Chemistry Update

Newsletter 293, 26th January 2018

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Calendar of Events

McCamley Lecture
Speaker: Prof Jason Holland, University of Zürich
Date: Wednesday 31 January
Time: 2pm—3pm
Location: C/A/101

Research Seminar
Speaker: Prof Varinder Aggarwal, University of Bristol
Date: Wednesday 14 February
Time: 1pm—2pm
Location: C/A/101

Inorganic Seminar
Speaker: Prof Matt Rosseinsky, University of Liverpool
Date: Wednesday 21 February
Time: 1pm—2pm
Location: C/A/122

Chemistry @ York
Date: Friday 23 February
Time: 10am—2.30pm
Location: YSOC, C/B/101 and C/B/102

Research Seminar
Speaker: Prof Warren Warren, Duke University
Date: Friday 23 February
Time: 1pm—2pm
Location: C/A/122

JISC EdTech in Higher Education Interactive Award Lecture
Speakers: Dr Glenn Hurst, University of York and Verity Nalley, DigiLab
Date: Wednesday 28 February
Time: 2pm—3.30pm
Location: C/B/102

Date of Next Issue: 23rd February 2018

Professor Pratibha Gai Recognised in New Year Honours

Professor Pratibha Gai has been appointed a Dame (DBE) in the New Year Honours for services to chemical sciences and technology.

Professor Gai is the founding co-director of York's JEOL Nanocentre and Professor of Electron Microscopy in York's Departments of Chemistry and Physics.

Professor Gai studies dynamic atomic processes in reacting solids during chemical reactions. Her many research highlights include the development of new nanomaterials and chemical processes for use in a range of high technology applications, including catalysis, energy, healthcare, chemicals and food coatings, and novel dynamic electron microscopies.

She is a pioneer in advanced electron microscopy to analyse dynamic gas-catalyst reactions on the atomic scale. They are at the heart of industrial processes for producing chemicals, energy, as well as many industrial and healthcare products, and for pollution control. Her chemical process and electron microscopy inventions are used worldwide.

She is a Fellow of the Royal Society (FRS) and a Fellow of the Royal Academy of Engineering (FREng). She was awarded the L'Oreal-UNESCO Women in Science Award as the 2013 Laureate for Europe, and the 2010 Gabor medal and prize of the Institute of Physics, among other awards. Prior to her York assignments she held positions in the USA and at the University of Oxford after a PhD in Physics from the University of Cambridge.

Professor Gai said: "I am truly humbled to receive this national honour and delighted that the research has received this wonderful recognition.

"This honour belongs to all the outstanding co-researchers and staff I have collaborated with. I am grateful to them and my main funders the Engineering and Physical Sciences Research Council

(EPSRC)."

The University of York's Vice-Chancellor, Professor Koen Lamberts, said: "Pratibha is an outstanding academic who has contributed hugely to chemical sciences and technology over many years.

"She is an inspirational leader in her field and this honour is a wonderful acknowledgement of the impact her research has made in the world."

Professor Deborah Smith, Pro-Vice-Chancellor for Research, added: "Professor Gai has pushed the boundaries of scientific research using electron microscopy.

"Her work has impact across a range of industries and has been recognised through numerous awards.

"This national honour is thoroughly deserved and highlights the significance of research in this field."

Professor Kieran Gibson, Head of the Department of Physics, said: "This is a richly deserved award for Pratibha, that recognises her sustained level of international excellence in studying matter at the scale of individual atoms.

"It is testament to all her work in developing novel ways of imaging the nanoscale in real time, which has huge impact across the fields of chemistry, physics and beyond."

Professor Duncan Bruce, Head of the Department of Chemistry, said: "For many years, Pratibha has pioneered the technique of using electron microscopy to 'see' chemical reactions at individual atoms on a solid surface, which is a remarkable achievement.

"She has been recognised by her peers in her election as a Fellow of the Royal Society and of the Royal Academy of Engineers, and now I am delighted to see that she has been recognised by this public honour."

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.

OBE for York Chemistry Honorary Fellow

Alumnus and Honorary Fellow of the University of York, Dr Stan Higgins, was recognised in the New Year's Honours with an OBE for services to the Chemical Process industrial sector.

Stan with some children from the Children Challenging Industry Programme

Stan, who recently retired as Chief Executive of North East Process Industries Cluster, NEPIC, studied Chemistry, Economics and Technology as an undergraduate and Process, Understanding and Development for his PhD. He continues to be associated with the University, contributing occasional lectures and acting as a key member of the advisory committee to the award-winning Centre for Industry Education Collaboration (CIEC) part of the Department of Chemistry.

The staff of CIEC were thrilled to hear of this richly deserved award. Joy Parvin, Director of CIEC, commented "Stan has been a loyal friend to CIEC. In particular, we have appreciated his unwavering support for our *Children Challenging Industry* (CCI) initiative over many years". Stan explained that CCI is very dear to his heart as the scheme targets primary school children early enough to influence the attitudes they form towards STEM subjects and industry. As research shows, CCI has a demonstrable effect on children's aspirations and is an efficient way for companies to invest in their future workforce. The scheme is supported by specialist teachers that deliver engaging and effective lessons, whilst helping school teachers understand the potential of STEM subjects in ensuring children's long-term success.

Over the years, Stan has been impressed by the excellent behaviour of the school children that he has met through CCI. "I was not that well behaved when I was at school," he said. In particular, he has been impressed by the attitudes of disadvantaged children who are clearly excited by science, and persist when faced with challenges. Going forward, he would like to see CCI delivered to as many primary school children as possible. As he explained, CCI not only puts STEM subjects into context for primary school children, but it lets them know that there is a place for everyone in the industry.

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.

York Talks 2018

On Wednesday 10 January 2018, over 700 people participated in a day of lively, accessible presentations sampling the great variety of innovative and world-leading research taking place in York.

From the Department of Chemistry, Dr Alison Parkin explained her research exploring new ways to generate energy. Her work with micro-organisms to couple sunlight and seawater to produce hydrogen and oxygen may pave the way to replace oil and gas with new clean-burning fuels. In the short video below, Alison explains more about the vision behind her research.

As part of the York Talks Event, PhD student Phillip Chivers, from the research group of Professor David Smith here in the Department of Chemistry presented a spotlight exhibition piece explaining his research to develop patterned gels for controllable and directional drug delivery.

The 15 minute 'TED-style' talks were attended by members of the public, academics and students, and covered a vast range of the innovative research taking place here in York. Talks this year included discussions of the dangers of drone warfare, digital technologies to improve healthcare, the complexities of the fight against cancer, and how fire could help conserve the savannahs of Africa.

Joan Concannon, Director of External Relations at the University of York, said: "This year's talks were packed with outstanding, world-class research that aims to tackle some of the biggest global challenges. We think it's really important to make the exciting research happening at York accessible and available to a general audience and this was a brilliant way for the wider community to engage with our academics and young researchers and learn more about their work."

York Talks has been held annually since 2014.

New Starters

Dr Aneurin Kennerley, Lecturer in Magnetic Resonance Imaging
Room: D014 ; Extension: 4230; Email: aneurin.kennerley @york.ac.uk

Dr Carmen Piras, **PDRA**
Room: D115; Extension 4184; Email: carmen.piras@york.ac.uk

Mrs Rana Torsun, CIEC Administrator
Room: B016; Extension 2523; Email: rana.torsun@york.ac.uk

Researchers Unlocking Potential for Next-Generation Medical Scanning

Researchers have developed a new way to magnetise molecules found naturally in the human body, paving the way for a new generation of low-cost magnetic resonance imaging (MRI) technology that would transform our ability to diagnose and treat diseases including cancer, diabetes and dementia.

Current MRI scanners operate using a superconducting magnet which makes them bulky and expensive to buy. Credit: Liz West via Flickr

While still in the early stages, research reported today in the journal Science Advances has made significant steps towards a new MRI method with the potential to enable doctors to personalise life-saving medical treatments and allow real-time imaging to take place in locations such as operating theatres and GP practices.

MRI, which works by detecting the magnetism of molecules to create an image, is a crucial tool in medical diagnostics. However, current technology is not very efficient – a typical hospital scanner will effectively detect only one molecule in every 200,000, making it difficult to see the full picture of what's happening in the body.

Improved scanners are now being trialled in various countries, but because they operate in the same way as regular MRI scanners – using a superconducting magnet – these new models remain bulky and cost millions to buy.

Visible

The research team, based at the University of York, has discovered a way to make molecules more magnetic, and therefore more visible – an alternative method which could produce a new generation of low-cost and highly sensitive imaging techniques.

Professor Simon Duckett from the Centre for Hyperpolarisation in Magnetic Resonance in the Department of Chemistry at the University of York said: "What we think we have the potential to achieve with MRI what could be compared to improvements in computing power and performance over the last 40 years. While they are a vital diagnostic tool, current hospital scanners could be compared to the abacus, the recent development of more sensitive scanners takes us to Alan Turing's computer and we are now attempting to create something scalable and low-cost that would bring us to the tablet or smartphone".

The research team has found a way to transfer the “invisible” magnetism of parahydrogen – a magnetic form of hydrogen gas – into an array of molecules that occur naturally in the body such as glucose, urea and pyruvate. Using ammonia as a carrier, the researchers have been able to “hyperpolarise” substances such as glucose without changing their chemical composition, which would risk them becoming toxic.

It is now theoretically possible that these magnetised, non-harmful substances could be injected into the body and visualised. Because the molecules have been hyperpolarized there would be no need to use a superconducting magnet to detect them – smaller, cheaper magnets or even just the Earth’s magnetic field would suffice.

If the method were to be successfully developed it could enable a molecular response to be seen in real time and the low-cost, nontoxic nature of the technique would introduce the possibility of regular and repeated scans for patients. These factors would improve the ability of the medical profession to monitor and personalise treatments, possibly resulting in more successful outcomes for individuals.

“In theory, it would provide an imaging technique that could be used in an operating theatre,” added Duckett. “For example, when a surgeon extracts a brain tumour from a patient they aim to remove all the cancerous tissue while at the same time removing as little healthy tissue as possible. This technique could allow them to accurately visualise cancerous tissue at a far greater depth there and then.”

Potential

The research also has the potential to bring MRI to countries in the developing world that don’t have the uninterrupted power supplies or infrastructure to operate current scanners. As well as its applications in medicine and general healthcare, the method could also provide benefits to the chemical and pharmaceutical industries in addition to environmental and molecular science.

Dr Peter Rayner, Research Associate at the University of York, said: "Our method reflects one of the most significant advances in magnetic resonance in the last decade".

Research Associate, Dr Wissam Iali added, “Given Magnetic Resonance Spectroscopy is of vital importance to the UK's chemical and pharmaceutical industries, I see significant opportunities for them to harness our approach to improve their competitiveness."

Using parahydrogen to hyperpolarize amines, amides, carboxylic acids, alcohols, phosphates and carbonates is published in *Science Advances*.

January's Graduation Ceremony - Saturday 20 January

The Chemistry Graduation ceremony took place on Saturday 22 January.

Congratulations to all the students who graduated:

PhD in Chemistry – attending	**PhD in Chemistry – in absentia**
Naomi Farren Katie Lamb Jamie Minaeian Joshua Reid Amy Ruddlesden Adam Vaughan Chunting Michelle Wang Elizabeth Wells Ellis Wilde	Hope Adamson Christopher Reed
MSc by Research in Chemistry	**MSc by Research in Chemistry – in absentia**
Peter Ivatt Roxana Milescu Rhianna Nelson-Forde	Antonio Misefari
MSc Green Chemistry and SIT – attending	**MSc Green Chemistry and SIT – in absentia**
Rhiannon Allan Ana Pacheco Adel Alzanbagi Rebecca Cowan Ziyang Guo Mingkang Li Yutao Liu Gavin Miller Matthew Plant James Randall Shuting Wang Guangya Zhu	Alima Abdulina Adhistia Amelia Jihane Maraache Alessandra Monaco
BSc Chemistry – attending	**BSc – in absentia**
Rachel Crewe Samantha Danby Thomas Horsley	Jennica Allen

Future Ceremony – Joseph Houghton – July 2018


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Chemistry Department Christmas and End-of-Year Party

This year's Christmas and End-of-Year party was held on Thursday, 7 December, at DoubleTree by Hilton. A drinks reception was followed by a three-course sit-down meal with a relaxed and friendly atmosphere bringing the Department together to unwind.

After dinner, the tone of the evening was livened when each table was asked to dress up one volunteer in full Personal Protective Equipment (PPE) using the wrapping paper, sticky tape and other provided decorations. The competitive nature of the challenge spurred up spirits and everyone quickly got to work.

The resourcefulness and enthusiasm of the Department was apparent. Along with the classic lab-coats and lab-specs, Christmas boots, beards and tinsel belts were also constructed to try and ensure that the mystery prize could be secured.

Professor Duncan Bruce was then trusted with the difficult job of picking a victor. After some deliberation and the loud cheers from the crowd Will Duckworth and his table were announced as the winners. The lucky team were handed their coveted prize of glow-sticks which were quickly put to use on the dance floor for the rest of the night.

The organisers, Nina and Ben, would like to thank all staff and student partygoers and the staff at DoubleTree for making the party a memorable and enjoyable evening.

Martin Steward, James Southwell, Will Swansborough-Aston, Barby Procacci, Will Duckworth, Rachel Steen and George Clarke showing off their PPE.

Equality & Diversity News

All Genders Welcome

The Department of Chemistry has become the first academic department at the University of York to introduce specific all genders welcome toilets.

As you may have noticed, over the holidays new signage appeared on some of the loos around the department to denote 'all genders welcome' WCs.

This signage has been introduced to make it clear that there are no restrictions on who can use these facilities. We hope this will provide a welcoming message to our trans* and non-binary staff, students and visitors who may not feel comfortable using gendered toilets because they don't meet their needs, or due to the reactions of others. This change will also benefit e.g. parents with young children and those (like myself) who have hidden disabilities.

We still have gendered facilities in the Department. Of course, everyone is welcome to use whichever facilities they feel most comfortable with and we ask (and expect) that everyone is respectful of those choices.

We are very grateful to the equality and diversity office and estates who have worked hard on research and consultations to develop the signage and we have learnt some interesting things along the way. For example, it is considered best practice to label facilities as gender neutral rather than just using the word 'Toilet' as this can make people assume they are just for women. In addition, proper gender neutral toilet blocks should have floor to ceiling dividers between cubicles, which may explain why some existing mixed sex toilet blocks are not always popular. We will be mindful of this when planning future developments and refurbishments.

There is further information including a list of the all gender facilities available on campus on the university equality and diversity pages (a map of facilities is coming soon) https://www.york.ac.uk/admin/eo/GuidanceandGoodPractice/AllGenderToilets-Additionalinfomation-updatedDec2017.pdf.

There are also some links to information on support for trans* staff and students, including top tips for working with trans* people available here https://www.york.ac.uk/admin/eo/GuidanceandGoodPractice/index.htm

If anyone has any comments or feedback on this or any other equality issue they can let any member of the chemistry equality and diversity group (EDG) know, or use the online suggestion box to provide feedback anonymously.

Leonie Jones – Equality and Diversity Officer

LGBT STEMinar 2018

The University of York hosted the UK's largest ever meeting of LGBT+ (lesbian, gay bisexual and transgender) individuals working in STEM (science, technology, engineering and maths).

Attendees at LGBT STEMinar 2018, waiting for the plenary lecture from Prof Tom Welton.

The 'LGBT STEMinar' 2018 was organised by Dr Derek Wann and Dr Leonie Jones from the Department of Chemistry and hosted in the National STEM Learning Centre at the University of York. The event involved over 150 people and celebrated the contributions of LGBT+ scientists and engineers, whilst exploring the challenges they face.

STEM subjects have been traditionally, and wrongly, thought of as heterosexual, masculine fields. However, the future of science relies on innovation, and it is vital that people from all walks of life enter the profession. LGBT+ individuals are an important part of this diversity. The STEMinar showcases the diversity of people across all STEM disciplines and provides role models and support to people at junior stages of their careers or others who are unsure whether to come out.

The opening keynote speaker was Dr Beth Montague-Hellen, organiser of the first LGBT STEMinar held in Sheffield in 2016. Beth talked about the personal importance of community and reflected on the way in which the STEMinars are enabling a diverse array of scientists and engineers to find unique and comfortable communities of their own.

From the speciation of bats to pulsar astrophysics, the scientific talks reflected the remarkable contributions of LGBT+ scientists across the UK to a range of areas. Dr Paul Clarke, from the Department of Chemistry at York, explained his ground-breaking work on the chemistry of the origins of life. Kiri Thornalley, a student in Professor David Smith's research group, explained her Masters project exploring self-assembled systems with potential medicinal applications.

For much of the day, extensive Twitter discussions involving both STEMinar attendees and participants from further afield, led to the trending of #LGBTSTEMinar18 in the top five UK hashtags. A key aspect of the STEMinar events is to act as a beacon; demonstrating to LGBT+ people in STEM that there is a large community of people happy to talk about science and support those facing difficulties.

In optimistic mood, Professor Tom Welton, Dean of Faculty at Imperial College London, reflected on his own career as an 'out' gay man working in chemistry. He explained the support he had experienced and told the audience that in our everyday lives, we are all role models. Summing up the

day, Professor David Smith from the Department of Chemistry at York built on this theme by highlighting the many ways in which LGBT+ people working in STEM can support others, such as volunteering as STEM or Stonewall ambassadors to engage the next generation of STEM students in schools.

The LGBT STEMinar has a uniquely supportive community atmosphere, with personality and humour being close to the surface throughout the day. Many attendees commented on feeling a sense of belonging and noted the relaxed nature of the meeting in contrast to traditional scientific conferences.

LGBT STEMinar19 will be hosted by the Royal Astronomical Societyand the Institute of Physics in London.

To find out more about the LGBT STEMinar series of conferences and to explore the contributions of LGBT+ people working in STEM, visit the LGBT STEM blog.

Johnson Matthey Poster Competition

The annual PhD Poster Competition, sponsored again this year by Johnson Matthey will be taking place on **Tuesday 10 April 2018**.

The poster competition involves all our 3rd year PhD students who are required to produce a poster about their research and answer questions on it during the judging session. A panel of judges are involved in scoring all the posters, with the winners receiving cash prizes courtesy of Johnson Matthey. We will also be joined by Dr Martin Partridge from Johnson Matthey who will deliver a seminar that afternoon as well as announcing our winners.

To run successfully, the competition requires members of staff to join the judging panel and we still have some spaces to fill. If you are available on 10 April and would like to get involved, please email chemgrad@york.ac.uk to find out more. This is a great opportunity to get involved in a departmental event and find out about all the different research taking place. Post-docs are very welcome to be on the judging panel as well as academic staff so do get in touch if you are interested.

Organising Google Drive in the Department of Chemistry

This is a quick reference guide. If you would like more detailed instructions please visit:

https://www.york.ac.uk/it-services/services/drive/

Creating files in Google Drive

1. Go to Google Drive
2. Click **New**
3. Select a Google app
4. Name your file by editing the title

Upload files and folders to Google Drive

1. Go to Google Drive and navigate to the destination where you wish to save your document
2. Click **New** or right click and select **Upload files** or **Upload folder**
3. Navigate to the document in Computer and **Open**
4. Files may be uploaded in Office format (e.g. Excel, Word etc.). If these are shared in Google Drive, collaborators will only be able download or make duplications of your file in Drive.
5. If you would like to share and collaborate using one version, then convert Office files to a Google file.

Convert files to Google formats in Drive

1. Select the document in Google Drive
2. Right click **Open with**
3. Select the Google app
4. A duplicate of your document will be created in Drive with a Google app logo by the document name.

Helpful Hint

There is an option in Google Drive settings which enables you to automatically convert uploaded files to the Google Docs editor format. Whilst in Google Drive, click on the cog wheel (top right) and choose Settings. Put a tick in the 'Convert Uploads' box.

Renaming a file

1. Navigate to the document
2. Right click and choose **Rename**
3. Type in the new name
4. Click OK

Moving a file

1. Navigate to the document
2. Right click and choose **Move to**
3. Choose the folder you wish to move the document to
4. Click **Move**

Helpful Hint

Look for the 'Add to My Drive' File option in files that have been shared with you. This creates a shortcut link to the file in My Drive. In My Drive, you can move these shortcut links into a personalised folder filing system that only you can see.

Creating multiple 'shortcut' links to one file

(n.b this feature is not currently available in Team Drive)

1. Navigate to the document
2. Right click and choose **Move to**
3. Select the folder where you wish to see a link to the file
4. Hold **Ctrl** until the **Move** button changes to **Add**
5. Click **Add**. A link to the original file will now be saved in the folder you have chosen

Deleting a file

1. Right click **Remove**
2. This sends your file to the **Bin** folder
3. If you own the file, people you've shared it with will still be able to make a copy. Learn how to permanently delete a file. If you don't own the file, removing the file from your Drive to the Bin only removes it for you.

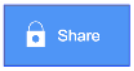
Sharing Files using Google Drive in the Department of Chemistry

This is a quick reference guide. If you would like more detailed instructions please visit:

https://www.york.ac.uk/it-services/services/drive/

Documents may be shared with others so that they can view, edit and collaborate on the same documents in real time in Google Drive. This means that everyone can work from a 'single source of truth'.

Share a file or folder

1. Select one or multiple documents in Drive and click  or open a single file and click 

2. Enter the email addresses of those individual people or Google Groups with whom you would like to share the file.
3. Use the drop-down options to select the individual sharing permissions for each person and choose to let them edit, comment or view only.
4. Use the **Advanced** settings to see more options for restricting collaborator access to view, download or share your document.
5. Select the checkbox to Notify people and Google will automatically notify your collaborators by email. There is also the option to add your own message before pressing **send**.

n.b. collaborators will be able to see everyone's email address and will also be able to see who is viewing the file at any one time. If you are required to hide collaborator email addresses for data protection, it will be necessary to create a Google Group with private membership settings for your recipients, and then share the file with the Google Group.

If you select 'get shareable link', the default setting is that 'anyone at University of York with the link: can view'. For documents that need to be kept secure, it is better to share with selected recipients either in Google Drive or by email (see below for instructions on how to share a file with email recipients).

Helpful Hint

If you have shared a file with specific people, it is possible to set an expiry date on their access permissions to the file. In the sharing settings, hover over the individual name, click the stopwatch symbol and set the date and time that the person's access to view, edit or comment on your document, should expire.

Share a file or folder in an email

1. Compose an email in Gmail.
2. Click the Google Drive icon  at the bottom of the New Message pane.
3. Navigate to the document you want to send.
4. Select Insert as **Drive Link**
5. Click **Insert**
6. When you click Send, Google will alert you if the Drive files aren't already shared with the recipient(s). Click **more options** to see the full list of sharing permission settings that you can use to secure your file before clicking **share and send**.

Helpful Hint

If someone you have shared a google file with subsequently deletes it, then only their copy will be deleted, yours will still be available. In order for them to access the document again you will need to re-send the link. To do this go to Share > get shareable link and re-send.

Receive an automatic notification when a Google Drive file is updated

If you are collaborating in Drive and would like to receive an automatic notification when a file is changed by someone else:

1. Open the document
2. In the toolbar at the top click on Tools > Notification rules…
3. Choose your options (when to be notified and how)
4. Click Save

Helpful Hint

You could agree with your file collaborators that everyone will set up automatic notifications. This way you won't need to remember to email your collaborators every time you make a change.

Chemistry Christmas Quiz

This academic year, we revised the current Christmas party format to include both a formal dinner and a Departmental quiz at the request of the (overwhelming) response to the Google Form sent round the Department early on in the autumn term. The quiz took place a week after the formal dinner, on Thursday 14 December. The event was a resounding success as our resident quiz master; Jason Lynam took to the podium to begin the quiz. A quiet hush descended on the 100 attendees as they were asked questions ranging from geography to films and Christmas songs to Star Wars. At 5pm, amongst the empty beer and prosecco bottles, dry spaghetti and sticky marshmallows, the winners were announced; the (formidable) Hatch Monkeys. Thank you to the PostDoc Society for supporting the event, Abigail Mortimer for creating the prize and last but not least, Jason Lynam for his imaginative and memorable quiz questions. This was a free event, co-funded by the Department and the PostDoc society and so any donations to St Leonard's Hospice, in memory of Robin Virgo would be greatly appreciated. Donations can be made either via the donation boxes at the Chemistry Reception or the Just Giving page (please see link below). We hope to see you all for the Christmas Quiz 2018, Emma and Jenny.

http://www.stleonardshospice.org.uk/Donate/Fundraising-Pages/View-Fundraising-pages/Friends-and-Colleagues-of-Robin-Virgo

Atmospheric Chemistry Special Interest Group

Advances in Airborne Monitoring of Atmospheric Composition & Chemistry

Royal Met Soc Atmospheric Chemistry Special Interest Group (ACSG)

University of York: Department of Chemistry, Room B101/02

Wednesday 21st March 2018, 10.30 am

Airborne platforms, including aircraft and satellite, are a crucial component in monitoring the global composition and chemistry of Earth's atmosphere. Scientific understanding of climate change, ozone depletion and air quality, amoung other important environmental issues, have all been advaned through aircraft- and satellite-led research in recent decades. This 2018 meeting of the Atmospheric Chemistry Special Interest Group (ACSG) brings together speakers working on various cutting edge aspects of airbone composition monitoring, from the use of civllian passenger aircraft, to unmanned drones. We will discuss advances in the field and consider what future challenges lay ahead.

Please bring any posters related to atmospheric chemistry for presentation at lunch and wine reception. **Prize for best early career poster sponsored by Air Monitors**

AirMonitors.co.uk
Quality - Service - Innovation

Organisers: Dr Ruth Purvis (Univ. of York) and Dr Ryan Hossaini (Lancaster Univ.)

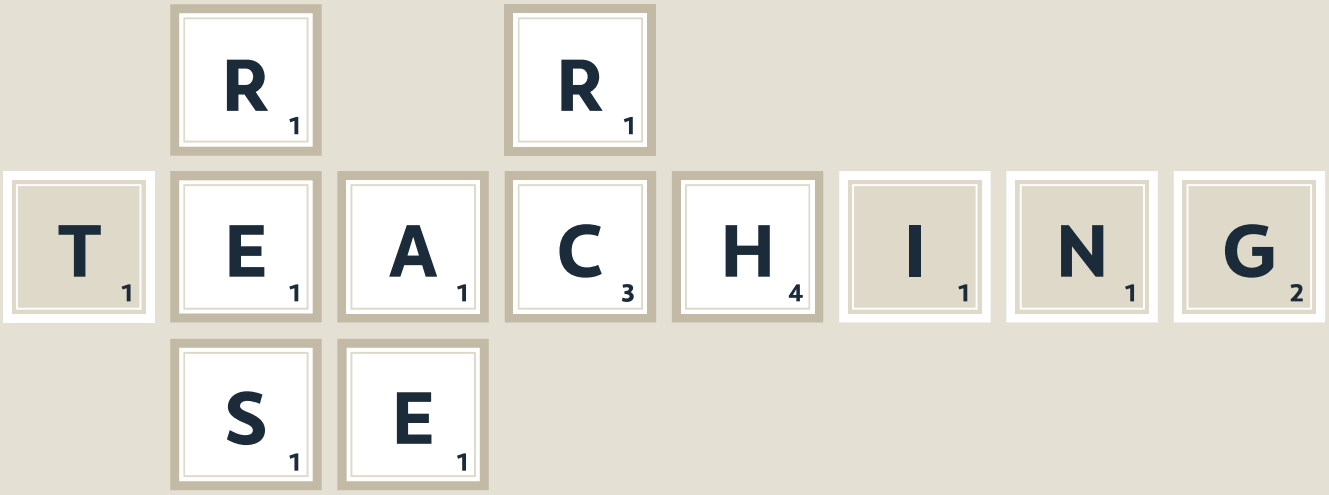
10.30	***Arrival with tea/coffee***	
11.15	**Welcome and introduction**	**Dr Ruth Purvis**
11.20	**The FAAM aircraft – a platform for atmospheric chemistry**	**Professor James Lee** National Centre for Atmospheric Science
11.45	**The FAAM aircraft – a platform for atmospheric aerosol**	**Dr Jamie Trembath** Facilities for Airborne Atmospheric Measurements
12.10	**Advances in the characterization of mineral dust properties from novel applications of airborne instrumentation**	**Dr Claire Ryder** University of Reading
12.35	**Global measurements of coarse mode aerosol – insights from recent aircraft field experiments**	**Dr Bernadett Weinzierl** University of Vienna
13.00	***Lunch (provided) + posters***	
14.30	**Observing sources and changes in UK air pollution from space**	**Dr Richard Pope** University of Leeds
14.55	**Measurement of VOC fluxes over London from a low flying aircraft**	**Dr Adam Vaughan** University of York
15.20	**What can be learned from regular passenger aircraft observations?**	**Dr Harald Bönisch** Karlsruhe Institute of Technology
15.45	**Measuring greenhouse gas emissions using unmanned aerial vehicles**	**Dr Grant Allen** University of Manchester
16.10	***Wine reception + posters***	
17.15	***Meeting closes***	

PLEASE REGISTER BY MAR 7th 2018 at our online shop: http://bit.ly/2z0bqg8

UNIVERSITY OF YORK
LEARNING AND TEACHING CONFERENCE

UNIVERSITY of York

RESEARCH-LED TEACHING IN PURSUIT OF EXCELLENCE



DELIVER A WORKSHOP, LIGHTNING TALK OR POSTER AT THE LEARNING AND TEACHING CONFERENCE ON FRIDAY 22 JUNE 2018

Excellent teaching goes hand in hand with excellent research. A creative relationship between research and teaching enhances the student experience, improves student employability and enriches the research culture.

CALL FOR
CONTRIBUTIONS

DEADLINE FOR SUBMISSIONS
15 FEBRUARY 2018

For more suggested conference themes, guidance and an application visit bit.ly/YorkLT18