

Chemistry Update

Newsletter 258, 27th February 2015

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Calendar of Events

UCAS Days

Dates: 3 & 9 March
Time: 12.30pm—4pm

Graduate Research Seminar

Date: Wednesday 4 March
Time: 4pm—5pm
Location: A101

Organic Seminar

Date: Wednesday 11 March
Time: 2pm—5pm
Location: A122

Inorganic Seminar

Date: Thursday 12 March
Time: 1pm—2pm
Location: A122

Organic Synthesis Group Plenary Session

Date: Thursday 12 March
Time: 2pm—5pm
Location: A122
Some of the final year PhD students in the organic section will be giving presentations on their research.

Professor Jon Lovett Lecture "Energy Gardens"

Date: Monday 16 March
Time: 4pm—5pm
Location: F106

Science Trail

Date: Tuesday 17 March
Time: 9.30am—3.30pm
Location: NSLC / Department of Chemistry

Waters and Reach Separations Lunchtime Seminar: "SFC and Difficult Separations"

Date: Tuesday 17 March
Time: 12pm—2pm
Location: F106

Bruker Poster Competition for 3rd Year PhD Students

Date: Wednesday 18 March

Discovery Days

Date: Wednesday 18 March
Location: National Railway Museum

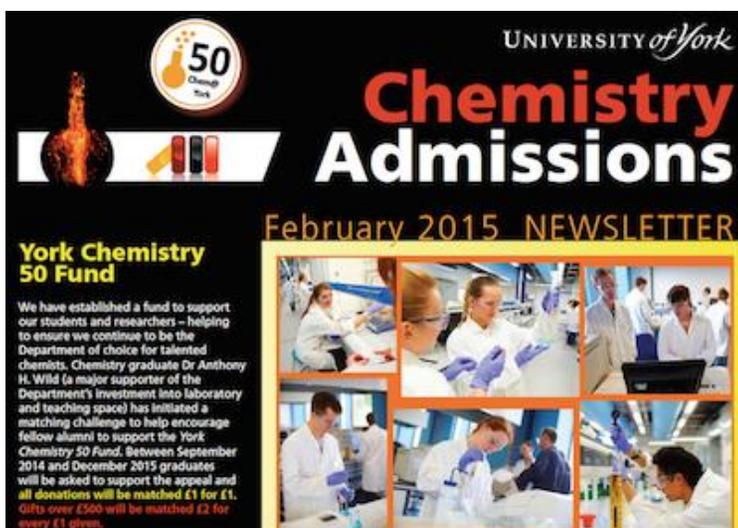
Salters' Festival of Chemistry

Date: Thursday 26 March
Time: 10am—3pm
Location: A & B Block

Date of Next Issue:
27th March 2015

Highlights of our Anniversary Year

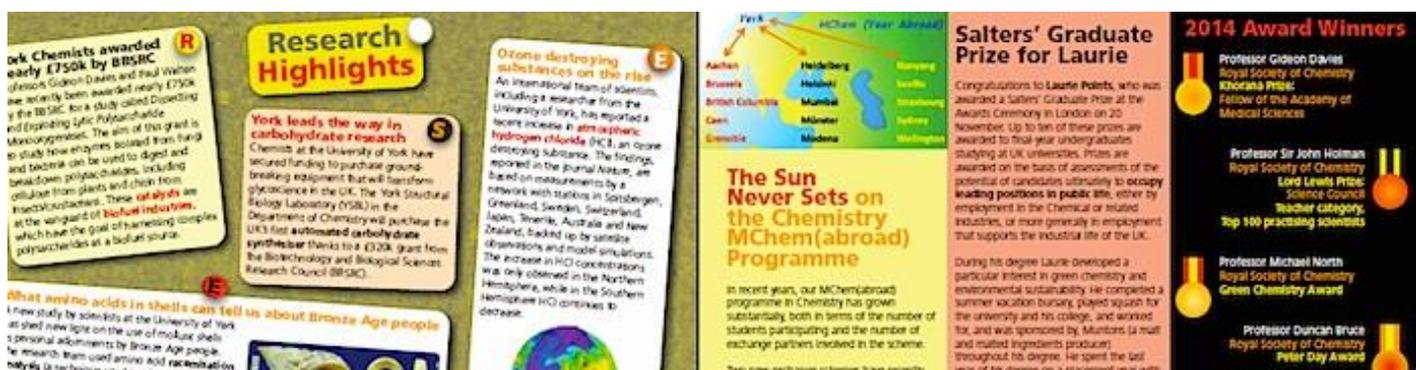
Our Departmental Chemistry Admissions and Chemistry Highlights newsletters show what an exciting and successful year we have had, on our Golden Anniversary.



The 2014-15 academic year is a landmark for the Department as it marks our first fifty years. It is remarkable to see what has been achieved at Chemistry@York in such a short space of time. Our recently produced **2015 Chemistry Admissions and Chemistry Highlights** newsletters (prepared by our undergraduate admissions team), further illustrates our continued success in both teaching and research.

Notable achievements have included the official opening of Block F (housing our **Green Chemistry Centre of Excellence** of our new undergraduate teaching laboratories) and our **Wolfson Atmospheric Chemistry Laboratories**, which are part of a recent **£29 million investment** in Chemistry@York. The newsletters also feature some of our award winners, including RSC research prizes, RSC 175 *Faces of Chemistry*, University of York *Faces for Fifty*, the AkzoNobel UK Science Award, and YUSU Excellence in Teaching awards. Some of our teaching developments are mentioned, including the expansion of our MChem Year Abroad scheme (which now includes placements in New Zealand and, uniquely, in India), as are a number of our research highlights: from grant awards, to high-impact publications and our standing of **7th in the REF 2014 Research Power Table**.

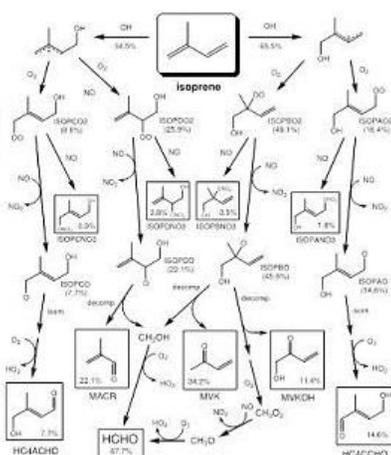
Our UCAS offer holders will be posted a copy of *Chemistry Admissions* and our undergraduate chemists will receive *Chemistry Highlights*. Our Admissions Newsletter is also available on the [web](#).



NERC Success

York atmospheric chemists celebrate double success being award over £1 million by NERC

A team of York scientists from chemistry, environment and archeology departments, lead by [Dr Jacqui Hamilton](#), have secured £333,000 to purchase a state of the art high resolution mass spectrometer for the discovery, isolation and structural analysis of the complex organic molecules found in atmospheric particulate matter. This is multi-disciplinary technology that can support diverse environmental science disciplines and will be integrated into York's Centre of Excellence in Mass Spectrometry.



Wolfson Atmospheric Chemistry Laboratory scientists [Dr Andrew Rickard](#) and [Professor Mat Evans](#) have secured £850k of NERC funding for the MAGNIFY project - Mechanisms for Atmospheric chemistry: GenerationN, Interpretation and FidelitY. This three year project will work closely with project partners at the Royal Society of Chemistry and the University Paris Est Creteil, as well as a range of world leading

international air quality and climate modelling groups, in order to make the [Master Chemical Mechanism](#) more sustainable, opening it up more to the community, building upon its success and maintaining it as the "gold standard" benchmark mechanism for atmospheric chemistry.

Social Badminton Group



If you would like to play badminton in a friendly group then we currently have block bookings at the Sports Centre at 5pm Thursdays and 9am-11am Saturdays. Anyone is welcome - from beginners to experienced players, staff, students, friends and family. Ad-hoc games at other times are also available, we use a Google Group email list to arrange things. Please email tim.kirk@york.ac.uk for more details and to join the mailing list.

Launch of the Centre for Industry Education Collaboration (CIEC)

Centre for Industry Education Collaboration (CIEC) aims to create and sustain links between school science and industry's people and practices

CIEC creates and sustains:

- Freely available online resources for schools and companies
- Associated training to enable effective school science - industry links and partnerships.

Centre for Industry Education Collaboration
Department of Chemistry,
University Of York, Heslington,
York (UK), YO10 5DD
T: +44 1904 322 523
E: ciec@york.ac.uk

Department of Chemistry

Centre for Industry Education Collaboration is part of the Department of Chemistry at the University of York

The home page of the new CIEC site

www.ciec.org.uk

CIEC has launched a new website intended to make it easier for all to understand what we do and find relevant information.

With the site comes a new name, the Centre for Industry Education Collaboration, to more accurately reflect the Centre's work. CIEC continues to have strong links with the chemical industry, but also works with other science industries; with colleagues in the department who wish to collaborate in schools outreach; and with organisations engaged in increasing motivation in science education and raising science career aspirations.

CIEC is working with Johnson Matthey both in the North East and at their Royston site in Hertfordshire. The generosity of Johnson Matthey has meant that the CIEC website has been redesigned and updated to make it more intuitive – especially for our industrial partners and generally more user friendly for everyone.

The website has areas for industry, primary teachers and secondary teachers, resources, CPD and research.

The industry section outlines four distinct ways in which companies can engage with school science education, from becoming involved with local schools to the creation of teaching materials tailored to tell their company's science stories in curriculum time.

The two sections aimed at teachers explain how they can benefit from CIEC's much acclaimed CPD and gives them access to all the free CIEC resources. These include activities, interactive sites for primary children and sites such as essentialchemicalindustry.org for secondary pupils.

CIEC research into children's perceptions of industry and how CIEC interventions positively impact on children's science learning is available in 'Research and Publications'.

Teachers are already seeing the benefits of the new site, when it was demonstrated on 8-10 January at the Association for Science Education's annual conference in Reading. Teachers were particularly excited by the new search facilities, enabling them to search CIEC primary resources by age, topic, types of enquiry and cross curricular links.

Prof. Jon Lovett Talk “Energy Garden” - Monday 16th March

Professor Jon Lovett, University of Leeds will be speaking on Monday 16th March from 4-5pm in F/106 about 'Energy Gardens'.

The 'Energy Garden' concept aims to find a solution to controversies surrounding the use of biomass and biofuels for energy production by using indigenous plant species grown in field edges or as shade. By harnessing the power of plants through technological innovation, we hope to transform the lives of small-scale farmers in developing countries.

Jon Lovett is Chair of Global Challenges at the University of Leeds. Originally a botanist, his main area of interest is now in institutional economics. He was at the University of York from 1994-2007, and then moved to the University of Twente from 2007-2013 as head of the Technology and Sustainable Development group where he worked with engineers on technology transfer to developing countries.

Organised by the Green Chemistry Centre of Excellence and greenSTEMS.

Everyone is welcome to attend.

For more information, e-mail jennifer.dodson@york.ac.uk

Minister Praises York's Bioeconomy Test Bed

The Minister for Universities, Sciences and Cities, Greg Clark, visited the University of York's Biorenewables Development Centre (BDC) to see how it was helping to place the region at the leading edge of the bioeconomy.

Accompanied by BDC Director Dr Joe Ross and the chair of its management board, Professor Ian Graham, Mr Clark toured the open access scale up facilities. Dr Ross and Professor Graham briefed him on the work that has been undertaken since a major £2.5M investment from the Department for Business, Innovation and Skills in 2012.



Minister for Universities, Sciences and Cities, Greg Clark, chats to Alex Jukes who is working on extracting valuable chemicals from tomato plant leaves (credit: Ian Martindale)

The Minister inspected plans for a new £20M BioVale Centre to be established at the University of York over the next 2 years with support from the York, North Yorkshire and East Riding and the Leeds City Region Local Enterprise Partnerships. The BioVale Centre will act as the hub of a BioVale Cluster that will bring together agriculture, industry and the knowledge base to establish Yorkshire as a world-leading bioeconomy region.

Mr Clark said: "I am delighted to have had the chance to visit this innovative centre and to meet those working at the forefront of the biorenewables industry. Through bringing ambitious businesses together with leading academics, the centre is supporting the UK's ambition to grow a high value bioeconomy, and I look forward to seeing its progress."

Professor Graham, who is also Head of the University's Department of Biology, said: "It was a pleasure to present some of our world class research to the Minister and to highlight some of the work that led to Biology at York being ranked first for impact in the 2014 Government review of research excellence across UK universities."

Dr Ross added: "It was great to have an opportunity to show the Minister some of the work the BDC has been doing to support regional SMEs and connect them with our University expertise, particularly in Biology and Chemistry. There is huge demand from industry to develop new bio-based processes and products and the BDC, along with the newly established BioVale Cluster, is now meeting that demand and helping to grow the region's economy."

ChemSoc Presentation Practice

On Wednesday 28th January, ChemSoc hosted their fourth Presentation Practice event in A101. The event, run in collaboration with Dr Nick Wood and Stephen Bromfield, allows undergraduate students to practise giving presentations in a friendly and supportive environment, where in addition to gaining valuable experience, they also receive anonymous structured feedback from the audience. Speakers are given free choice to talk about a subject that is interesting to them and this session saw student presentations on the history of alchemy, the mathematics behind urinal selection and why the ideal gas law has a place in every home!

Plus, Nick Wood joined in the fun by considering how unconscious biases can impede our thinking. The afternoon concluded with host Stephen Bromfield considering why choosing colours carefully can be crucial for communicating chemistry when using PowerPoint. It is anticipated that ChemSoc Presentation Practice V will take place in Summer Term.

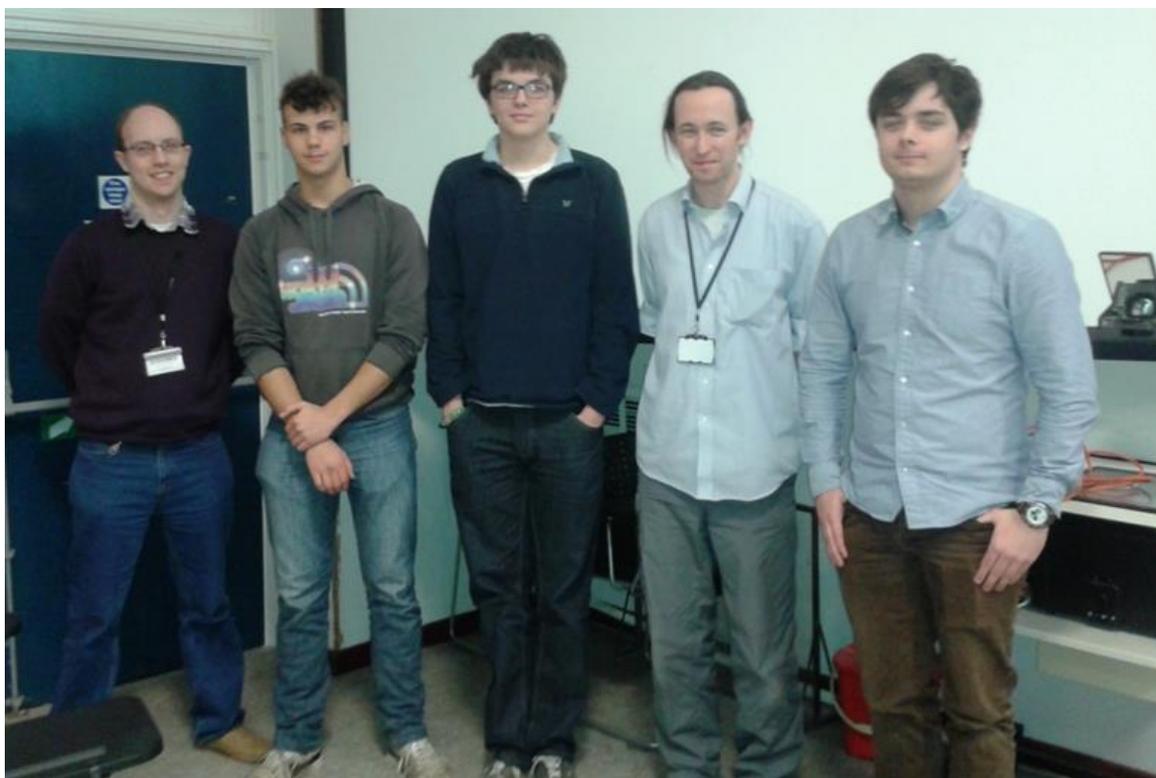


Photo: Speakers from ChemSoc Presentation Practice IV

Suggestion Box



Reminder: there is a Suggestion Box located next to the pigeon holes in the foyer of A Block and one outside Room K167 for YSBL staff. Suggestions from staff are most welcome. All suggestions are discussed at the departmental communications meeting.

Invitation to the BBEE Workshop for Early-Stage Researchers

2nd June 2015, Department of Biology, University of York



On 2nd June, the University of York will host a one-day interdisciplinary workshop on "Building a BioEconomy in Europe (BBEE)", organized by the Network of Early-Career Sustainable Scientists & Engineers (NESSE), greenSTEMS, BioBase NWE and the National Non-Food Crops Centre (NNFCC).

The workshop is aimed at early career professionals from academia, industry and policy organizations related to bioeconomy. It will be a great opportunity to discuss the challenges of building a bioeconomy in Europe, from a technical, economical and legislative point of view.

The structure of the event has a highly interactive layout, as it involves group discussions mentored by high-profile experts, Green Chemistry & Biotechnology insights from peer early-stage researchers as well as TED-style talks from experienced members of the university and from companies and policy organizations.

The workshop will also act as a platform to encourage the formation and reinforcement of networks of young researchers who share a common interest for Bioeconomy.

To guarantee a heterogeneous group of participants and ensure participatory discussions the workshop is limited to 50 attendees.

The overall cost is £40, including refreshments and lunch.

If you require more information go to <http://www.rrbconference.com/bbee>

DKS Group News

In February, Stephen Bromfield gave a lecture as part of the 1st Manchester Proteoglycan Meeting. His talk 'Multivalent Binding and Sensing - Toward Selective GAG Targeting' presented progress made recently in the Smith labs towards achieving recognition which can be selective between highly similar bio-polyanions. This is a highly challenging target, of great interest in terms of both supramolecular science and chemical biology, and is being led by Stephen, alongside postdoctoral research fellow Ana Rodrigo, with support from Marie Curie EU funding.

Dr Glenn Hurst Awarded Two Grants

Dr Glenn Hurst has been awarded two grants from the University of York Rapid Response Fund in order to develop our undergraduate practical courses. The first grant worth £1503 is to be used to contribute towards the purchase of a rotational viscometer, allowing students to explore the exciting properties of non-Newtonian fluids. An experiment based on a modified version of Glenn's recent article in the Journal of Chemical Education¹ will be developed.

The second grant is in collaboration with Dr Martin Fascione and is worth £400. This will be combined with an existing £400 award from the Department of Chemistry. The funding will be used to employ an undergraduate student to work over the summer 2015 vacation period in order to develop a novel, interdisciplinary biochemistry experiment in the hope of enhancing our research-led teaching in the Department of Chemistry.

Glenn would like to thank Dr Nigel Lowe for his guidance.

1: The Rheological Properties of Polyvinyl Alcohol Gels from Rotational Viscometry
Glenn A. Hurst*, Malika Bella, Christoph G. Salzmann
J. Chem. Edu., (2015) DOI: 10.1021/ed500415r

Waters and Reach Separations Lunchtime Seminar: “SFC and Difficult Separations”

Date and Time: Tuesday 17th March; 12pm – 2pm

Speakers: Guy Wilson, Waters and Victoria Coulthard, Reach Separations

Location: F106 (Green Chemistry Seminar Room)

Waters will introduce the fundamentals of SFC and giving a range of examples where this technique can be applied to analytical challenges. In the second part, Reach Separations will explain how the technique can be used to efficiently purify compounds and show real life examples of the benefit of using SFC. This will be an opportunity to learn about the latest separation technology and how it can address a wide range of analytes, particularly those where reverse phase chromatography or GC are not straight forward.

Lunch and refreshments will be provided.

If you would like to attend, please e-mail katy.holiday@york.ac.uk

New Starters

Katie Stott moved roles and started on 2 February. She is now Administrative Assistant in the Examinations and Undergraduate Office;

Room Number: A137/A109; Extension Number: 2512; Email: katie.stott@york.ac.uk

University Reuse Policies

Please use the recycling bins around the department instead of throwing rubbish in the bin (as the vast majority can be recycled). See the following webpage for more information:

http://www.york.ac.uk/admin/estates/operations/waste_management/recycling/

Do you have enough recycling bins?

As part of the Green Impact Scheme, we are currently looking at whether or not there are enough paper recycling bins throughout the department. As a guideline, there should be at least one paper recycling bin per 10 desk-based members of staff. If you or your research group would like another paper recycling bin, please let Nick Abbott know at nick.abbott@york.ac.uk.

Students - please email Nick on nick.abbott@york.ac.uk if you have any queries or requests for extra recycling facilities in the department.

See below to read about the University's waste and recycling policies.

<http://www.york.ac.uk/about/sustainability/recycling/>

See the links on the left under 'Sustainability'.

For Staff - furniture reuse scheme - instead of getting rid of your office furniture, please advertise here first, there is a good chance someone will take it off your hands!!

<http://www.york.ac.uk/admin/supplies/fru/index.cfm>

Also check to see if you can use any of the goods offered - for free!

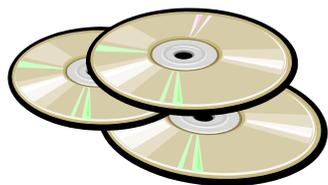
You can also subscribe to receive emails when things are advertised!

Staff and Students - Small Ads - there is also a 'Small Ads' webpage where you can advertise your second-hand goods and pick up a bargain!

<http://www.yorkgsa.org/site/forums/>

There are also red BHF clothes banks situated at every college.

Please Recycle Unwanted CDs!



Please send any CDs to be recycled to the Post Room, Car Park South. For more than a few CDs, please place them in CD/DVD confidential waste bags, available from the mail room at mail-room@york.ac.uk.

Switching Off

Reminder to all staff and students

- Monitors - these need to be turned off when you are not using them (they use up to 50% of energy of both monitor and computer combined!)
- Equipment not being used - please switch off any equipment when you finish using it especially before you go home (apart from computers in the computer rooms which are automatically switched off at the end of each day)
- Lights - ask yourself before you use the lights "Do I really need all the lights on?" Use part-lighting where applicable.



Please turn off the lights when you have finished using them!

If you see an empty room with lights on (and there is nothing in there, please turn the lights off!

- Heating - turn down where applicable and especially at the end of the day (see below).

Heating



As part of our green initiative with Green Impact, we would like to encourage all members of the department to wear appropriate clothing for the weather. This helps us to avoid unnecessary heating or air conditioning throughout the year. We would like to keep cooling to no lower than 24° degrees and heating to no more than 21° degrees. By layering up with thick jumpers in the winter months and wearing light, loose clothing in the summer, we can avoid wasteful energy use!

University's Flexible Working Policy

The University's comprehensive flexible working policy can help staff reduce the number of miles they travel when commuting to work. For more information visit

<http://www.york.ac.uk/admin/hr/flexible-working/>

See also the Department's webpage on flexible working:

<http://www.york.ac.uk/chemistry/internal/staffinfo/hrinfo/flexwork/>

We also operate a family-friendly policy, see: <http://www.york.ac.uk/chemistry/department/family/>

Photocopying/Printing

ASK yourself before you print, "Do I really need to print this, can I read on screen and make notes where necessary?".

Please print and photocopy double-sided! York Print Plus machines should already be set to print double-sided by default.

Access your print preferences' and select 'duplex' or similar to print both sides of the paper. Please also consider printing 2 sides to a page.

Yellow Trays

These have been set up next to each photocopier, please put anything printed off on one side in these so that people can reuse for scrap paper.

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

1. When printing to the photocopier, please select 'print on both sides' = NO or change to "print one sided" and select a particular tray, for example tray 2. Please put the paper in FACE UP i.e. print side up in whichever tray you are using.
2. When photocopying onto scrap paper from the photocopier, please do the same as the above.

Dripping Taps

A Reminder from the Green Impact team –

Staff - please report any dripping taps in the department or other water wastage on Planon - go to Staff home page > Repairs and Maintenance > Log in > 'Report a problem...' under 'FIX IT'. A dripping tap can waste up to 5,000 litres of water a year.

Students - please can you go to reception and let the receptionist know.

Dual-flush Toilets – these are next to Reception in A block, please use the button with the SMALL circle on it (on the left) to save water. Only if absolutely necessary can you use the right hand button with the large circle on it.

Communications Group

The Departmental Communications Group meets approximately once per term to discuss all aspects of external and internal communication. The remit of the group and membership are listed below and the minutes from the meetings can be found at:

<http://www.york.ac.uk/chemistry/internal/staffinfo/committees/>

Recent topics have included email communication, seminar promotion, poster distribution and guidelines for use of social media.

The DMT will be considering a Departmental Communication Strategy to inform the work of the Group.

Please note and adhere to the University Social Media Guidelines:

<http://www.york.ac.uk/admin/hr/resources/policy/social-media-guidelines.htm>

If anyone would like to raise an agenda item or attend a Communications Group Meeting then please let me know (helen.coombs@york.ac.uk)

Remit of Communications Group

To improve and enhance external and internal communications and support the communication strategy within the Department of Chemistry ensuring that dissemination of information is balanced and appropriate.

Membership

Departmental Manager (Chair): Helen Coombs

Operations Manager: Simon Breeden

Press and Publicity Officer: Avtar Matharu

Departmental Computing Officer: Adrian Whitwood

Web Officer: Tim Elsworth

Technical Representative: Phil Helliwell

Postdoctoral Researcher Representative: Barbara Procacci

Graduate School Representative: Alice Duckett

Undergraduate Student Experience Team Representative: Katrina Sayer

Research Support Representative: Andy Goddard

Green Chemistry Representative: Katy Holiday

YSBL Representative: Catherine Jardine

CIEC Representative: Valmai Firth

Chemistry Update Representative: Katy Holiday

HR Administrator: Eliza Bonello

Academic Vacancy

Other interested staff as appropriate

Building Sustainable Solvent Solutions for Industry



Thursday, 30th April 2015, 9.30am—5.30pm

Green Chemistry Centre of Excellence (GCCE), Department of Chemistry, University of York

A one-day symposium on safer, greener and more sustainable solvents in industry

- Learn which widely used solvents will be restricted / banned in the near future and the alternatives that the GCCE can help to find.
- Find out which alternative solvents are sustainable and economically attractive compared with conventional organic solvents.
- Guidance on how we can help your business with greener solvents from our experts in solvents research.
- Listen to talks from companies that can supply alternative solvents and those who are currently benefitting from using them, such as Circa.
- Opportunities for knowledge transfer, discussion and networking.

Who Should Attend?

This conference would be of interest to academics and industrialists working in all areas where solvents are used including chemicals and pharmaceuticals, cleaning, formulations, inks and pigments, extractions and analysis.

Register your place by Monday 27 April 2014 at <http://solventsolutions.eventbrite.co.uk>

If you would be interested in giving a talk (of which there is some limited space for) or exhibiting a poster at this event, please get in contact. Email katy.holiday@york.ac.uk.