

Chemistry Update

Newsletter 281, 27th January 2017

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Calendar of Events

McCamley Lecture

Speaker: Dr Rebecca Melen, Cardiff University

Date: Wednesday 1 February

Time: 1pm—2pm

Location: A101

UCAS Days

Dates: 2, 7, 9, 13, 20, 21 Feb

Time: 12.30pm—4pm

Board of Studies Meeting

Date: Wednesday 8 February

Time: 2pm—4pm

Location: A102

RSC Prize Lecture

Speaker: Prof Joerg Feldmann,
University of Aberdeen

Date: Wednesday 15 February

Time: 2pm—3pm

Location: A101

Research Seminar

Speaker: Alison Woolford, Astex

Date: Wednesday 22 February

Time: 1pm—2pm

Location: A122

CHyM Research Seminar

Speaker: Prof Alexej Jerschow, NYU

Date: Tuesday 28 February

Time: 1pm—2pm

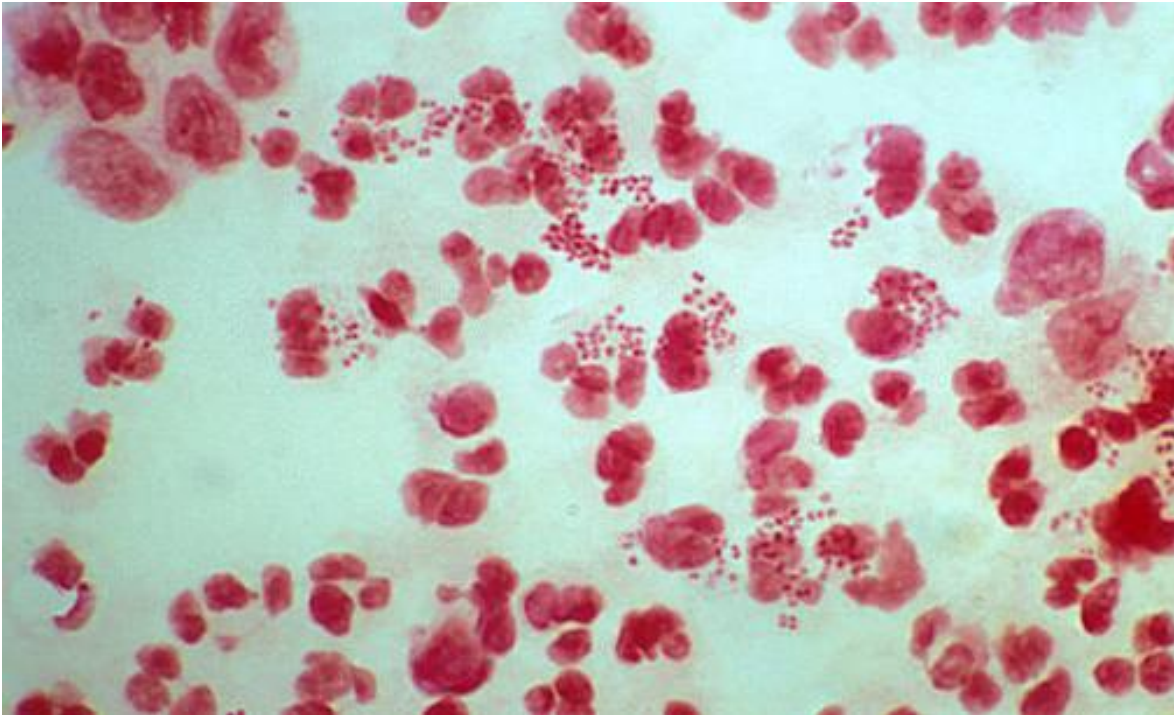
Location: A140

Date of Next Issue:

24th February 2017

Scientists Develop New Antibiotic for Gonorrhoea

Scientists at the University of York have harnessed the therapeutic effects of carbon monoxide-releasing molecules to develop a new antibiotic which could be used to treat the sexually transmitted infection gonorrhoea.



The infection is caused by the bacteria *Neisseria gonorrhoeae*

The infection, which is caused by the bacteria *Neisseria gonorrhoeae*, has developed a highly drug-resistant strain in recent years with new cases reported in the north of England and Japan.

There are concerns that gonorrhoea, which is the second most common sexually transmitted infection in England, is becoming untreatable.

Almost 35,000 cases were reported in England during 2014, with most cases affecting young men and women under the age of 25.

Engine room

The interdisciplinary team, from the University of York's Departments of Biology and Chemistry, targeted the "engine room" of the bacteria using carbon monoxide-releasing molecules (CO-RMs).

CO is produced naturally in the body, but there is increasing evidence that carbon monoxide enhances antibiotic action with huge potential for treating bacterial infections.

The scientists found that *Neisseria gonorrhoeae* is more sensitive to CO-based toxicity than other model bacterial pathogens, and may serve as a viable candidate for antimicrobial therapy using CO-RMs. The CO molecule works by binding to the bacteria, preventing them from producing energy.

New treatments

Scientists believe the breakthrough, published in the journal *MedChemComm*, could pave the way for new treatments.

Professor Ian Fairlamb, from the University's Department of Chemistry, said: "The carbon monoxide molecule targets the engine room, stopping the bacteria from respiring. Gonorrhoea only has one enzyme that needs inhibiting and then it can't respire oxygen and it dies.

"People will be well aware that CO is a toxic molecule but that is at high concentrations. Here we are using very low concentrations which we know the bacteria are sensitive to.

"We are looking at a molecule that can be released in a safe and controlled way to where it is needed."

Drug development

The team say the next stage is to develop a drug, either in the form of a pill or cream, so that the fundamental research findings can be translated on to future clinical trials.

Professor Fairlamb added: "We think our study is an important breakthrough. It isn't the final drug yet but it is pretty close to it."

"People might perceive gonorrhoea as a trivial bacterial infection, but the disease is becoming more dangerous and resistant to antibiotics."

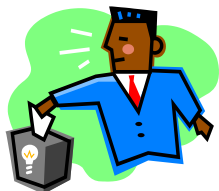
The team worked with Professor James Moir from the University's Department of Biology. He added: "Antimicrobial resistance is a massive global problem which isn't going away. We need to use many different approaches, and the development of new drugs using bioinorganic chemistry is one crucial way we can tackle this problem, to control important bacterial pathogens before the current therapies stop working."

The study was funded by the Biotechnology and Biological Sciences Research Council (BBSRC).

The full research paper can be found here:

<http://pubs.rsc.org/en/content/articlelanding/2017/md/c6md00603e#!divAbstract>

Suggestion Box



Reminder: There is an online anonymous suggestion box for staff under the Equality and Diversity section of the intranet: <http://www.york.ac.uk/chemistry/internal/> and a physical suggestion box located outside Room K167 for YSBL staff. Suggestions from staff are most welcome. All suggestions are discussed by the appropriate departmental committee.

Study Confirms Steady Warming of Oceans for Past 75 Years

Scientists have solved a puzzling break in continuity of ocean warming records that sparked much controversy after climate data was published in the journal *Science* in 2015.



The Ocean buoys now used to measure water temperatures tend to report slightly cooler temperatures than older ship-based systems.

The latest research from the Universities of York, UK, and California, Berkeley, US, confirms that the conclusions of the National Oceanic and Atmospheric Administration's (NOAA) research paper, which sparked wide debate following the suggestion that there was no detectable slowdown in ocean warming, were in fact accurate.

The 2015 analysis by NOAA scientists showed that ocean buoys now used to measure water temperatures tend to report slightly cooler temperatures than older ship-based systems. As buoy measurements have replaced ship measurements, this had hidden some of the real-world warming.

Scientists corrected this 'cold bias' and concluded that oceans have actually warmed 0.12 degrees Celsius per decade since 1997, nearly twice as fast as earlier estimates of 0.07 degrees Celsius per decade. This brought the rate of ocean temperature rise in line with estimates for the previous 50 years, between 1950 and 1999.

Robotic floats

Many scientists, including the International Panel on Climate Change, acknowledged the 'global warming hiatus', while those dubious about the science pointed to it as evidence that climate change is a hoax. The new study, which uses independent data from satellites and robotic floats as well as buoys, concludes that the NOAA results were correct.

Dr Kevin Cowtan, from the University of York's Department of Chemistry, said: "Replication is an

important part of science, but is often unrewarded - everyone wants to get the big new result rather than checking old ones. In this case the political controversy which was manufactured around the NOAA paper provided a strong motivation for doing the study.

"We were initially sceptical of the NOAA result, because it showed faster warming than a previous updated record from the UK Met Office. So we set out to test it for ourselves, using different methods and different data. We now think NOAA got it right, and a new dataset from the Japan Meteorological Agency also agrees."

Small fraction

Historically mariners measured the ocean temperature by scooping up a bucket of water from the ocean and sticking a thermometer into it. In the 1950s, however, ships began to automatically measure water piped through the engine room, which is typically warm.

Nowadays, buoys cover much of the ocean and that data is beginning to supplant ship data. The buoys report slightly cooler temperatures because they measure water directly from the ocean instead of after a trip through a warm engine room.

Zeke Hausfather, a graduate student in UC Berkeley's Energy and Resources Group, said: "Only a small fraction of ocean measurements are being used by climate monitoring groups, and they are trying to combine data together from different instruments, which leads to a lot of judgement calls about how you weight one over the other, and how you adjust for the transition from one to another.

"So we created a temperature record just from the buoys, or just from the satellites, or just from the Argo floats, so there was no mixing and matching of instruments."

No 'break'

Using data from only one instrument type, – either satellite, buoys or Argo floats – the results matched those of the NOAA group, supporting the case that the oceans warmed 0.12 degrees Celsius per decade over the past two decades.

This means that the upward trend seen in the last half of the 20th century continued through the first 15 years of the 21st – there was no sudden 'break' from global warming.

David Carslaw Contributes to Article in *Chemistry World*

Dr David Carslaw contributed to a recent article in *Chemistry World* on urban air pollution and the contribution made by diesel vehicles.

The article is available here:

<https://www.chemistryworld.com/2500224.article>

Scientists at York Explore Ways of Reducing Food Waste

The University of York is to lead a new research project examining how food manufacturing systems can be improved to reduce waste.



Food and drink is the largest manufacturing sector in the UK.

The project, which received £800,000 funding from the Engineering and Physical Sciences Research Council (EPSRC), is a joint collaboration between the Universities of York, Loughborough and Nottingham.

Food and drink is the largest manufacturing sector in the UK, employing approximately 400,000 people with a turnover of £76 billion.

However, a staggering 9.9 million tonnes of food waste and food by-products are generated per year in the food industry alone, of which 56 per cent is considered unavoidable.

Environmental impact

The two year project will explore how systems can be improved to better utilise unavoidable food supply chain wastes (UFSCW).

Food which is lost after harvest and along the distribution and consumption chain has a negative environmental impact, putting pressure on natural resources and ecosystems and causing pollution through food discards.

However, current strategies for dealing with UFSCW are rudimentary and of low value: these include incineration and where possible; animal feed and bedding; compositing; ploughing back in to soil and sometimes landfill.

Bio-resource

Scientists said UFSCW has huge potential as a bio-resource as it contains a number of unexploited, bio-based materials and chemicals, with a range of potential commercial applications.

Dr Avtar Matharu, joint lead Investigator at the University of York, said: "Our research aims is to develop a holistic understanding of re-use of unavoidable food supply chain wastes as a source of functional food ingredients.

"This is very exciting as our research has global ramifications as it addresses grand challenges of food waste, hunger and poverty alleviation, climate change and sustainability"

The results from the project will be assessed at an industry level to determine any possible consequences for the entire UK food manufacturing sector.

GRASPing Silly Putty

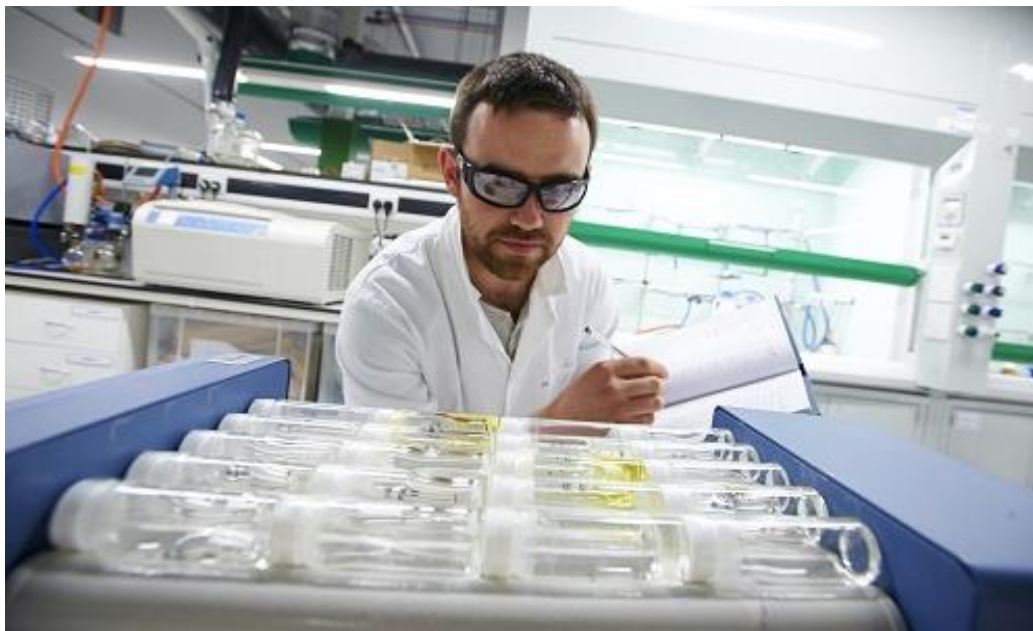
As part of our Green Reactants and Sustainable Products (GRASP) project to further embed green and sustainable chemistry within the curriculum, Dr Glenn Hurst, Dr Avtar Matharu and Dr Brendan Garrett focused on practical chemistry; specifically, silly putty. Silly putty is a common gel utilised at the primary, secondary and tertiary level as part of demonstrations, outreach and laboratory experiments (<http://pubs.acs.org/doi/abs/10.1021/ed500415r>). However, we found that the crosslinking agent, borax poses a serious health hazard in that it may damage fertility and the unborn child.



Working with a team of undergraduate students as part of a third-year miniproject (including Nick Cox, James Pollard, Rebecca Jeffrey and Alex Bowes), the team developed a new research-led undergraduate experiment investigating the rheological properties of a green calcium-crosslinked alginate gel. Following development, this experiment was successfully trialled with our first cohort of Natural Sciences students as part of a new summer activity. Glenn, Avtar and Brendan have now published this work in the *Journal of Chemical Education*. This serves as an excellent example of working with students as partners to innovate within our undergraduate programme and to disseminate the results in one of the best journals in chemical education. You can GRASP the paper for yourself here: <http://pubs.acs.org/doi/full/10.1021/acs.jchemed.6b00584>

Green Chemistry Win Major BBI Grant

The Green Chemistry Centre of Excellence (GCCE) has won and will lead on a major new €4.5M Bio-based Industries (BBI) consortium grant “ReSolve” aimed at the major industrial and research challenge of seeking sustainable and safe bio-based solvents.



Solvents are the most widely used chemicals with applications in industries from paints to pharmaceuticals. They also represent one of the greatest “green chemistry challenges” as many of the most commonly used solvents are toxic and have been identified by the EU as “substances of very high concern” and need to be replaced.

The new BBI project (ReSolve) brings together the research expertise of the University of York and Wageningen University with a number of companies both seeking and developing new bio-based solvents. The University of York team is led by Professor James Clark, Director of the GCCE and also includes Dr Thomas Farmer, Dr Andy Hunt and Dr James Sherwood. Industrial partners including the companies Circa with whom the GCCE have an existing joint venture on the new solvent “Cyrene” and Nitto with whom the centre has been developing different novel solvent solutions.

The primary aim of ReSolve is to replace the hazardous solvents with safe alternatives derived from non-food carbohydrates. Starting from promising bio-based platform molecules, an effective combination of computational modelling, high-throughput toxicity testing and evaluation of application performance will be used to design bespoke bio-based solvents. These solvents will be designed to serve a wide range of applications.

The provision of safe and economically viable bio-based solvents by ReSolve will allow the full benefit of regulatory restrictions on the use of aromatic and nitrogen-containing solvents to be felt without a negative impact on the economic security of the European solvents industries. The impact of this research will also be relevant to thousands of downstream businesses and consumers that are dependent on solvents. Above all, it will positively affect the health and safety of the millions of European citizens who are routinely exposed to solvents as part of their job.

Newton Grant Aids to Develop New Collaborations in Thailand

Developing a potential collaboration with the National Science and Technology Development Agency (NSTDA).

Dr Duncan Macquarrie and Dr Andrew Hunt from the Green Chemistry Centre of Excellence (GCCE) recently met with Dr Nontipa Supanchaiyamat and Associate Professor Sittipong Amnuaypanich at Khon Kaen University (KKU) as part of a Royal Society Newton Mobility grant between KKU and Green Chemistry. During the visit, Dr Macquarrie and Dr Hunt also gave a set of talks at Nanotec, part of the NSTDA of Thailand.



The visit was extremely positive. The NSTDA have incredible facilities and programmes with significant potential for working with the Department of Chemistry in the future.

Johnson Matthey Poster Competition

The annual PhD Poster Competition, sponsored again this year by Johnson Matthey will be taking place on Tuesday 28 March 2017.

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 a guest from JM 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 28 March 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.

Green Chemistry Wins H2020 Funding

The Green Chemistry Centre of Excellence (GCCE) has been awarded three-year Horizon 2020 funding as part of a multidisciplinary and multi-actor collaborative Research and Innovation Action (RIA) coordinated by Unitelma Sapienza University, Italy.



The project STAR-ProBio aims to promote a more efficient and harmonized policy regulation framework, needed to promote the market-pull of bio-based products within the context on a sustainable 21st Century. This will be achieved by developing a fit-for-purpose modular sustainability scheme, linked to standards, labels and certification opportunities.

Professor James Clark, Dr Avtar Matharu and Ms Louise Summerton from the GCCE will lead on the development of suitable thresholds for indicators of environmental sustainability that allow for comparisons between bio-based products and their alternatives. Life cycle analysis will be used to evaluate the manufacturing processes used to make bio-based products, and identify product design choices to minimise waste and environmental impact. Environmental sustainability criteria will be combined with social and economic indicators of sustainability for a thorough, harmonised scheme for all types bio-based products.

Dr Avtar Matharu, Deputy Director of the GCCE, said: "This project is a reflection of our continued research on establishing much-needed biobased standards. Global society needs to be better informed when it comes to 'biobased' especially as more biobased products and alternatives appear in the marketplace.

"Providing measurable, evidence-based standards against a set of sustainability criteria is an exciting challenge and a huge step forward in our understanding."

RSC Higher Education Teaching Network Meeting

The latest meeting of the RSC HETN group took place at the University of Oxford in early January, with a focus on Practical Chemistry and York sent Dr David Pugh to represent the department. The meeting is the smaller relative of the Variety in Chemistry Education meeting and was well attended by laboratory teaching focussed staff from around the country. The membership includes quite a few ex-York people who are now in Chemistry Teaching roles and amongst others, David was able to catch up with Stephen Bromfield (ex DKS, now Bath); Mike Edwards (ex RJKT, now Keele); Daniel Cornwell (ex DKS, now KCL) and Chris Armstrong (ex SBD, now Birmingham).

The meeting explored various laboratory based topics including discussions on the approaches taken for producing to techniques videos; transferability of skills into non-chemistry/academic careers; a project for students to monitor air pollution using Palmes' tubes; investigative projects on making soap and biodiesel and lots of discussion. Lots of ideas have been brought back to York to further develop our practical courses.

Wann Group News

Thanks to the Wild Overseas Scholars Fund, João Pedro Nunes (third year PhD student supervised by Dr Derek Wann) had the opportunity to carry out ultrafast electron diffraction (UED) experiments at the Stanford Linear Accelerator Center (SLAC), University of Stanford, California. This visit was part of a collaboration between the Wann Group and the UED/UEM Initiative supervised by Dr Xijie Wang and sponsored by the USA Department of Energy (DoE).



Photo: João Pedro Nunes at SLAC, California, USA

UED experiments at SLAC are carried out using sub-100 fs electron packets accelerated to 4 mega-electron-volts using a photocathode RF gun, identical to the one used in the LINAC Coherent Light Source (LCLS). These relativistic electrons are guided towards a diffraction chamber where they are allowed to interact with an optically pumped molecular beam containing photo-excited molecules. The use of relativistic electrons allows MeV UED experiments to study the gas-phase dynamics of small molecules with sub-100 fs temporal resolution. During his two-month visit Pedro studied 1,2-

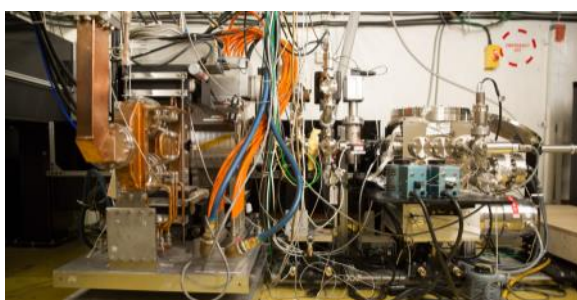


Photo: MeV UED apparatus at SLAC

dithiane amongst other samples. Ahead of the visit to SLAC, the photo-induced dynamics of this small cyclic disulfide system were extensively explored by Conor Rankine in the Wann Group using non-adiabatic molecular dynamics simulations (Wann *et al.*, *Phys. Chem. Chem. Phys.*, 2016, **18**, 27170). At SLAC, these simulations were used to both demonstrate the usefulness of computational chemistry in UED and to support experiment efforts.

With this visit the Wann Group has further embedded the collaboration between York and SLAC, demonstrating the importance of combining theoretical and experimental physical chemistry in the study of molecular dynamics and the observation of previously unseen ultrafast events.

Clarke Group News



On 3 January 2017, the Clarke group was joined by Nannapaneni Chakravarthy (Pavan) who is studying the Asymmetric Bronsted Acid Catalysed Formation of Tetrahydropyrans for an MSc (Research). This month sadly sees the departure of Niels Koning, who has been in the group as an ERASMUS exchange student investigating a Diels-Alder approach to a key intermediate in the Total Synthesis of Anthracimycin.

Excitingly, the Clarke group team has made its way into the second round of the RSC National Retrosynthesis Competition. All those group meetings are beginning to pay off, so good luck gang!

O'Brien Group News

Frank Warren Conference 2016

Rhodes University, South Africa, 4-8 December 2016

Professor Peter O'Brien was a plenary speaker at the 2016 Frank Warren Conference in South Africa. This is the premier organic chemistry conference in South Africa. It was a wonderful opportunity to meet most of the organic chemists based in the old and new universities across all of South Africa. The conference covered wide-ranging topics, with an emphasis on medicinal chemistry, and the delegate list was impressively diverse as the conference photo below shows. The highlight of the conference was probably not the chemistry, but a trip to a local game reserve for a game drive. We had close-up views of lions, elephants, zebra, springboks and wildebeests from our open-sided truck!



4th Winter Process Chemistry Conference

University of Strathclyde, 12-14 December 2016

Adam Islip, co-supervised by Peter Karadakov, won 1st prize in the poster competition at this conference. Well done Adam!

Stereochemistry at Sheffield

University of Sheffield, 10 January 2017

Twelve members of the group headed off to Sheffield to attend the 50th Annual Meeting on "Modern Aspects of Stereochemistry".

Emerging Areas of Photochemistry: From Fundamentals to Applications

16 - 17 March 2017 - Department of Chemistry, University of York

This two-day symposium brings together leading international and national scientists to present and discuss the most recent innovations in the field of photochemistry and photophysics. The meeting includes ample time for stimulating discussions. The conference will provide an excellent opportunity for early career researchers, postgraduate students, post-doctoral researchers, academics and industrialists to meet others in their field.

Topics will include, but not be limited to:

- Photochemical dynamics, mechanisms, and theory
- Time-resolved spectroscopy
- Photocatalysis
- Solar energy conversion
- Light switches
- Medical applications
- Photochemical technologies

This symposium will consist of a combination of invited talks and a poster session. A poster prize will be awarded to the best poster presented at the conference.

The event is **open to all**. A **£10 contribution** towards catering will be collected on the door. **Registration is now open (deadline: 28 Feb 2017).**

To register for the event please fill in the following form: https://docs.google.com/forms/d/e/1FAIpQLSc4zlC1mi7kyJXJC4DXEVqZ_PKq6Olpio5jDsKCjRVJEqg/viewform.

Places are limited to 120 applicants so early registration is recommended.

Further event details will be provided in due course.

This event is kindly supported by EPSRC and the University of York.

Further information can be found at:

<https://www.york.ac.uk/chemistry/research/inorganic/inorganic-seminars/photochemistry-symposium-york-2017/>.

Graduation



The Chemistry Graduation ceremony took place on Friday 20 January followed by a drinks reception in the Department. Graduates and their guests joined staff for drinks to celebrate their achievements.

Congratulations to all the students who graduated:

PhD in Chemistry – attending	PhD in Chemistry – in absentia
Rebecca Gregory Daniel Cornwell Saimeng Jin Richard John Jessica Milani Lucy Milner Tomas Sherwen Dene Bowdalo Ching Wan Chan	Kaana Asemave Joseph Ogunjobi Menglong Zhang Chehasnah Haji-Cheteh Joanna Simpson
MSc Green Chemistry and SIT – attending	MSc Green Chemistry and SIT – in absentia
Opeyemi Hussain Andrew Maneffa Xiangju Meng Shenjian Wang Xinyi Zhou	Yushan Hou Andong Li Yiwen Lu Han Yao Martyna Kundrotaite
BSc Chemistry – attending	BSc – in absentia
Molik Atef-Uz-Zaman Richard Bickford-Smith Harry Kirby Katerina Michael James Ronson	Syed Musawi Rhiannon Allan Rachel Callaghan



NEW Workshop Series: Sustainable Manufacturing for the Chemical Industry



In close consultation with industry, the Green Chemistry Centre of Excellence (GCCE) have organised a series of interactive workshops, which have been designed to provide an insight into the issues surrounding sustainable manufacturing including change management, commercialisation, environmental impact, circular economy, legislation and bio-resources including the conversion of waste into valuable products. The multidisciplinary course content incorporates industrial case studies, providing access to real business issues, and will be delivered by experts from departments across campus as well as from industry.

The interactive nature of the workshops will also provide opportunities for open discussion and debate, as well as training to enhance communication skills, improve team-working and develop problem based and logical approaches. The workshops will also provide the chance to network with like-minded individuals on campus, and some of the workshops will be followed by additional networking sessions where refreshments will also be provided.

Content

Two of the workshops 'What is Green Chemistry?' and 'Business Case for Green' have already passed but there are still spaces at the following workshops.

15 February 2017	<u>Biorefining Waste</u>	<i>Dr Joe Ross, Biorenewables Development Centre</i>
1 March 2017	<u>Running a Sustainable Chemical Company</u>	<i>Robert Brocklesby, Brocklesby Ltd; Dr Glenn Hurst & Dr Rob McElroy, Department of Chemistry</i>
15 March 2017	<u>Safer Chemicals for Healthy Buildings</u>	<i>Dr Nic Carslaw, Environment Department</i>

Who is it for?

These workshops are open to all on campus with an interest in the future of sustainable manufacturing. Graduates, PhDs and postdocs are particularly encouraged to attend.

How do I sign up?

Follow the links above to register your attendance at each of these workshops via Eventbrite. Attendance at all workshops is not compulsory but is encouraged. Places are limited and will be allocated on a first come, first served basis.

To find out more detail on the individual workshops please visit the links above or alternatively contact Dr Rob McElroy (rob.mcelroy@york.ac.uk) or Louise Summerton (louise.summerton@york.ac.uk) or visit: <https://www.york.ac.uk/chemistry/research/green/renewchem/workshops/>.

New Starters

Christina Surdhar, Receptionist

Room: reception; Extension: 2529; Email: christina.surdhar@york.ac.uk,

Mark Roper, Senior Mechanical Workshop Technician

Room: A006; Extension: 2514; Email: mark.roper@york.ac.uk

Rhoderick Miller, Administrative Assistant Exams and UG office

Room: B013; Extension: 5899; Email: rhoderick.miller@york.ac.uk

Andrew Steer, Research Associate, working with Dr Will Unsworth

Room: D110/D114; Extension: 2596; Email: andrew.steer@york.ac.uk

Depika Lakhaney, Management Accountant

Room: A144; Extension: 2678; Email: depika.lakhaney@york.ac.uk

Dr Jobie Kirkwood, Green Chemistry TEN Assistant

Room: F109; Extension: 2705; Email: jobie.kirkwood@york.ac.uk

Elizabeth Wells, YSBL Administrative Assistant

Room: B/K167; Extension: 8264; Email: elizabeth.wells@york.ac.uk

Caroline Moore, Research Support, working with Dr Andy Goddard

Room: A134; Extension: 2602; Email: caroline.moore@york.ac.uk

Dr Kevin Kasten, PDRA working with Prof Peter O'Brien

Room: D215; Extension: 4521; Email: kevin.kasten@york.ac.uk

Madeleine Stone, E&D Winter Intern, working with Dr Leonie Jones

Room: A131; Extension: 4478; Email: mbs510@york.ac.uk

Louise Wise, Development Manager: Fundraising for CIEC, working with Joy Parvin

Room: B016; Extension: 2528; Email: louise.wise@york.ac.uk



Independent Fellowships Open Day – 24 March 2017



The Department of Chemistry will be holding an Open Day for researchers interested in applying for independent fellowships to be based in York. Potential applicants are invited to come and visit the Department on Friday 24 March 2017 to meet fellow scientists, view our facilities and learn more about the Department and its work. Both external and internal candidates are encouraged to attend.

The programme outline is as follows:

- | | |
|-------------|--|
| 10.00-10.30 | Registration and coffee |
| 10.30-12.00 | Introduction to the Department <ul style="list-style-type: none">• Department research themes and strategy• Equality and diversity• Research support |
| 12.00-14.00 | Tours of the Department, lunch, and networking |
| 14.00-15.30 | Current and former research fellows talk about their work and their career |
| 15.30-16.00 | Tea |
| 16.00-16.45 | Panel Q&A session |
| 16.45-17.30 | Refreshments and networking |

To register or for more information on independent fellowship opportunities in Chemistry at York please see our Fellowships webpage: <http://www.york.ac.uk/chemistry/research/fellowships/>

Please direct any enquiries to chem-research@york.ac.uk.

Please circulate this opportunity as widely as possible.

Chemistry Student Wins Penultimate Year Prize from RSC



Charlotte Gregson, year 4 MChem student, has won the Penultimate Year Prize for Analytical Chemistry from the Royal Society of Chemistry (RSC).

The Department put forward the nomination for Charlotte to receive this prize. The award process is managed by the Analytical Division North East Region of the RSC who promote Analytical Science in the region by introducing and aiding activities that further enhance the subject.

Charlotte said: "I am very grateful to have been nominated for this prize as I very much enjoyed the analytical aspects of my chemistry course last year, particularly the Analytical and Forensics Chemistry option module. To have won the prize has given me a great sense of accomplishment to take forward in my future studies."

Professor Duncan Bruce, Head of Department, added: "The Department would like to congratulate Charlotte and is very proud of her achievement and recognition in this important area of chemistry. Well done."

Charlotte has won £100 and a one-year student membership of the RSC.

50th Anniversary HSP Conference (HSP50)

5-7 April 2017, Ron Cooke Hub, University of York

Charles Hansen's Solubility Parameters (HSP) first appeared in 1967. They quickly became adopted by the polymer and paints industries as a vital formulation tool. It was gradually realised that they were a universal tool able to provide formulators with powerful insights into pigments, art restoration, nanoparticles, pharma formulations, green chemistry and more. They are now more popular than ever, used by industry and academia all over the world.

To celebrate fifty years of HSP, the HSPiP team (Dr Hansen, Prof Abbott, Dr Yamamoto) are holding a special conference hosted at the University of York by the GCCE.

The program is a mix of distinguished keynote speakers covering the broad range of HSP applications, contributed papers selected for their interest and challenge, two poster sessions and networking events and a Grand Conference Dinner in the world-famous National Railway Museum. It also features an optional training session on HSPiP given by Prof Abbott at no extra charge.

<http://www.hansen-solubility.com/conference.php/>

The deadline for abstract submission is 31 January 2017.

The early bird registration deadline is 15 February 2017.

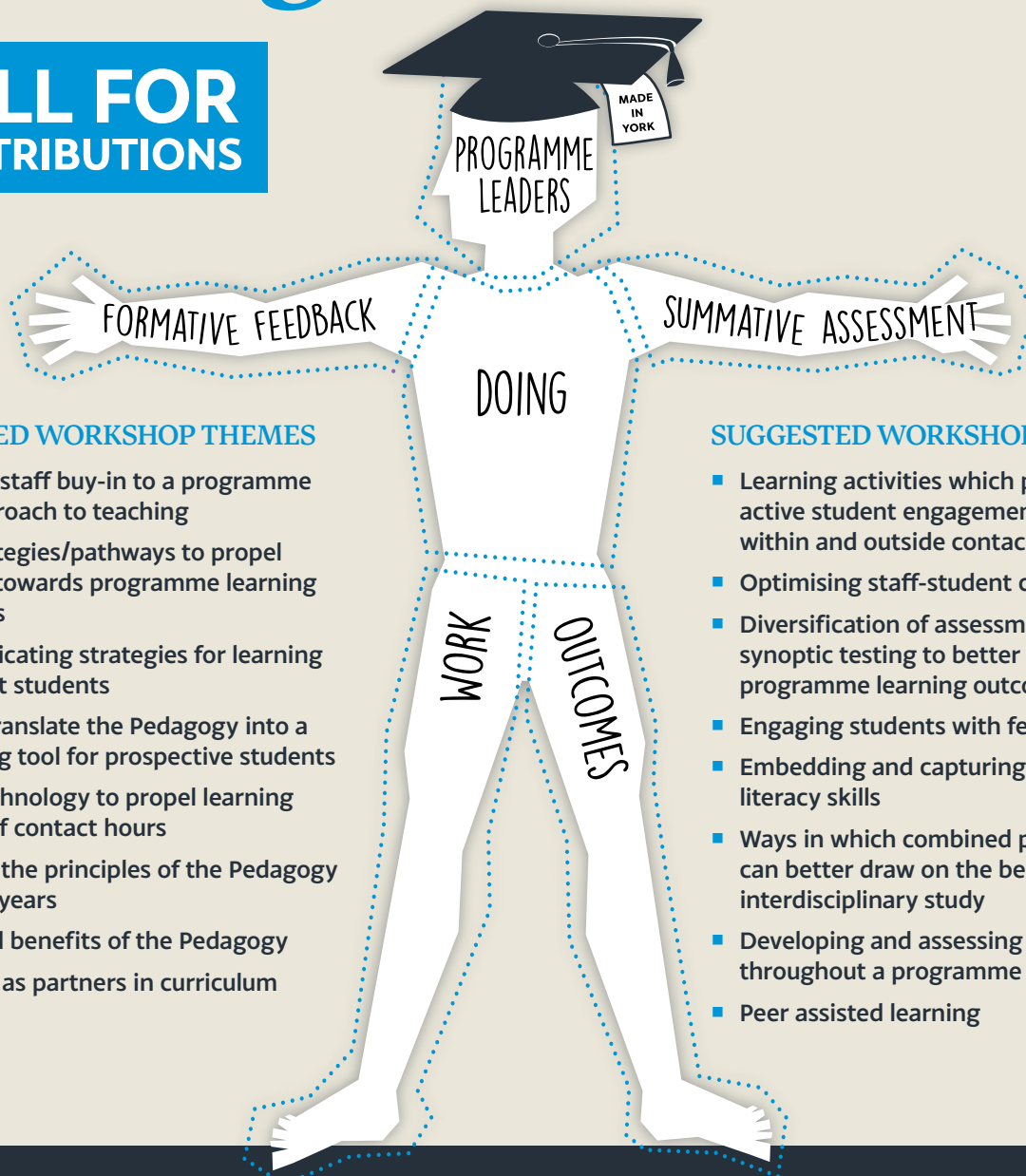


UNIVERSITY OF YORK LEARNING AND TEACHING CONFERENCE

2017
TUESDAY 20 JUNE

The York Pedagogy – making it work

**CALL FOR
CONTRIBUTIONS**



SUGGESTED WORKSHOP THEMES

- Securing staff buy-in to a programme level approach to teaching
- Best strategies/pathways to propel learning towards programme learning outcomes
- Communicating strategies for learning to current students
- How to translate the Pedagogy into a marketing tool for prospective students
- Using technology to propel learning outside of contact hours
- Applying the principles of the Pedagogy in future years
- Perceived benefits of the Pedagogy
- Students as partners in curriculum design

SUGGESTED WORKSHOP THEMES

- Learning activities which promote active student engagement both within and outside contact hours
- Optimising staff-student contact time
- Diversification of assessment and synoptic testing to better align with programme learning outcomes
- Engaging students with feedback
- Embedding and capturing digital literacy skills
- Ways in which combined programmes can better draw on the benefits of interdisciplinary study
- Developing and assessing group work throughout a programme
- Peer assisted learning

CALL FOR CONTRIBUTIONS

We are inviting colleagues to contribute workshops and poster presentations.

Deadlines for submission is Wednesday 15 February 2017. Further information can be found at: bit.ly/2es0a2R