**Calendar of Events**

**UCAS Interview Afternoons**
- Date: 31 October; 7, 11, 14, 19, 21, 25, 26 & 28 November
- Time: 12pm - 4pm
- Location: Hub DS / 008

**BBSRC White Rose DTP Open Day**
- Date: Thursday 7 November
- Time: 12pm
- Location: Biology Atrium

**Graduate School Board**
- Date: Wednesday 30 October
- Time: 2pm - 3.30pm
- Location: A132

**SCI Careers Options Seminar**
- Date: Wednesday 13 November
- Time: 1pm - 5pm
- Location: A101 / A102

**Meet the Demonstrators**
- Date: Wednesday 30 October
- Time: 1pm - 5pm
- Location: A101 / A128

**Organic Symposium**
- Date: Wednesday 20 November
- Time: 2pm - 5.30pm
- Location: A101

**Discovering New Medicines (Public Lecture)**
- Speaker: Dr Dave Alker
- Date: Wednesday 6 November
- Time: 6.30pm
- Location: A101

**Postgraduate Open Day**
- Date: Wednesday 4 December
- Time: 1.15pm-5pm

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**Inside this Issue**

- Atmospheric Chemistry group
- Awarded two Grants
- New Starters
- Dave Smith Receives National Teaching Fellowship
- KMS Winners Seminar
- X-ray Absorption Spectroscopy for Catalysis
- York Pilot Centre for Doctoral Training in Catalysis (YorCat)
- SCI Careers Talks
- WACL Building Opens
- Children Challenging Industry visit to LOTTE Chemicals
- Aleksandra Borisova wins ISWA Award
- Jovember and Movember
- Interview with Jane Harrison

**Date of Next Issue:** 29th November 2013
Atmospheric Chemistry Group Awarded Two Grants

The atmospheric chemistry group has been awarded two grants (NERC and the EU FP7) totalling £550k to investigate the chemistry of the tropical atmosphere.

The **Biodiversity and Land-use Impacts on Tropical Eco-system Function (BALI)** project is a consortium of nine UK university groups to investigate how human disturbance of the tropical rainforest is leading to irrevocable changes in biodiversity, ecosystem biogeochemistry and climate. The project focuses on the island of Borneo and will collect and evaluate a multiannual data set of the atmospheric concentration of volatile organic compounds (VOCs), including isoprene. Concurrent, but shorter term, observations of isoprene from two other sites, one a pristine forest and another a modified forest/palm plantation will also be made. Dr Jim Hopkins commented “We will compare and contrast the observations from these different environments to describe the effect of land-use change on the emissions of isoprene and the consequent effect on the atmosphere”. Members of the group will be going to Borneo between 2014 and 2016 as part of this project.

The **Dynamics-aerosol-chemistry-cloud interactions in West Africa (DACCIWA)** project is a 10€M FP7 project with 12 partners across the UK, France, Germany, Switzerland, Ghana, Cote Ivoire and Nigeria. This project aims to improve our understanding of atmospheric chemistry in the context of rapid economic and population growth in the West African region and will use 3 of Europe’s leading research aircraft to characterise emissions from biogenic, anthropogenic, marine and soil source and their subsequent chemistry. The major field component of the project will occur in the summer of 2015 with many of the group heading to West Africa (probably Ghana or Cote Ivoire). As well as doing some exciting atmospheric chemistry, York is coordinating the impact activities of the project that includes outreach to the public, education and policy in Europe and West Africa.
Atmospheric Chemists Awarded £220k

Mat Evans and Ally Lewis, part of the atmospheric chemistry research team at York, have just been awarded £220,000 for new computing infrastructure.

The award is part of a Government investment in 'Big Data', announced by the Chancellor at the last Budget. The funding will support tools for visualisation, analytical software, new computing, and large capacity data storage facilities. The new infrastructure will help combine together the massive datasets generated by York's atmospheric chemistry modelling with state of the art analytical chemistry instruments in the lab, to create a virtual archive of atmospheric composition.

New Starters

**Dr Terry Dillon**, Physical Chemistry Lecturer
Extension Number: 4706; Room: WACL 112; Email: terry.dillon@york.ac.uk

**Professor Michael North**, Chair in Green Chemistry
Extension Number: 4545; Room: B022; Email: michael.north@york.ac.uk

**Dr Meghan Halse**, Postdoctoral Research Fellow in CHyM
Extension Number: 8894; Room: CHM 115; Email: meghan.halse@york.ac.uk

**Dr Jose Castro-Osma**, Postdoctoral Research fellow in Green Chemistry
Extension Number: 4547; Room: B020; Email: jose.castro-osma@york.ac.uk

**Dr Xiao Wu**, Postdoctoral Research fellow in Green Chemistry
Extension Number: 4547; Room: B020; Email: xiao.wu@york.ac.uk

**Dr Saioa Urresti**, Postdoctoral Research fellow in YSBL
Extension Number: 8278; Room: B/ K151 ; Email: saioa.urresti@york.ac.uk

**Mrs Liza-Jane Binnington**, Teaching Laboratories Assistant
Extension Number: 2530; Room: B106; Email: liza.binnington@york.ac.uk
Dave Smith receives National Teaching Fellowship

On October 9th, Dave Smith received his National Teaching Fellowship at an awards dinner. The dinner took place at Middle Temple in Central London - better known as Hogwarts Dining Hall from the Harry Potter films - Dave insists that he and his partner Sam, and the current Vice Chancellor Jane Grenville, were all sat on the Gryffindor table. The award recognises Dave’s innovation, development and leadership in higher education, and provides £10k to be spent on further professional development of his educational practice. Dave is the first National Teaching Fellow in the Department of Chemistry here in York, and one of very few chemists ever to receive one of these awards.
The KMS Winners’ Seminar took place on Wednesday 9 October during which all three of our winners gave a talk about their research. The KMS interviews had taken place earlier in the Summer, and three winners had been chosen by the KMS Panel. Professor Robin Perutz, Chair of the KMS Panel, also chaired the event and presented the winners with certificates.

The Winners

**Stephen Bromfield** (DKS) - *Heparin Rescue: Controlling Blood Coagulation Through Thick and Thin*

**Daniel Raines** (AKD/KSW) - *How do coordinatively unsaturated iron siderophore complexes interact with their binding proteins?*

**Kristaps Ermanis** (PAC) - *Towards Phorboxazole B*

This year also saw an addition to the event with the Winners’ seminar being combined with a poster session for PhD students who had just completed the first year of their research. As part of the skills training being offered to research students, all Year 2 students were offered the chance to display a poster about the first year of their research. A competition was held for everyone to vote for their favourite poster and the winner was Sarah Chambers (PAOB/RJKT).

Many thanks to all participants, and to everyone who attended.
In September 2013, Professor Ian Fairlamb co-organised (with Profs Adam Lee (Warwick/Monash) and Stephen Marsden (Leeds)) a ‘Dial-a-Molecule’ and Catalysis Hub supported-symposium at the Diamond Light Source (Didcot, Oxfordshire) to highlight the opportunities for utilising synchrotron radiation to study the mechanisms of chemical processes involving catalysts.

Catalysis is currently experiencing a global renaissance, with interest soaring in new experimental and theoretical approaches to the design of novel catalysts offering exceptional activity and selectivity. Central to this resurgence is the recognition that catalysts are dynamic entities whose structures can evolve during reactions to influence the yield and purity of desired products, and in-turn regulate catalyst lifetime and reuse. Advances in synchrotron radiation facilities, associated X-ray analytical methodologies and reactor technologies, offer new opportunities for synthetic chemists working at the interface between homogeneous and heterogeneous catalysis. The resulting insight is highly complementary to mechanistic investigations employing traditional spectroscopic (e.g. IR, Raman, UV-vis, NMR, EPR) and spectrometric methods (e.g. ESI-MS, MALDI). For example, time-resolved X-ray absorption spectroscopy (XAS) enables the \textit{in situ} detection of metastable reactive intermediates at ppm levels with millisecond resolution, and is a powerful tool for identifying active species and distinguishing them from catalytic spectators.
The two-day symposium brought together UK and international researchers interested in the application of X-ray methods to accelerating synthetic research in with the Dial-a-Molecule Grand Challenge goals. Day One featured lectures from catalysis and synchrotron practitioners with a particular emphasis on the role of clusters and nanoparticles in synthesis. Within that session, Ian also delivered a research lecture “The cross-coupling problem - a multi-ensemble of Pd species with significant implications for catalyst design”. Day Two provided an interactive forum for attendees of all backgrounds and levels of synchrotron experience (including complete newcomers!) to foster new collaborations, formulate interdisciplinary research grant applications and beamtime proposals.

For details concerning XAS experiments, please contact Ian by email (ian.fairlamb@york.ac.uk).
At the end of September 2013 the YorCat postgraduate students (a total of 13) delivered research presentations detailing the findings from Year 1 of their PhD studies. The diversity of interdisciplinary catalysis research going-on across the Department was particularly noticeable. For example, research into solar energy, biocatalysis, C-H and C-X bond activation-functionalisation, synthetic chemistry (natural products / 3D fragments), organometallic mechanistic work, materials aligned with physical chemistry. The quality of the presentations was exceptional and participation (discussion and questioning) from all the PhD students was superb. Of particular note was the degree and rigour of positive and constructive questioning, which ensured that an excellent scientific symposium took place.

During the following week the YorCat students participated in a one-day problem solving session run by Dr. Jason Lynam and Professor Ian Fairlamb on fundamental aspects pertaining to catalytic studies. It took into account the wide-ranging interests of the students (and their backgrounds). The students attempted the questions enthusiastically. The exercise demonstrated a need to keep practising fundamental problems, particularly those underpinning PhD projects, where there was greatest potential benefit for the individual student.

The second part of the session was dedicated to literature critique. The cohort were split into groups, covering 4 topics and 8 topical research papers in total. The degree of engagement and critique in this exercise was on show throughout the group discussion and ultimately in presentations to the whole cohort. The exercise worked well and served to highlight the importance of rigorous critique, debate and opinion.

The third part of the session was dedicated to ‘Challenges with PhD project’. The students were asked to highlight project bottlenecks and identify areas where additional skills were needed in their opinion.
Photographs from the ‘at-the-board’ problem-solving sessions:

YorCat activities will continue as the students enter into year 2 of their studies.

Professor Ian Fairlamb

**SCI Careers Talks**  
**Wednesday 13 November 2- 5pm**

Once again we are hosting a careers afternoon run by The Society of Chemical Industries. All students and research staff are invited.

Confirmed speakers at the moment are:

Jason Lynam – academic career  
Speaker from – manufacturing (Nufarm)  
Louise Byass – IP/commercialisation (FERA)

There will be a chance to chat to the speakers after the talks with tea and cakes provided.

For more information please contact Sue Couling (sue.couling@york.ac.uk)

**WACL Building Opens**

The New Wolfson Atmospheric Chemistry Laboratory was handed over to Chemistry on Thursday 24 October.

More information to follow in the November issue of Chemistry Update.
**Children Challenging Industry visit to LOTTE Chemicals**

LOTTE Chemicals had not hosted a visit for Children Challenging Industry for quite some time. We began with an initial meeting to update Jackie Petford and the team on what it entails. Joanne Route, who was the Industry Liaison Officer and Tony Johnson, who hosts regular visits at Huntsman (also on the Wilton site) were present, along with me and two members of the LOTTE team. Initially hesitant due to the time lapse since the last visit, the ideas and plans came rapidly into fruition. Jackie remembered hosting previous visits and the other members of her team became more and more enthused about the whole idea. A firm plan was put in place and the visit date was booked.

After providing and paying for the coach, for which St Bernadette’s RC Primary School were eternally grateful, the LOTTE team sprang into action with a brief introduction from the CEO, a Health and Safety talk and a quick tour of the site. Hard hats, lab coats and specs were provided by the CCI team. The children got to see the control room in action and a series of exciting experiments in each of the real laboratories. One child commented that ‘It was great to see what really goes on in one of those labs, instead of what you see on the telly!’ The morning finished with a set of photographs being taken of the group and a healthy drink and snack being given by the LOTTE team. The children were buzzing with conversations about what they had seen and learned from the visit all the way back to school. Several children said that they had not expected it to be as interesting as it was and they were more likely to study science subjects in future. A great success all round!

Jenny Harvey, **CIEC Advisory Teacher for the North East**
Aleksandra Borisova wins ISWA Award

This year, the International Solid Waste Association (ISWA) launched a new Video Award, aimed at exploring issues of waste as one of the major global problems of our society in an original, witty way. The style and delivery was completely up to the participants.

The award was sponsored by ECOMONDO, an event run by Rimini Fiera focusing on the Green Economy in Southern Europe and the Mediterranean.

The inaugural winning entry, "The Magic of Waste", by Aleksandra Borisova, current PhD student, and Will Soutter, Chemistry Department Alumnus, is a stop motion animation about the potential of waste, which was selected by a panel of judges from ISWA from a total of 42 submissions.

You can see the winning video here: https://www.vimeo.com/wijssoutter/magic-of-waste
Please support Jo Eastwood in her fight against Breast Cancer or raise funding for Prostate Cancer by joining us for Jovember & Movember.

For the whole of November you can:

- Grow a Moustache
- Go on a diet
- Take up a form of exercise
- Give up your favourite food or drink
- Have your hair shaved off

Anything that will help the Department raise some funding for Breast and Prostate cancer.

If you are willing to take part then let Helen Coombs helen.coombs@york.ac.uk know as soon as possible.

Breast Cancer Campaign
Breast Cancer Campaign only funds research into breast cancer and will support research at any centre of excellence in the UK and the Republic of Ireland.

http://www.breastcancercampaign.org

Movember 13
Movember supports world class men’s health programmes that combat prostate and testicular cancer and mental health challenges, the programmes are directed by the Movember Foundation.

http://uk.movember.com
Interview with Jane Harrison

After leaving school, I completed a HND in Media Production. I was eager to start gaining some admin work experience and worked for a Land Rover dealership in a reception and sales administrator role for two years. It was a good starting point for me in an administrative environment but I became eager to try to break into the television industry which is no easy task!

I applied for the traineeship of Production Coordinator with Screen Yorkshire, that back in 1999 were known as The Yorkshire Media Training Consortium. I was lucky enough to be one of only four people given the opportunity to receive training and a placement within local industry. I was placed within the Documentary Department at Yorkshire Television in Leeds and was immediately co-ordinating UK and overseas filming in a busy and successful department. After six months in this trainee role, I was offered a Staff contract within the department which I was thrilled to accept. After three years in this position, I was offered an internal promotion to Production Manager.

In this more senior role I would initially draw up a production budget and schedule, once commissioned I would negotiate and contract a TV crew, any production and post production resources, equipment, locations and permissions, complete risk assessments and book travel and accommodation. I would oversee all aspects of the day to day running of the production ensuring that everything ran smoothly to budget and schedule by liaising with the Director and Head of Department. Any overspend or delay to the schedule would need to be picked up and contingencies put into place. It was an exciting job, where no day was the same and we had great fun, but the working day was long and unpredictable.

In 2007 whilst on maternity leave with my daughter Brook, I was offered and accepted voluntary redundancy. I continued to freelance as a Production Manager, a highlight of which was one of the programmes I worked on winning the Regional RTS award in 2010 for best Factual Programme. After having my Son Reed in 2009, I continued to accept TV work but with lesser responsibility and in 2013 started to look for a career away from TV, where I could divide my time more equally with work and being a Mum.

I am excited about starting a new career within YSBL at the University of York and look forward to improving and utilising the skills and experience I have acquired in my previous administrative roles.