

Chemistry Update

Newsletter 296, 27 April 2018

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Calendar of Events

Green Chemistry Seminar

Speaker: Prof Shicheng Zhang,
Fudan University
Date: Monday 30 April
Time: 3pm—4pm
Location: C/F/106

Inorganic and Organic Seminar

Speaker: Dr Louise Horsfall,
University of Edinburgh and
Dr Rebecca Goss, University of
St Andrews
Date: Wednesday 2 May
Time: 1pm—3pm
Location: C/B/102

**Poster Presentation followed by
Scientific Symposium: Celebrating
Diversity in the Chemical Sciences**
Celebrating 10 years of Athena SWAN
Date: Wednesday 16 May
Time: 12.30pm—5.30pm
Location: Ron Cooke Hub

Jim Matthew Public Lecture

Celebrating 10 years of Athena SWAN
Speaker: Prof Carolyn Bertozzi,
Stanford University, USA
Date: Thursday 17 May
Time: 6.15pm
Location: Spring Lane Building

Organic Seminar

Speaker: Dr Sara Kyne,
University of Lincoln
Date: Friday 18 May
Time: 1pm—2pm
Location: C/B/101

ACAL BFI Roadshow

Date: Tuesday 22 May
Time: 10am—3.30pm
Location: Reception Foyer

Organic Seminar

Speaker: Dr Scott Cockcroft,
University of Edinburgh
Date: Wednesday 23 May
Time: 1pm—2pm
Location: C/B/101

Departmental Seminar (RSC)

Speaker: Dr Nicholle Bell,
University of Edinburgh
Date: Wednesday 30 May
Time: 1pm—2pm
Location: C/B/101

Date of Next Issue:
23 May 2018

Enhanced Wild Fund Scholarship Funding

Chemistry alumnus Dr Anthony Wild has doubled his annual donation to [Wild Fund Scholarships](#) from £100,000 to £200,000 for graduate students entering from 2018/19 onwards.



Kelechi Uleanya – one of the current Wild Fund Scholars.

Since it was established in 2006, the Wild Scholarship Fund, endowed to the Department by Dr Tony Wild, has enabled 70 students to accept postgraduate research positions. Over 50 of these students have now graduated, with ca. 50% of all them being female. The University of York has been the proud home of Wild Scholars from across the globe, with students coming from China, France, Nigeria, New Zealand, United States of America, Guatemala and Pakistan to name just a few. These incoming scholars have transformed and enlivened the Department with both their passion for chemistry and their international outlook. On graduation, these scholars have gone onto a range of careers across the globe including post-doctoral research, academic positions, research and development in industry, medical research and banking.

Thanks to the generosity of Dr Wild, the Department of Chemistry has now been able to increase the value of the scholarships offered by this scheme in the hope that it will continue to attract the strongest students from around the world who would not otherwise be able to take up the opportunity to undertake postgraduate research in the UK.

As one of our current Wild Fund scholars, Kelechi Uleanya from Nigeria points out: “In the face of the towering inflation that hit my country, drastically diminishing my sponsorship and closing up all foreign transfers when I arrived for my studies, I will always remain a million times thankful to the Wild fund that gave me invaluable support”.

For 2018/19 we are pleased to offer the following scholarships:

- Wild Platinum Scholarships (overseas) - full tuition fees for the duration of study
- Wild Platinum Scholarships (EU) - full tuition fees + £6,000 per year for duration of study
- Wild Gold Scholarship (overseas) - 50% reduction in tuition fees for the duration of study
- Wild Gold Scholarship (EU) - full tuition fees for duration of study
- Wild Prize - £2,000 in Year 1 of study for self-funding students from the UK, EU or overseas

Scholarships are awarded based on academic merit, country of origin, expressed financial need and departmental strategy.

Athena SWAN 10 Year Gold Celebration Event

This year we are celebrating 10 years of holding an Athena SWAN Gold Award which will be focused on two days of events on 16 & 17 May. All members of the Department are invited to take part in these events.



Scientific Symposium Celebrating Diversity in the Chemical Sciences

16 May, 12:30—17:30, Ron Cooke Hub

On the afternoon of 16 May, there will be a [scientific symposium](#) which will be held at the Ron Cooke Hub. Professor Carolyn Bertozzi of Stanford University will be the keynote speaker, along with Professor David Haddleton of Warwick University. David was an undergraduate and postgraduate student in Chemistry at York, having completed his PhD with Professor Robin Perutz. He supports diversity in science and is one of the Royal Society's "Parent-Carer" Scientists. In addition, there will be talks by Dr Meghan Halse, Dr Kirsty Penkman, Dr Will Unsworth and Professor Paul Walton, along with a poster session prior to the talks.

We are looking forward to two days of excellent events, and strongly encourage you and your research groups to take part.

Draft Programme for 16 May Scientific Symposium

12:30-1:30	Lunchtime poster session
1:30-1:35	Opening remarks
1:35-2:20	David Haddleton
2:20-2:45	Kirsty Penkman
2:45-3:10	Paul Walton
3:10-3:40	Tea break
3:40-4:05	Meghan Halse
4:05-4:30	William Unsworth
4:30-5:30	Carolyn Bertozzi



Public Lecture: The Long Game of STEM Diversification

Professor Carolyn Bertozzi, Stanford University, 17 May, 18:15, SLB/118

On 17 May, Professor Carolyn Bertozzi will give a public lecture from 18:15 in the Spring Lane lecture theatre (note updated title). Carolyn will speak on her life as a scientist and the importance of diversity in science. The talk will be followed by a panel discussion.

[Professor Carolyn Bertozzi](#) is the Anne T. and Robert M. Bass Professor of Chemistry and Professor of Chemical & Systems Biology and Radiology (by courtesy) at Stanford University, and an Investigator of the Howard Hughes Medical Institute. She is considered one of the foremost multidisciplinary scientists of her generation.

Tickets for the public lecture are now available [here](#).

Johnson Matthey Poster Competition

The Johnson Matthey Poster Competition took place this year on 10 April, and saw 31 of our third year PhD students presenting their work.

The Competition requires participants to display a poster about their research which is scored by a panel of judges who look at presentation, scientific content and student discussion.

The judging panel consists of members of academic staff and PDRAs.

The overall standard of the posters was high as usual, and after careful consideration, 5 winners were awarded **£350** to be spent on research activities / items.

Many congratulations to:

Robin Brabham (Dr Martin Fascione and Prof Rod Hubbard) – Palladium-Unleashed Proteins: Gentle Aldehyde Decaging for Site-Selective Protein Modification.

Phillip Chivers (Prof David K. Smith) – Spatially-Resolved Soft Materials with Biomedical Applications.

Paul Jones (Prof Peter O'Brien and Prof Rod Hubbard) – Design and Synthesis of 3-Dimensional Fragments to Explore New Areas of Pharmaceutical Space.

Conor Rankine (Dr Derek Wann) – The Femtosecond Molecular Movie.

Emma Stanbury (Prof Simon Duckett) – Quantifying Substrate-Iridium Binding Potential via pKa.



L to R: Phill Chivers, Paul Jones, Emma Stanbury, Dr Martin Partridge from Johnson Matthey, Robin Brabham, Conor Rankine

Winners were announced at a departmental seminar in the afternoon, followed by a talk from our guest speaker Dr Martin Partridge from Johnson Matthey entitled:

Turning waste into Fuel – New Opportunities for Fischer-Tropsch Catalysis

Thanks go to Johnson Matthey for their sponsorship of the event, all those members of staff on the judging panel, and all the students for taking part.

[Johnson Matthey](#) have sponsored this event for the past 3 years. We are

delighted that Dr Martin Partridge, Research And Development Director at Johnson Matthey has agreed that they will continue to sponsor this event, providing the prize money for a further 3 years up to 2021.

Dr Liz Dickinson in RSC Voice Magazine

Dr Liz Dickinson has been featured in the Royal Society of Chemistry's Voice magazine, highlighting the importance of supporting researchers to return to work after a career break.



In a [two-page interview](#), Liz explains how a [Daphne Jackson Trust Fellowship](#) enabled her own return to research after a seven-year break to look after her sons.

Liz said, "The RSC part-funded my fellowship, so they were aware I had the Daphne Jackson Trust Fellowship, and contacted me to see if I'd have a chat about it, and my experience."

Liz joined the Department of Chemistry as a research fellow in Dr Julie Wilson's group two years ago. A former NMR spectroscopist, she has now retrained in chemometrics, a science which applies statistics and pattern recognition to chemical numerical data. In the interview, she talks about the challenges of returning

to work and also her achievements in the two years since her return. She gives special mentions to her supervisor and also the Department of Chemistry at York as a whole.

Liz also stresses the importance of initiatives supporting researchers to return to work, such as the Daphne Jackson Fellowship Trust. "There are so many people that don't even know about it and that's really sad," said Liz. "I hope the article makes other people apply."

Voice magazine is published quarterly by the Royal Society of Chemistry and is received by members as a supplement to *Chemistry World*.

"I had no idea what to expect when I returned to work. What has surprised me is the constant level of support I have received from my supervisor Dr Wilson, the Department of Chemistry at York and mentorship from other academics, and the trust as a whole. Everyone has been extremely encouraging and understanding of part-time research to fit in with family life. They have also pushed me to make my research competitive and high quality, but with patience and understanding of the retraining aspect of the research." - *Dr Liz Dickinson in Voice magazine.*

"Athena SWAN and equality for all has made a huge difference to working life - this is something that Chemistry at York has embraced and is evident in daily life there." - *Dr Liz Dickinson in Voice magazine.*

Clarke Group News

Dr Paul Clarke has been on an EPSRC-funded research visit to the laboratories of Professor Mick Sherburn at the Australian National University, Canberra. The trip enabled Paul to learn more about the synthesis and reactivity of dendralenes, cross-conjugated polyenes, the use of which could provide more step-economic routes to the synthesis of biologically active natural products. During the visit, a collaboration was established between the Clarke and Sherburn groups to investigate transmissive pericyclic reactions of dendralenes and apply them to the synthesis of decalin-containing biologically active natural products. Over the 6 weeks Paul was visiting Canberra, he also got to experience some of the wildlife, including wild wallabies and koalas, and the indigenous culture of the region - a 1000 year old aboriginal rock painting.

En-route to Australia, Paul stopped off to see former PhD student Nadiah Nasir and give a lecture at Universiti Putra Malaysia, where she is now an academic in the organic chemistry department.

Giacomo Lodovici, Chris Maddocks and Kirsten Hawkins all presented posters at the RSC Regional Organic Division Meeting in Leeds on 13 April. All the posters generated interest with the delegates, but sadly no prizes were won on this occasion.



Paul, Nadiah and Nadiah's husband at the top of the Kuala Lumpur Tower, Malaysia



Wild Wallabies



1000 year old Aboriginal Rock Art



A sleepy wild Koala



Research School of
Chemistry, Australian
National University

Online Department Suggestion Box



The online Equality and Diversity suggestion box has been extended to be a suggestion box for the whole Department. You can submit your thoughts / suggestions / ideas for general Departmental matters as well as matters relating to Equality and Diversity. You can find the Google form on the intranet homepage or at this [link](#).

Solar Fuels Network Symposium - 19-20 March 2018



We hosted the 6th Solar Fuels Network Symposium in the Department on 19-20 March. The idea behind solar fuels is to store the sun's energy in the form of fuels or chemical feedstocks rather than in batteries. If we could do this on a commercial scale, we would be able to store solar energy harvested when the sun shines and use it at night. This sounds a narrow topic but there are a myriad potential ways of storing the energy. It could be via direct photochemistry or via electrochemistry, with homogeneous or heterogeneous or enzyme catalysis or a mix of methods. For me, one of the most exciting lectures came from Julea Butt (UEA) on the light-driven reduction of C=C bonds using a combination of a micro-organism, a photosensitiser and an electron relay. The symposium, chaired jointly by me and Erwin Reisner from Cambridge, attracted about 100 participants. Our keynote lecture was from Mike Wasielewski from North Western University in Chicago. It was my duty to present him with the RSC Physical Organic Award, a little ironic considering my lack of credentials in the subject. Nevertheless, this award emphasised the lack of boundaries in the subject – these days Mike investigates rhenium complexes for CO₂ photoreduction much as we have done here.

- Professor Robin Perutz



Left: Prize winners for the talks and posters with Erwin Reisner (red jumper)



Right: Mike Wasielewski receiving RSC Award

STAR-ProBio 1st Annual Meeting and 1st International Workshop - 4-6 April 2018



On 4 & 5 April, project partners Quantis hosted the first annual meeting of the EU H2020 STAR-ProBio project in their offices on the École polytechnique fédérale de Lausanne (EPFL) campus in Lausanne, Switzerland. Professor James Clark, Louise Summerton and Dr Kadam Lokesh represented the Green Chemistry Centre of Excellence (GCCE) and presented their work on downstream environmental assessment and the development of novel 'circular' metrics, as well as the management of the project's Communication and

Dissemination activities. Attendees were also treated to a tour of the rather unusual Rolex Learning Centre on the EPFL campus, a 110m CHF development that looks rather like a piece of Swiss cheese from above due to its unique curved design!



On 6 April, James and Louise then travelled to Geneva for the project's first international workshop held at the Climate Show in Palexpo, a massive exhibition and congress centre just by the airport. The workshop was attended by 53 stakeholders from 15 countries representing a diverse range of backgrounds from research institutions to companies, industry associations and civil society organisations. The 1.5 hour workshop

combined presentations on the STAR-ProBio project from Professor Piergiuseppe Morone of Unitelma Sapienza and on European Standards supporting the market for Bio-based Products from Maria Gustafsson of CEN TC/411 with a panel discussion to explore 'A vision for a bio-based economy: opportunities and challenges for bio-based products'. Chaired by James Clark, the panel fostered lively debate and discussion including significant audience participation on three key areas: Policy; Customer Acceptability and Future Markets and Products. Panel members consisted of a complementary blend of industry (including SME), academia, trade association and NGO: Constance Ißbrücker, European Bioplastics; Peter Jürgens, REDcert; José Maria Gómez Palacios, URBIOFIN Project and Biomasa Peninsular S.L.; Enzo Montoneri, University of Torino; Francesco Razza, Novamont and Andreas Taglieber, Firmenich. The workshop was live-streamed via the [STAR-ProBio Facebook page](#) and the recording is still available for viewing via this platform. Afterwards members of the STAR-ProBio Advisory Board continued the discussion over a business lunch. The full programme of the workshop and biographies of the speakers and panel members can be downloaded [here](#).

STAR-ProBio receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 727740, Work Programme BB-01-2016: Sustainability schemes for the bio-based economy.

5th RSC Analytical Biosciences Early Career Researchers Meeting in York



The 5th Royal Society of Chemistry Analytical Biosciences Early Career Researchers Meeting took place in the Department of Chemistry, University of York over two days at the end of March. The meeting, organised by Dr Kirsty High and Dr Elizabeth Dickinson, was a great success, with 50 attendees from academia and industry, from every stage of their career, and some international speakers, the furthest travelling from Nigeria.

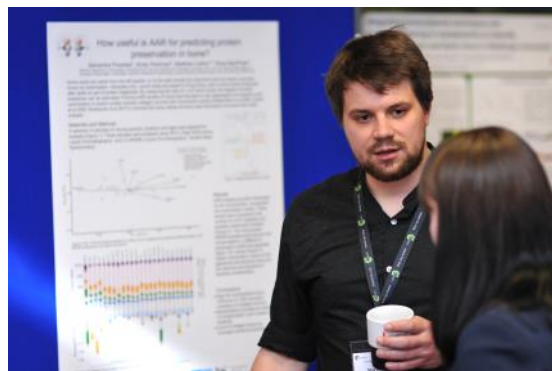


The keynote speakers delivered a fascinating and diverse range of applications of analytical techniques. Dr Adrian Charlton (Fera Science Ltd) discussed the detection of food fraud and the potential economic and health effects; Dr Julie Evans (Abbott Forensics) showed how toxicology was used to anticipate the next potent and deadly “legal high”; and Dr Sarah Fiddymment (BioArCh, Department of Archaeology, University of York) revealed how the age and origin of ancient valuable parchments were determined.



Early career researchers presented their work throughout the meeting to a very high standard, and three prizes (one for best oral, and two for posters) were awarded, with thanks to Syngenta and Jasco. Career advice was given from academic and industry representatives, and experts from the RSC. It was commented on by several attendees that the meeting was a particularly

good opportunity for Analytical Bioscientists to attend a very encouraging and supportive meeting, especially those early on in their career. For anyone interested in attending in 2019, the 6th RSC Analytical Biosciences ECRM will be held in Cambridge. Thanks to all in the Department who helped make the meeting a success.



New Starters

Aimee Clarke, PDRA

Room: C/D217/D211; Ext: 2520; Email: aimee.clarke@york.ac.uk

Dr Jacob Berenbeim, PDRA

Room: C/A057 ; Ext: 2507; Email: jacob.berenbeim@york.ac.uk

Harriet Chidwick, PDRA, YSBL

Room: B020/B031 ; Ext: 2594; Email: harriet.chidwick@york.ac.uk

Mark Tolley, Chemistry / Environment IT Support Technician

Room: C/A138; Ext: 4186 (Mon mornings, all day Wed and Fri); Email: mark.tolley@york.ac.uk

Milena Kaestner, Research Associate, CHyM

Room: CHM/114; Ext: 8893; milena.kaestner@york.ac.uk



New Arrival



Rhoderick Miller (Undergraduate office) and Miranda Prendergast-Miller are delighted to announce the arrival of Gabriel William Rufaro Prendergast-Miller.

Gabriel was born on 29 March, weighing 3.68kg. All are doing well.

Fundraising in Chemistry Over the Years

Macmillan and Other Cancer Charities

Since 1995, the Department has been supporting Macmillan with coffee mornings, held both in the Biology Atrium and D Block coffee room; we estimate that over £10,000 has been raised in this time. Other cancer charities supported include Breast Cancer Care (the Department turned pink in 2009 and a Strawberry Tea was held in 2013, raising £880 in total); Breast Cancer Campaign and Prostate Cancer (Jovember in 2013 and Movember throughout the years, raising over £4500); Teenage Cancer Trust (ChemSoc held a charity bake sale in 2012, raising £225); Yorkshire Cancer Research and Cancer Research UK.



COFFEE MORNING

This years YSBL/Chemistry Coffee Morning in aid of **MACMILLAN CANCER SUPPORT** will be held on

Wednesday the 20th of September

Treats will be offered in the Biology Atrium and Chemistry Reception.
We are looking forward to welcoming you there!

HAVE YOUR CAKE AND EAT IT

CAKE TASTES BETTER TOGETHER
#coffeemorning

It's so easy to donate to the Coffee Morning, just pick up your phone, text the unique code below and you're done. It couldn't be simpler!

Text **MUG QDC2** to **70550**
Ond text = £3. Text more than once for donate more.

Donations of cakes and other delicious treats are very welcome!

For further information please contact myself Tamara Mielke (YSBL/Biology) or Helen Burrell (Chemistry).



Overseas Appeals

Fundraisers for overseas appeals in the Department have included Food for the Hungry International (a raffle in 2009 raised £200); Pakistan Floods Appeal (over £1000 was raised in 2010 through a raffle and a 'Promises' Auction); and the Philippines Typhoon appeal (a cake sale in 2013 raised £167).



The 'Reliefs'

The Department has raised over £200 for Comic and Sport Relief through bake sales in 2013 and 2014, with the help of Chemical *InterActions* and several MChem students who baked cakes depicting the periodic table.

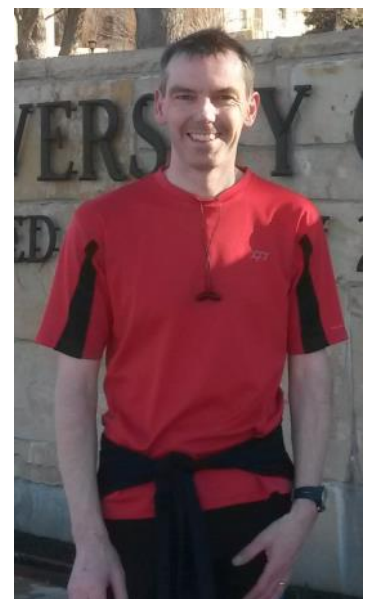


Others

The Chemistry Admin team held a Stars and Stripes fundraising day in 2015 and raised over £600, split between Mind, British Heart Foundation and Yorkshire Cancer Research. In 2016, £1,646 was raised for British Heart Foundation, Cystic Fibrosis Trust and Cancer Research UK when members of the Department were sponsored to commit to New Year's resolutions. Other charities that the Department have supported over the years include York Food Bank (Bake Offs in 2014 and 2015 raised £280), York Cares, the Eve Appeal (a cake sale raised £325 in 2010) and Children in Need (spotty cakes were sold in 2011). The Department also donates £1 to Mind for every departmental culture survey completed so please complete the survey when requested to continue with the donations.



Individual staff have also been involved in a range of activities to raise funding for different causes throughout the years and a few photos are below, apologies to those of you who aren't featured but thank you to everyone for all their hard work, effort and generosity.



RSC Organic Division North East Regional Meeting

It is fair to say that York Chemistry dominated the recent RSC Organic Division North East regional meeting, held at the University of Leeds on 13 April. In all, 33 York chemists made the short journey to Leeds, which is a fantastic effort from the section. Highlights of the day from a York perspective were 2 excellent talks given by Dr Martin Fascione (on organocatalyst-mediated bioconjugation of proteins) and Fairlamb group PhD student Anders Hammarback (Mn(I)-catalysed CH bond functionalisation). York were also extremely well represented in the poster session, with 17 out the 40 posters being presented by York PhD students and PDRAs. This number even beat our hosts Leeds, which is well worth celebrating! Congratulations to Dr James Donald, who picked up a prize for his poster on the development of new methods in photoredox catalysis. A fun and informative day was had by all!

- WPU



JEOL Postdoc Poster Competition 2018

Thursday 7th June
C/A122

All staff and students are welcome to attend the annual Chemistry Department JEOL Postdoc Poster Competition

Poster judging between 10 am - 12 pm

Open viewing and refreshments 12 - 1 pm

Winners announced at 1 pm

Please contact Derek Wann for more information derek.wann@york.ac.uk



Generously sponsored by JEOL (UK) Ltd