at Birmingham, the day will include two sample lectures, a tour of campus and an interactive mathematics session.

**Time:** 9:30am-3:30pm

**Venue:** Edgbaston Campus

### **Tuesday 4 July**

#### **Engineering Taster Day**

Our Engineering Taster Day is for Year 12 pupils who are thinking about applying to university to study an engineering degree. The day will consist of an introductory talk, a tour of campus, a subject fair and an interactive workshop.

**Time:** 9:30am-3:30pm

**Venue:** Edgbaston Campus

**Sunday 16 - Thursday 20 July**

**[IUPAP International Conference on Women in Physics](#)**

The International Union of Pure and Applied Physics (IUPAP) is delighted to announce that the 6th conference in this series will be hosted by Birmingham, UK. Organised in partnership with the Institute of Physics (IOP) and the Universities of Birmingham, Nottingham and Warwick, the Conference will foster the participation of women in physics and increase diversity in the field.

**Venue:** Edgbaston Campus

**Wednesday 20 September**

**[London Mathematical Society Popular Lectures](#)**

We are proud to begin the 2017/18 Birmingham Popular Mathematics Lecture series with the London Mathematical Society Popular Lectures, which are suitable for all who have an interest in Mathematics, and present exciting topics in mathematics and its applications. In this first event of the new academic year, David Tong (University of Cambridge) and Jason Lotay (University College London) will be speaking.

**Time:** 6:30-9pm

**Venue:** Elgar Concert Hall, University of Birmingham

**Saturday 30 September**

**[University of Birmingham Alumni Reunion](#)**

Join us for the big Anniversary Reunion on Saturday 30 September 2017. Whether you're celebrating your 50th anniversary or your 1st anniversary, come back to the Edgbaston campus and celebrate your University with staff, students and fellow alumni.

**Time:** 10am-5pm

**Venue:** Edgbaston Campus



**You are in control of your data. We want to stay in touch with you and keep your information in accordance with your wishes.** You will be kept updated with news from our campus, including research, educational activities and courses, events, alumni activities, and opportunities to support our fundraising. Depending on [your preferences](#), you will receive communications via post, email, telephone and social media. We would like to ensure that our interactions with you are appropriate and cost-effective. We will pay attention to your responses (including e-tracking) and, from time to time, may use your data for profiling, targeting, and research purposes. Your information will be [held securely](#) by the University of Birmingham and will only be made available to our academic & administrative departments, recognised alumni groups, and trusted agents acting on behalf of the University. Information on how your data is held and used is set out in our [Data](#)



**Protection Statement**. If you wish to opt-out of any contact or have any questions about your personal data, please **contact the alumni office**. For reference, our Inland Revenue Charities reference number is X7237.