Chemistry Update

Newsletter 291, 24th November 2017

Inside this Issue

Calendar of Events

Ionic Liquids Seminar
Speaker: Professor Tom Welton, Imperial College
Date: Tuesday 28 November
Time: 12pm—1pm
Location: C/A122

Organic Seminar
Speakers: Dr Daniele Leonori, University of Manchester & Dr Allan Watson, University of Strathclyde
Date: Wednesday 29 November
Time: 12.30pm—2pm
Location: C/B101

Chemistry Research Forum
Date: Friday 1 December
Time: 12.45pm—2.15pm
Location: C/A122

Seminar: Equity and access to graduate study: an overview with special reference to chemistry
Speaker: Paul Wakeling
Date: Tuesday 5 December
Time: 1pm—2pm
Location: C/A122

Departmental Seminar
Speaker: Professor Anne Duhme-Klair, University of York
Date: Wednesday 6 December
Time: 1pm—2pm
Location: C/A101

Chemistry All Staff Meeting followed by Mulled Wine and Mince Pies
Date: Monday 11 December
Time: 3pm—4.30pm
Location: C/A101 & C/B102

Inorganic Seminar
Speaker: Dr Andrew Ashley, Imperial College
Date: Wednesday 13 December
Time: 1pm—2pm
Location: C/B101

Chemistry Christmas Quiz
Date: Thursday 14 December
Time: 3pm—5pm
Location: C/B101

Date of Next Issue: 18th December 2017

Glenn Named Social Media Superstar

An academic in the Department of Chemistry has been recognised as one of the top 10 UK social media superstars in a competition celebrating the excellent social media work being done in Higher Education.

Dr Glenn Hurst was recognised for his innovative use of social media to enhance his teaching. The judges in the competition, run by Jisc, were particularly impressed by Glenn's use of Snapchat to signpost students during inductions. Glenn sends students a blend of annotated pictures and videos to allow them to contextualise the chemistry concepts taught in lectures to the real world. In doing so, he also provides students with a glimpse of how chemistry research is conducted in laboratories in the department and beyond. Students have commented: "It's super fun to see research in chemistry labs!"

He also uses Twitter to engage with students and the academic community and empowers them to create their own YouTube videos of organic chemistry mechanisms. Students then tweet their videos to him to receive feedback so they can improve.

Glenn said: "This approach has allowed me to provide students with even more feedback than other approaches such as tutorials / workshops and enables them to improve their communications skills."

Other award winners included academics making use of a wide range of social media platforms, from Facebook Live and Instagram, to developing their own bespoke apps for student learning.

The winners receive an ed-tech visit for their class from DigiLab, so we're looking forward to seeing a robot and some VR visiting the Department soon. The award was made by Jisc (formerly the Joint Information Systems Committee), a UK not-for-profit company, which supports post-16 and higher education by providing relevant and useful advice, digital resources and network and technology services. The winners were chosen by a panel of HE and social media experts, including the JISC social media team, JISC Head of Student Experience and the social media editor for Times Higher Education.

Professor James Clark Lectures in China and Oman

Professor James Clark recently gave invited research seminars at Fudan University, Shandong University and the Solvay Research Centre in Shanghai. He also gave a Plenary lecture at the International Workshop on Nanocatalysis in Shanghai. James later gave the opening Plenary Lecture at the SQU Green and Sustainable Chemistry Conference (13-15 November) in Muscat, Oman.

Gay Times Honour for York Academic

At a star-studded event, Professor David Smith of York's Department of Chemistry was nominated for a Gay Times Honour in recognition of his advocacy as an LGBT+ scientist.

The event, hosted at the National Portrait Gallery, marked 50 years of the decriminalisation of homosexuality and recognised the organisations and individuals who have had a tremendous impact on what it means to live openly and freely as LGBT+ people in Britain today.

Professor Smith was nominated for the Gay Times Honour for Excellence in STEM. He is a rare example of an 'out' gay scientist, who has led extensive public work to raise the profile of this hidden area of diversity and support LGBT+ individuals working in STEM.

The Award for Excellence in STEM (Science, Technology, Engineering and Maths) was named after Barbara Burford, who was born in Jamaica and moved to London at the age of seven. After studying medicine, she championed equality through initiatives with the NHS and was central to several breakthroughs in heart and lung transplant surgery. From a high-quality shortlist, the overall winner of the Barbara Burford Honour was Dr Rachael Padman, an astrophysicist from University of Cambridge. As a transgender scientist, she played a pioneering role as the first transgender Fellow of all-female Newnham College in Cambridge

Winners of other Gay Times Honours included Nicola Adams, for her contribution to sport, and EastEnders for the representation of LGBT+ characters in the media. Switchboard, the LGBT+ helpline was recognised for its role in community activism, while the European Convention of Human Rights was honoured as a vital piece of legislation for LGBT+ rights in the UK.

Professor Smith said: "It was a genuine honour to be nominated for a national award of this type and great fun to mingle with LGBT+ 'A-listers' at the awards event. Most importantly, it was very satisfying to see the contribution of those working in STEM recognised by the LGBT+ community. Science needs diverse individuals with varied approaches and ideas in order to solve challenging scientific problems. Hopefully, in the future, scientists will feel increasingly comfortable in bringing their whole selves to work, with science labs being diverse, safe spaces where all researchers can be happy and fulfilled."

New Starters

Dr Aggie Lawer, PDRA Synthetic Organic Chemistry
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Celebrating Diversity in Chemistry

Diversity in the chemical sciences was celebrated at a flagship event, hosted by the Royal Society of Chemistry, in collaboration with Athena SWAN Gold Award chemistry departments from the University of York and Imperial College, London.

The event, which was held at Burlington House in London, was timed to coincide with the 150th birthday of pioneering female scientist Marie Curie and linked with 10 years of York's Department of Chemistry holding an Athena SWAN Gold Award. Head of Department Professor Duncan Bruce and Dr Caroline Dessent, from York, along with Professor Sue Gibson of Imperial College, London, were co-organisers of the event.

Combining two top-class speakers and a panel discussion, the thought-provoking evening highlighted the progress made in addressing inclusion and diversity, and reflected on the challenges ahead. It was introduced by Professor Sir John Holman, Emeritus Professor in the Department of Chemistry at York, and current President of The Royal Society of Chemistry.

Keynote speaker Professor Sarah Harper, Director of the Royal Institution, provided a fascinating reflection on the way demographic change intersects with the role of women in the workplace, and highlighted how trends associated with an ageing population have been hugely influential on women's careers and will become even more so in the coming years. She focussed on the 'leaky pipeline' of women in professional jobs and the demographic trends that underpin it, including the ongoing adverse impact of child-bearing on women's careers in science. Professor Harper also spoke about the inspirational importance of female role models in her own career.

Professor Dame Julia Higgins, current President of the Institute of Physics, went on to talk in more detail about some of the initiatives which actively address career progress of women in science, and particularly those who have taken career breaks, with the importance of role models and mentors emerging as a key theme. Dame Julia also shared a little-known story about how Marie Curie, further to her Nobel Prize winning work, developed mobile X-ray machines and took them out to the front lines in World War One to help diagnose soldiers' injuries.

As one of the panel members, Professor David Smith talked about his experiences in the Department of Chemistry at York. In particular, he reflected on the way in which the diversity-aware atmosphere in the department had helped him to come out as a gay academic and supported his work in raising international awareness of this 'hidden' LGBT+ diversity issue. Further, he explained that departmental policies developed in response to Athena SWAN, such as flexible working and the part-time working assurance, helped him greatly, both when his husband was seriously ill and when he wanted a period of part-time working after the adoption of their son.

Other panel members reflected on a variety of issues, from diversity in the Research Councils and

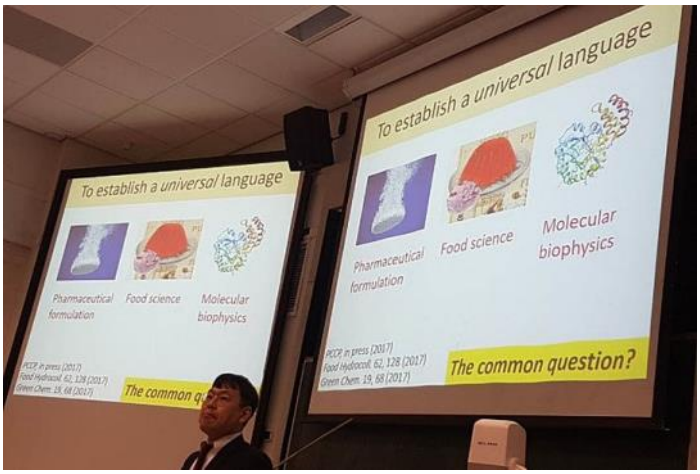
industry, to the role of the Equality Challenge Unit in pushing for change. An emerging theme was ongoing under-representation based on social background and the need for scientists to consider whether they can expect society to care about them if they don't care about society.

Reflecting on the evening, Dr Dessent, Chair of the Departmental Equality and Diversity Group and co-organiser of the event, said: "This flagship event was a really valuable reminder of the considerable impact that our work promoting equality and diversity can make to the careers of some scientists. The event has stimulated a lot of new ideas, and reinforced a commitment from our community to developing chemistry as a beacon area for diversity and inclusion in STEM."

First ChemSoc Lecture

Academic staff in the Department of Chemistry shared their excitement over their own research in the first open lecture, organised by ChemSoc, in which undergraduate students could find out more about research carried out in the Department.

Dr Seishi Shimizu and Professor David Smith talked about recent results from their research teams, their shared fascination with interactions between molecules and their impact on real-world processes.



Dr Shimizu presented 'Theoretical Bucket Chemistry' in which he explained how using statistical thermodynamics methods, had given him new insights into the organisation of soft materials. His research has wide-ranging impacts, from understanding the way in which tofu is structured, to gaining insight into how flavours such as vanillin behave in custard. He guided students gently through the underlying Mathematics, never losing sight of how it intersected with the real world.

Professor Smith presented 'Super-SAM: Supermolecules for Self-Assembled Medicine', explaining two aspects of his research inspired by his husband's cystic fibrosis. In particular, he presented self-assembled chemical vectors that deliver genetic material into cells, with the ultimate goal of developing gene therapy treatments. He then discussed self-assembling gels in which the programmed chemistry can direct tissue growth, with the long-term goal of growing organs from a patient's stem cells for transplantation.

Professor Smith said: "This well-attended event was the first ever ChemSoc open lecture and they did a great job of organising it. York is one of the largest Departments of Chemistry in the UK, carrying out highly impactful research across a broad spectrum of science. Sharing our own research excitement with our undergraduate students was a genuine pleasure.

Professor Sir Jon Holman Gives Last Lecture

After many years of inspiring our undergraduate students in physical chemistry, Professor Sir John Holman gave his last lecture to our second year students earlier this term. After 50 years of teaching, across a wide range of age groups in both schools and universities, it was an ideal opportunity for our students, and some staff, to thank John for his many contributions just before his final lecture. To celebrate John's achievements, including his passion for using contextual demonstrations in lectures, our talented technical colleagues, Abby Mortimer, Tim Ayers and Mark Roper made John a stunning model of a train; this was suggested by our students as a reminder of one of his memorable demonstrations. Many of John's other demos, including those involving liquid nitrogen, ice cream, jelly babies, balloons and fountains, will be remembered by staff and hundreds of our former undergraduates, as will John's passion and enthusiasm for teaching chemistry.

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.

NERC Parliamentary Reception

Professor Ally Lewis and Dr Sarah Moller from the Wolfson Atmospheric Chemistry Laboratories (WACL) attended a National Environment Research Council (NERC) Parliamentary Reception on Monday 16 October.

The reception, hosted by Stephen Metcalfe MP, aimed to bring NERC research, researchers and partners into the Houses of Parliament to showcase how NERC helps find solutions to the problems facing people, society and the economy such as working with Parliament to ensure our evidence informs policy, and engages the UK public with environmental science evidence.

The themes for the reception focused on solutions such as improving air quality, safeguarding natural resources and increasing resilience of UK infrastructure.

Professor Lewis was representing the excellent air quality science carried out at the National Centre for Atmospheric Science (NCAS) and by the Atmospheric Chemistry Group at the University of York. Dr Moller spoke to attendees about her role as knowledge broker between the Department for Environment, Food and Rural Affairs (Defra) and the air quality research community, providing impartial scientific advice on air quality issues and strategic evidence priorities.

Attendees included MPs, peers, Chief Scientific Advisors and representatives from the Parliamentary Office for Science and Technology, House of Commons Library and the Department for Business, Energy and Industrial Strategy (BEIS).

The focus of the evening was one-to-one discussions between attendees. There were also speeches on “Environmental science evidence and public policy”, highlighting the relevance of science to inform key policy debates.

Speeches were given by Stephen Metcalfe MP, current member and previous Chair of the House of Commons Science and Technology Select Committee; Mary Creagh MP, Chair of the Environmental Audit Committee; and Duncan Wingham, NERC CEO.

They all spoke about the importance of evidence for policy making, with Stephen Metcalfe sporting an 'I love evidence' badge and Mary Creagh encouraging attendees to continue making valuable contributions to committee inquiries and calls for evidence.

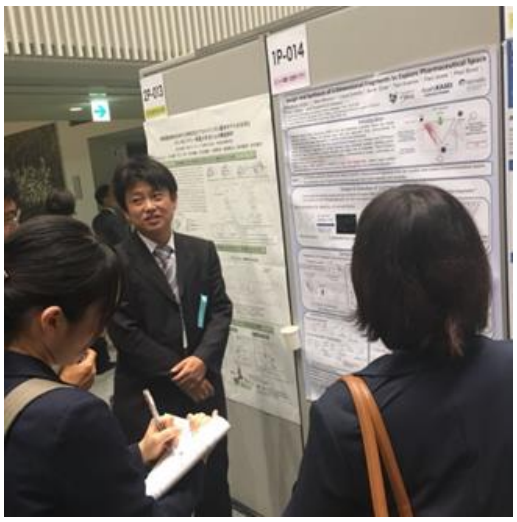
Dr Moller said: "This was an interesting event and a great opportunity to hear from parliamentarians about how much they value the research we do and our efforts to communicate it to decision makers."

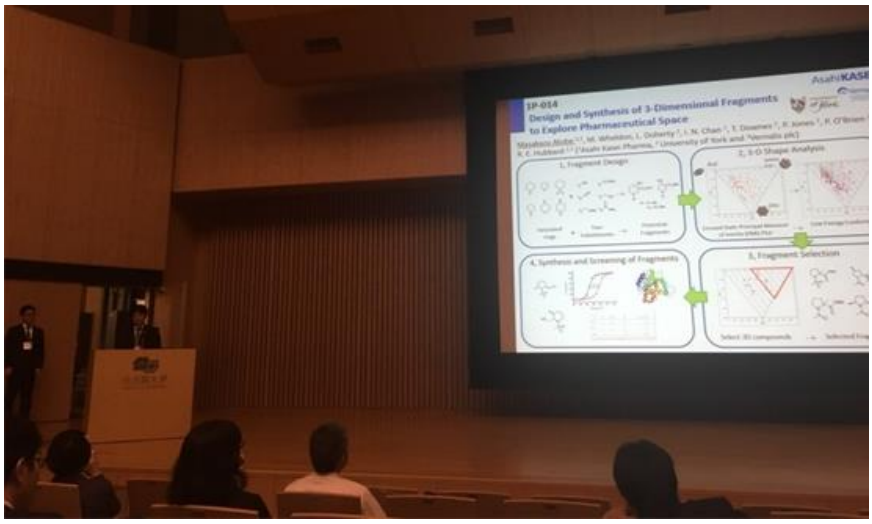
O'Brien Group News

35th Medicinal Chemistry Symposium in Japan

Nagoya, Japan, 25- 27 October 2017

The 35th Medicinal Chemistry Symposium was held in Nagoya, Japan on 25-27 October. This is one of the largest chemistry conferences in Japan and was hosted by Professor Tohru Fukuyama. Dr Masakazu Atobe, who recently finished working in the groups of Professors Peter O'Brien and Rod Hubbard, presented a poster on his results on the York 3-D fragment library project. During the session, many people came to his poster to discuss his work, which was very well received. Overall, it was a very good conference.





43rd Symposium on Progress in Organic Reactions and Synthesis – Applications in Life Sciences

Toyama, Japan, 6-7 November 2017

Dr Masakazu Atobe was also selected to present his results at the 43rd Symposium on Progress in Organic Reactions and Synthesis, which was hosted by the Pharmaceutical Society of Japan. In this event, 30 researchers were selected as oral presentationers out of 47 proposals. Masakazu gave an oral presentation entitled "New Routes to 3-D Heterocycles: Lithiation-trapping of Oxygen and Sulfur Heterocycles" describing his work in York in the O'Brien group.

European Lead Factory Learnings and Achievements Chemistry Meeting in Beerse, Belgium

Paul Jones and Tom Downes recently attended the European Lead Factory Learnings and Achievements Chemistry Meeting in Beerse, Belgium. The conference, which took place on 5-7 November, was a chance to reflect on the learnings from the European Lead Factory project, which is now drawing to a close, as well as to learn from external speakers. Both Paul and Tom applied for and were awarded funding to attend and present their work at the conference. A variety of lead-oriented syntheses were presented, with both Paul and Tom giving flash talks and poster presentations on the group's approach to fragment based drug discovery. The conference was a great chance to pick up some new ideas for building the group's compound library, as well as getting an insight into new

approaches to drug discovery. It was also good to catch up with previous group member Mary Wheldon, now at UCL, who was presenting work from her Post-doc.

International Tea and Coffee Social Meeting

At the **International Tea and Coffee Social** November meeting, for chemistry postgraduate students from outside the UK, Natta and Li showed fellow students how to write their names in Thai and Chinese!

We invite all chemistry postgraduate students from outside of the UK to join us for our December meeting, it's a great opportunity for students to meet with other international/EU students and share experiences.

Please do come along. Tea, coffee and mince pies will be provided!

Monday 4th December,

3pm – 3.45pm, C/A122

Green Impact

Yellow Trays by Photocopiers

Yellow trays have been set up next to relevant photocopiers (library, photocopier room and other select locations). Please put anything printed off on one side in these so that people can reuse for scrap paper - either for re-use for writing, making notes, drawing, etc.

If you print something on one page and it is not needed anymore, please put them in the trays for reuse by others.

You can also use the paper to print in the photocopiers:

1) When selecting your document to print, please select 'print one-sided' and select a particular tray, for example Tray 2. Please put the paper in BLANK SIDE FACE DOWN.

2) When photocopying onto scrap paper, please put the paper into a particular tray, for example, Tray 2, BLANK SIDE FACE DOWN, then swipe your card, select 'Copy' > 'Sides' 1 to 1-sided and select 'Select Tray' and Tray 2.

Switch it Off!

PCs and Monitors should be switched off overnight.

Or during the day you can send your computer to 'sleep' via the Start Menu (Click on the arrow next to 'Shut down').

Please also turn off any equipment that doesn't need to be on.

You should also be turning off your monitor if you are away from your desk for more than 15/20 minutes or so – screensavers don't save energy!

Don't Waste the Waste Video

For those who haven't seen it (and a reminder for those who have!) please see the following waste video as a reminder that we can continue to recycle almost all our rubbish.

https://www.youtube.com/watch?v=_2aQtq1u5Mk

Warp It Reuse Scheme - Goods and Furniture

(For internal University staff use only)

Don't throw away your unwanted goods and furniture! Advertise it on the University Warp It Reuse Scheme (not for personal items / benefits – University use only).

Save Money and Improve Environmental Sustainability by:

- Easily advertising items that you no longer need but may be of use to someone else, rather than just throwing away as waste.
- Simply and cheaply obtain items that you need (which others have placed on the site) instead of buying new!

1) Sign up by clicking the "Register Now" button at www.warp-it.co.uk/uniofyork

2) When you receive an approval email, it will give you a quick guide on how to add items that you want to get rid of.

Also have a look to see if there is anything on offer that your department may need.

What items can be reused through Warp It?

Mostly reusable furniture, office consumables (such as stationery and ink jet cartridges), lab equipment, teaching equipment / materials - but any resource really. As long as it is legal and you do not need to get it removed from a department asset list it can be posted.

Any queries, please contact Mark Clough at mark.clough@york.ac.uk

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5th RSC Analytical Biosciences Early Careers Research Meeting

Registration is now open for the 5th RSC Analytical Biosciences Early Careers Research Meeting, held in the Department of Chemistry 22-23 March 2018.

The meeting is free to attend for York people with a £15 fee for the conference dinner. Please email Kirsty High (kirsty.high@york.ac.uk) to let her know that you are attending.

For more information, visit https://www.york.ac.uk/chemistry/events/seminars/2018/analybio22-03-18/ and http://www.rsc.org/events/detail/27395.