

# The rbital



As most of you will be aware, I will be acting as Head of Department until the end of July 2017, when Professor Mike Ward joins us. I hope that I can do a good job of steering the Department through a very busy time which will include the ITLR review and the subsequent feedback, the annual round of planning and the recruitment of several members of staff. We have a great team in this department and I am confident that we will get an excellent outcome in every respect.

As you will also all be aware, three members of academic staff will be leaving the Department of Chemistry soon: Alison and Mark Rodger, and Ale Troisi. Alison will leave in February, and Mark will be departing later in the year. Between them, Alison and Mark have served Warwick Chemistry for over 40 years! I am sure that we would all wish Alison and Mark the very best of luck and good fortune for the next stage of their exciting lives down under in their beautiful and exciting home city of Sydney. Ale is leaving in April - he has been a key member of the department since he started his independent academic career here in 2005, and particularly supportive to me on the PG front. Obviously there will be many 'farewells' to all three however I would like to take the opportunity to not only thank them on behalf of the Department for all their hard work and multiple contributions, but also personally for being great colleagues to me during their time here.



Thank you to everyone for your hard work and service to the Department and enjoy this term's edition of The Orbital.

**Professor Martin Wills, Interim Head of Department**

## Solar powered



In a recent [paper](#) published in *Nature Energy*, [Dr Ross Hatton](#), [Professor Richard Walton](#) and colleagues, explain how solar cells could be produced which are more adaptable and simpler to produce than their current counterparts. For more details, see [here](#).

## Congratulations - Salters' Institute Graduate Award

[Patrick Rowe](#), a MChem with Industrial Training student who graduated in July 2016, has won the prestigious Salters' Institute Graduate Award. Up to ten awards of £1,000 each are made to the best final-year Chemistry undergraduates from all of the UK universities. Awards are based on an assessment of the candidate's potential to occupy a leading position in public life, either by employment in the chemical or related industries, or more generally in employment that supports the industrial life of the UK.



The prestigious Annual Awards Ceremony took place on Friday 9 December 2016. Over 180 guests attended the prize giving ceremony and lunch reception. Dr Annette Doherty, Senior Vice President Product Development and Supply at GlaxoSmithKline, delivered a keynote address and presented the awards at the Ceremony. Unfortunately, Patrick was trapped in snowbound Montreal airport on his way back from a conference and missed the ceremony itself, but his award was accepted by his mother.

Patrick undertook his MChem Industrial Year at DSM Speciality Resins in Zwolle in the Netherlands working on the development of novel bio-renewable monomers for water-dispersed composite polyurethanes and his final year MChem project with Prof. Troisi on biological light harvesting complexes. Patrick is currently undertaking a PhD at University College, London.

For further information on all the Salters' Institute activities, please visit [www.saltersinstitute.co.uk](http://www.saltersinstitute.co.uk)

## Publication successes

[Dave Haddleton's](#) paper on 'Sequence-controlled methacrylic multiblock copolymers via sulfur-free RAFT emulsion polymerization' was recently published in 'Nature Chemist'.



[Maartje Van Agthoven's](#) article on 'Mass Spec goes 2D' was published in *Laboratory News* on January 19. For the full article, see [here](#).

[Alina Kuzmich](#), currently a Y3 BSc Chemistry student, published her first paper on the prestigious RSC journal *Energy & Environmental Science* (IF=25.4) from the research carried out from a URSS summer placement in the **Troisi group**. In her work she analysed close to a hundred electron acceptors used in organic solar cells and discovered that all high efficiency acceptors are characterized by unusually small energy difference between the two lowest unoccupied orbitals. This opened new routes for the design of new electron acceptors. You can read more from A Kuzmich, D Padula, H Ma, A Troisi, *Energy & Environmental Science*, 2017, DOI: 10.1039/C6EE03654F.



## A last word from Alison...

As I am trying to pack up to move to Australia I have been thinking about my last 22.5 years at Warwick. The most disconcerting thing is that most of the members of the department were not even alive then! Google hadn't been invented, PowerPoint was an esoteric bit of software unusable by normal (i.e. me) people, mobile phones required a weight lifter to carry and were just what the name says and no-one used them to plan their lives or keep track of their children. I think the thing that struck me most strongly when I came to Warwick was that it had nearly as much equipment as Oxford and I could get access to it. Over the years I have developed a suite of spectroscopy equipment that I am delighted to think has supported the research programmes of hundreds of people who have passed through and remained at Warwick. Nikola is planning to keep that philosophy going after I leave – but please be vigilant about loving and caring for the equipment to extend its life.

So, what else has changed at Warwick?

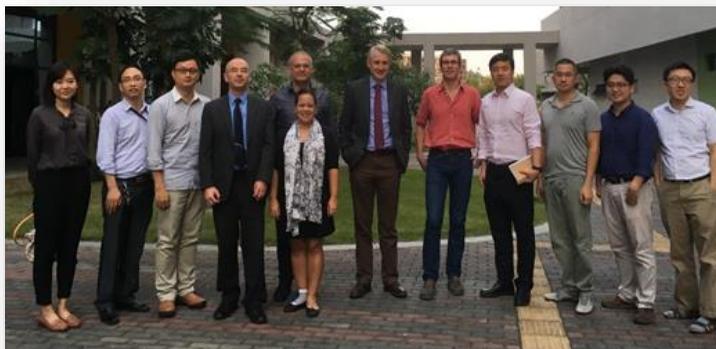
- No-one is in danger any longer of being the only female academic in chemistry.
- After a lot of lobbying a half-term childcare facility is now operating. It took me years to realise why I was a lone voice on this one – only scientists don't have 'reading weeks' that happen to coincide with half term.
- Doctoral Training Centres are a fact of life, no longer an experiment.
- Career skills are deemed to be a key part of training our students.
- Cross-departmental PhD supervision is common.

And lots of other things, but perhaps the biggest thing that has changed for me is the external perception of the university. When I came to Warwick chemistry it didn't seem to have much of a reputation for anything (though bear in mind Google didn't exist, so how ever did one find out anything???) except attempts at an artificial nose and maybe a bit of carbohydrate synthesis. Now we are a much larger vibrant community of diverse scientific activity with extensive collaborations and energy and a superb student body at all levels. I am very sad to be leaving it but then one of the joys about academia is that people come and people leave but they are encountered in all sorts of places all over the world. When you come to Sydney do include Macquarie in your plans!

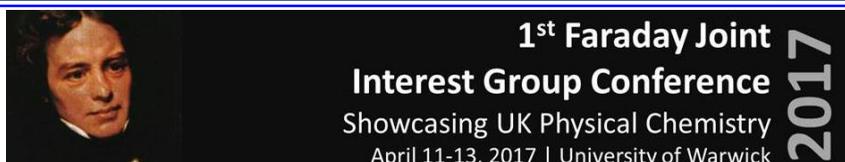
## Visit to SUSTech, Shenzhen, China

Five members of staff from Warwick Chemistry; [Prof Martin Wills](#), [Prof Peter O'Connor](#), [Prof Richard Walton](#), [Jon Rourke](#) and [Isolda Romero-Canelon](#), visited the Southern University of Science and Technology (SUSTech) in November 2016.

Although SUSTech is a very new University (only established in 2011, in Shenzhen), its Chemistry department is rapidly gaining a strong international profile. The visit included a one-day workshop during which the Warwick delegation discussed potential collaborations and common research interests with staff from SUSTech. More information on the recently-agreed Collaborative PhD programme between Warwick University and SUSTech is available [here](#).



Participants at the Warwick/SUSTech workshop



The Interest Groups of the RSC Faraday Division invite you to register for the upcoming **Faraday Joint Interest Group Conference 2017**, to be held at the University of Warwick from April 11-13 2017.

This meeting is the first of its kind, and aims to bring the UK Physical Chemistry community together on a regular basis to highlight latest trends in research, encourage collaboration, as well as strengthen links with international researchers and industry. In particular, we encourage the active participation of early-career researchers, either in the form of a contributed talk or a poster. Poster prizes will be available for postgraduate and postdoctoral researchers.

Confirmed plenary speakers include: 2016 Nobel Laureate Sir Fraser Stoddart (Northwestern), Sir Richard Friend (Cambridge), Prof Chris Dobson (Cambridge) and RSC Award Winners Talks from Prof Peter Bruce (Oxford), [Dr Józef Lewandowski](#), and Prof Ifor Samuel (St. Andrews).

Plenary sessions will be combined with parallel sessions hosted by many of the Faraday Interest Groups and representing a wide breadth of Physical Chemistry research. Over these parallel sessions, we have capacity for 70 contributed talks from registrants – so please consider submitting an oral presentation for consideration. Register by 14 March if you would like to contribute a talk.

### Other logistics at a glance:

- Fees (incl. room & board): £80 (student), £240 (RSC member), £275 (non-RSC)
- Registration deadline for contributed Talks: 14 March 2017
- Registration closes: 28 March 2017

Registration fee includes two nights en suite accommodation, meals, and conference dinner.

Further information on full programme of speakers and registration can be found [here](#).

Contact: [Ann Dixon](#), Conference Chair and Secretary of the RSC Biophysical Chemistry Group.

## “The Great Christmas Cake Off”

**Selina Kermode**, RSC Education Coordinator for the Midlands, delivered the chemistry-themed [Christmas lecture](#) at the Arts Centre in early December. Selina made it her mission to show every aspect of making a cake from a science perspective, and as with all popular science lectures, there were plenty of explosions (flour, alcohol) as well as some more gentle reactions looking at the properties of fats and raising agents. And plenty of bad jokes and audience participation with over 500 members of the public, including some very vocal Scouts!

Special thanks to **Matt Wendzina** who was the Christmas lectures assistant.



## Materials Week 2017

The Materials GRP's Materials Week will take place from Monday 13 February – full details can be found [here](#).

### **Monday 13 Feb: 13.00-15.00, P521 - ERC Starter/Consolidator Grant Networking session -**

An informal networking event for academics looking to apply for ERC Starter or Consolidator grants in the near future. The session will be targeted towards Physical Sciences, but all are welcome. Please contact [Annie Morton](#) if you wish to attend.

### **IOM3 Young Speakers Competition: 18.30-20.30, Location TBC**

The regional heat of the IOM3 Young Persons' Lecture Competition welcomes entrants aged 25 and under to present a 15 minute talk on their research on any subject related to Materials, Minerals or Mining. The winner will go on to the national finals in London later in the year with the international finals being held in Perth, Australia. Please see [the Materials GRP website](#) for details on how to take part.

### **Tuesday 14 Feb: 10:00-11:00, B2.04/5 - “The Nature of Science Publishing” Alison Stoddart (Nature Reviews Materials)**

Alison was Associate Editor then Senior Editor for *Nature Materials* and has recently launched *Nature Reviews Materials* where she is Editor in Chief.

**Wednesday 15 Feb: The Egg Drop** – an afternoon of smashing fun! Working as a team, design a crash structure from the materials provided to protect your egg! We welcome teams of students and staff from all disciplines – register [here](#).

### **Thursday 16 Feb: Materials Week Symposium** (all talks will take place in PLT, and refreshments on the Science Concourse).

12.45-13.30: Buffet lunch

13.30-14.15: [Dr Ross Hatton](#)

14.15-15.00: **Dr Rachel Evans** (Cambridge)

15.00-15.30: Tea/coffee

15.30-16.00: [Prof Richard Walton](#) – “Solution Crystallisation of Complex Oxides: Discovery of New Materials with Magnetic & Catalytic Properties”

16.00-17.00: **Prof Dermot O'Hare** (Oxford) - RSC Tilden Prize seminar: “New Breakthroughs in Layered Double Hydroxide Chemistry”

17.00-18.00: Wine reception/Poster Exhibition, including the 2016 Summer Bursary posters and images from the Materials GRP Photography Competition.

### **Friday 17 Feb: Materials in Medicine**

A half day workshop bringing together clinicians, medics and scientists to discuss challenges and opportunities for collaboration.

## Careering ahead

The Non-Academic Career Options for PhDs event will be held on Wednesday 22 February from 1pm-5pm in the Wolfson Research Exchange. This is a chance to learn more about decision making, career routes for PhDs, applications to jobs and finally to hear from PhD alumni who have gone on to non-academic careers. You can book a place by logging on to Warwick's careers event booking portal [here](#). There is a PhD Networking event, where you can come to speak with employers who target PhDs from Chemistry, on Wednesday 1 March, 6pm-8pm in Digilab Mezzanine. Again you can book at the link above.

You can drop in to see [Charlie Cunningham](#), Chemistry Careers Consultant on Wednesdays 10.30am-12.30pm and 1pm-3pm (commencing 1 February) in the Science Careers Office (old porters lodge Chemistry side of bridge from Main Library). If this time is not convenient, please email Charlie direct or book an appointment at [myAdvantage](#).



## RSC Thursday Lectures

The Winter/Spring term schedule continues as follows (4 pm start in PLT unless otherwise stated):

**Week 17:** 26 January  
**Week 18:** 2 February  
**Week 19:** 9 February  
**Week 20:** 16 February (1.30pm start)  
**Week 21:** No seminar  
**Week 22:** 2 March  
**Week 23:** 9 March  
**Week 24:** 16 March

Please check [here](#) for updates.

### What's happening?

For an update of all future Chemistry events, please see [here](#).

Updated committee membership and meeting dates for 2016/17 are available on [ChemIntra](#) (for staff view only).

# Winter 2017 Graduation



Polymer



MAS AS MIT



MAS



AS MIT

## Winter Graduation 2017

Many congratulations to all of our very recent Graduands :

**BSc** – Abby MADDOCKS

**MPhil** – Khatija BHAYAT

**MSc (Research)** – Yee Ting Candace HO

**MSc (MAS)** – Shrina BHAGAT\*, Emily Kathleen CORLETT\*, James EDMONDSON\*, Charlotte Elizabeth FLETCHER, Nicole Louise KELLY, Mary Joanna THOMAS\*, James TOWN, Matthew TURNER

**MSc (Polymer Chemistry)** – Abdullatif ALANAZI, Chaoyi CHEN, Andrew HICKMAN, Steven Matthew Joseph MERRITT, Iona Mary MUNRO, James SODE, Birsen SOMUNCUOGLU, Chen ZHU

**MSc (Diamond Science and Technology)** – Johnathan William Robert ASH, Ella BENTIN\*, Alexandra Jane BORRILL\*, Joseph Andrew DURK\*, Lukasz DZIECHCIARCZYK, Joshua Jonathan GREEN, Shazeea Nisa ISHMAEL\*, Robin LAURENCE\*, Maabur SOW, Fabian STELZER, Guy Anthony STIMPSON, Amber May WASELL, Jacob WOOD\*

**PhD** – Fehaid Mohammed ALSUBAIE, Rhiann ANDREW, Alaina Emanuella EMMANUEL, Alexander Stuart PARKER, Christopher Andrew WOOTTON, Jamie David YOUNG

\* Indicates graduates with Distinction or First Class Honours

## Common Room makeover



*Before: dire, drab and dreary*



*After: cool, contemporary and chic!*

This is YOUR common room and kitchen: please help to keep both areas clean and tidy by disposing of your rubbish in the waste bins provided.

Thank you!

## A festive feast and a battle of wits

"The Annual Department of Chemistry Christmas Lunch was held on Thursday 15 December at the Lakeview Restaurant, Scarman.

Teams of staff and postgraduates then went head-to-head in the Chemistry Christmas Quiz, hosted by our scintillating Quizmaster, Mr Nick 'Bamber Gascoigne' Barker. Our general knowledge was stretched to its limits by an eclectic range of fiendish questions set by Ashley Page.

The winning teams were:

- 1st = Bioquizzical Chemistry
- 2nd = The Roaring Chestnuts
- 3rd = The Egg Nog Heads



Extra special thanks go to Anne Hollingsworth for all the hard work she put into organising the lunch and quiz - a very merry time was had by all!"

*Lucy Johnson*

## Sporting success for James Ryan

Teaching Technician **Eddie Ryan's** son, James who is 17 and currently in year 12, recently played U19 Rugby for the Philippines, scoring a try against Singapore. James has also represented the Philippines Rugby at U16 and U18 level, as well as representing England at Judo.

James played in both matches for the Philippines U19 Rugby team (the Volcanoes) in the Asia Division 1 Rugby Championship against Korea and Singapore.



James being presented with his match shirt by Matt Cullen the Director Of Rugby for the Philippines Rugby Football Union.



## Arrivals .....

We extend a warm welcome to the following:

### Staff

**Dr David Burnett** – Research Fellow  
**Dr Changhui Chen** – Research Fellow  
**Mrs Julie Hage** – PA to Mike Shipman (temporary)  
**Dr Muhammad Hasan** – Research Fellow  
**Dr Guillaume Hedir** – IAS Early Career Research Fellow  
**Ms Candace Ho** – Research Assistant  
**Mr Joseph Jones** – Research Assistant  
**Dr Daniel Murdock** – Teaching Fellow  
**Dr David Perry** – Research Fellow  
**Dr Victor Quan** – IAS Early Career Research Fellow  
**Ms Nishi Vasisht** – Core Technician

### Visitors

**Dr Christopher Fage** – Visiting Research Fellow  
**Mr Bjorn Hamburg** – Visiting Student  
**Mr Haruki Moriyama** – Visiting Fellow  
**Ms Isabel Meching Ornelas** – Visiting Student  
**Ms Marianna Pioli** – Visiting Student  
**Dr Adair Richards** – Visiting Associate Professor  
**Mrs Nastja Riemer** – Visiting Fellow  
**Miss Felaine Sumang** – Visiting Fellow  
**Dr Andrew Weems** – Visiting Research Fellow  
**Mr Xiaoyou Xie** – Visiting Fellow

### .... and Departures

We say thank you and goodbye to:

**Samita Bawa** – Administrative Assistant  
**Dr Chris Birchall** – RSC Teaching Fellow  
**Dr Abraha Habtemariam** – Senior Research Fellow  
**Dr Corinna Preuss** – Visiting Fellow  
**Dr Anaïs Pitto-Barry** – Research Fellow

## 'Why I love Warwick Chemistry'

"I have been here for all of three weeks, covering Joy Montgomery and I thought you would be interested in an "outsider's perspective". I was previously at the University of Leicester for 13 years.

The Chemistry staff have proved to be very welcoming so far – particularly the biscuit monitor (you know who you are!), Pam the cleaner and the people I share an office with. I have already been included in the "Staff Walk" on a Tuesday lunchtime; which has enabled me to meet other University members of staff, and feed the ducks; tried out the Beauty Parlour (yes, I need it!) and met many academic, technical and administrative staff – apologies if I don't always get your name right!

So far, I have had no problems with parking; and the journey from Leicester has not proved as horrendous as I expected. I deliberately changed to part-time work so I could have Fridays off (my husband – David – and I (together with Rupert the dog) are keen caravanners, to the extent that he teaches towing at weekends for the Camping and Caravanning Club and I have a great weekend on my own, so we need to travel on Fridays.



Julie Hage

Oh, and I forgot Mike Shipman – my boss, who has been very patient and understanding when I didn't know the Warwick lingo (and you do all love using acronyms)."

## Borneo expedition

From mid January to the end of April 2017, **Joy Montgomery** (PA to Mike Shipman) will be participating in a [Raleigh International Expedition](#) in Malaysian Borneo, working alongside young volunteers on community and environmental projects. Joy flies out to Kota Kinabalu on 20 January to look after all the administration – "a bit of a bus man's holiday" - supporting the volunteer staff and venturers throughout the expedition.

Raleigh International is a sustainable development charity working for and with young people, alongside rural communities, focusing on providing access to safe water and sanitation, protecting vulnerable environments, and building livelihoods. The work gives thousands of young people experience of sustainable development work, whilst developing skills that they will carry with them throughout their lifetime.

Joy will be funding all her own expenses so every donation, however small, will go to support Raleigh's work – please visit her Justgiving page [here](#) if you would like to make a donation.



## Thank you...

... to all bakers, eaters, treaters, feeders and donators!

Together, the department of Chemistry raised **£402.16** for Children in Need at the Bake Sale in November.



**BBC**  
**Children**  
**in Need**