

Chemistry Update

Newsletter 274, 24th June 2016

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Calendar of Events

Open Days Dates: 24 & 25 June

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Sixth Form Chemistry Conference Date: Wednesday 6 July Time: 9.30am—4pm

Chemistry Graduation Drinks Reception Date: Wednesday 13 July Time: 1.30pm—3pm Location: Chemistry Quad

Chemistry Staff Family Picnic Date: Friday 15 July *Rounders match from 2pm*

Picnic from 4.30pm

Green Chemistry Seminar Speaker: Dr Nick Gudde Date: Tuesday 26 July Time: 10.30am—11.30am Location: C/F/106

Chemical InterActions International Picnic Date: Wednesday 27 July Time: 4pm—6pm

Date of Next Issue: 22nd July 2016

Study Suggests Fracking is Responsible for a Reversal in Atmospheric Hydrocarbon Trends



A fracking site in Colorado

An international team of scientists, including academics from the Department of Chemistry at York, have identified an increase in the concentrations of ethane and propane gas over much of the Northern Hemisphere since around 2009, probably due to increasing North American oil and natural gas production.

A surge in unconventional oil and natural gas production has occurred in recent years, particularly in the USA, where shale production is estimated to have increased 10–20-fold between 2000 and 2015.

This trend represents a hemispheric-wide reversal of the overall global steady decline in ethane that began in the 1970s, which was due primarily to stricter air quality emission controls.

Working with researchers at the University of Colorado, the National Centre for Atmospheric Science (NCAS) and the US National Oceanic and Atmospheric Administration (NOAA) and other international laboratories, the team observed the largest increases in ethane and propane over the central and eastern USA.

Increasing concentrations year-on-year are apparent as far downwind as the Cape Verde islands, where the University of York operate a long-term atmospheric observing station, and European monitoring stations.

This new research, which is published in *Nature Geoscience*, indicates that ethane emissions are increasing at a rate of around 0.42 Tg (teragrams or million tons) per year, representing an increase in North American ethane emissions of nearly 50% since 2007.

Methane, a very significant greenhouse gas which has been increasing since 2007 after nearly a decade of stable levels, is co-emitted with ethane from oil and natural gas production. Measured methane/ethane ratios from these sources are variable, but an extrapolation using a median ratio indicates that USA oil and natural gas production emissions of methane may have doubled over 2009-2014.

Professor Lucy Carpenter of the Department of Chemistry who leads the group's measurements at the Cape Verde station, said: "This careful study of ten years of hydrocarbon data from stations worldwide is a worrying indicator that unconventional oil and natural gas production is having a global impact.

"Not only will the increased hydrocarbon emissions bring higher levels of air pollution downwind of oil and natural gas production, but this study suggests that fracking could be a substantially larger emitter of methane than previously thought, with adverse affects on climate."

Professor Alastair Lewis from NCAS said: "It is remarkable that one industry can reverse a global trend in ethane, a ubiquitous constituent of the Earth's atmosphere."

Professor Detlev Helmig, from the University of Colorado and lead author, added: "About 60 per cent of the drop we saw in ethane levels over the past 40 years has already been made up in the past five years.

"If this rate continues, we are on track to return to the maximum ethane levels we saw in the 1970s in only about three more years. We rarely see changes in atmospheric gases that quickly or dramatically."

Award-Winning Musical Chemist



Oliver Wass, who studied for a BSc in Chemistry here in York from 2012 to 2015, and achieved a first class degree, has won the 2016 Guildhall School of Music Gold Medal.

During his chemistry degree, Oliver maintained his passion for music. Alongside his studies in chemistry, he took 40 credits of elective modules within the Music department, where he achieved the highest ever mark for a final recital, and also won the Blake Music Prize.

After leaving York, Oliver went on to the Guildhall School of Music where he is now studying for a Masters degree. He received the prestigious Guildhall Gold Medal award for his performance of Ginastera's concerto for harp, accompanied by the Guildhall Symphony Orchestra and conducted by Adrian Leaper.

You can hear Oliver playing live on Radio 3 at the following link:

http://www.bbc.co.uk/programmes/p03v0gdy

The Department of Chemistry is committed to supporting students in their extracurricular activities, and aims to help all students develop the confidence to pursue and achieve their goals.

York Education Experts Win Prestigious RSC Award

The Centre for Industry Education Collaboration (CIEC) has won the 2016 Royal Society of Chemistry Inspiration and Industry Award.



Gayle Pook and Joy Parvin, Directors of the Centre for Industry Education Collaboration

The award is given for the Centre's outstanding achievements in promoting science, supporting teachers, and inspiring students to take up STEM careers.

Two of the team were presented with their award at a ceremony hosted by television personality Hugh Dennis, which formed part of Chemistry Means Business - a two -day event organised by the Royal Society of Chemistry.

They were chosen from a shortlist of three by a panel of senior scientists and executives from industry, and receive a cash prize of £2,000.

Joy Parvin, joint Director of the CIEC, said: "We are absolutely delighted to be recognised for all our efforts linking schools with industry over the years.

"During our flagship primary schools programme - Children Challenging Industry, running from 1996 to 2016 - we have worked with more than 40,000 children and nearly 10,000 teachers from 1,550 schools, and 124 companies. We of course carry out other initiatives with smaller numbers than this, but we have influenced huge numbers of teachers and pupils to ensure they have a balanced view of science, industry and related careers."

Professor Duncan Bruce, Head of York's Department of Chemistry, said: "I am delighted to see our colleagues in CIEC receive this award. For many years they have been promoting science in general, and chemistry in particular, to young people in close collaboration with both industry and teachers. It is wonderful that their hard work, dedication and vision is recognised in this way."

Dr Robert Parker, Chief Executive of the Royal Society of Chemistry said: "It is an honour to recognise the illustrious achievements of our prize and award winners in our 175th anniversary year.

"We were founded in 1841 by a group of academics, industrialists and doctors who understood the power of the chemical sciences to change our world for the better. Our winners share that vision and are advancing excellence in their fields, whether through innovative research or inspirational teaching and outreach.

"We are proud to celebrate and support the work of inspiring and influential individuals, whose work has the potential to improve so many lives."

YUSU Rewards Excellent Teaching

York chemistry received three of the 2016 YUSU Excellence Awards.

The YUSU Excellence Awards present an opportunity for students to recognise and celebrate the work of teaching and support staff across the University of York. Entirely student led, the Awards reward the teachers and staff that are making an outstanding contribution to students' lives.

Out of twenty three awards made in total, three were won by members of the Department of Chemistry, recognising, in particular, exceptional teaching and supervision:

David Pugh - Best Communicator of the Year

Andy Hunt - Supervisor of the Year

Andy Parsons - Most Enthusiastic (Highly Commended)



The full list of award winners can be found at the following link: https://www.yusu.org/opportunities/recognition/excellence

Suggestion Box



Reminder: There is a online anonymous suggestion box for staff under the Equality and Diversity section of the intranet: <u>http://www.york.ac.uk/chemistry/internal/</u> 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.

The Chemistry of Breaking Bad

As part of the York Festival of Ideas, Professor David Smith gave a public lecture explaining the chemistry behind hit TV show *Breaking Bad*. This flagship lecture, at Merchant Adventurers Hall, was attended by around 150 people.

In *Breaking Bad*, when chemistry teacher Walter White is diagnosed with terminal cancer, he turns his chemical skills to the synthesis of the illegal drug crystal meth in order to provide a financial future for his family. Widely recognised as one of the best TV shows produced in recent years, the programme blends an outstanding cast and script with very realistic science applied in a dark setting.



Dave's lecture was in two parts. The first part explored the synthesis and activity of the drugs themselves, and in particular, considered the importance of making one specific mirror image form of the drug. The second part of the talk considered some of the chemical methods used by Walter White to deal with his enemies, from explosives such as mercury fulminate to poisons such as ricin, and also reflected on whether it really is possible to dispose of dead bodies using hydrofluoric acid.

The educational and entertaining lecture included clips from the show and used practical demonstrations to explain some of the relevant chemistry - although there were no deaths, and no free samples were provided.

Smith Group in Paris



In June, members of the Smith group attended an International Conference in Gel-Phase Soft Materials hosted at Solvay in Paris. This two day meeting included a number of international speakers and also had strong industrial input from the host company, aiming to explore how academic solutions could be married with industrial problems. Professor Dave Smith gave a plenary lecture, and PhD students Jorge Ruiz-Olles and Vania Vieira both gave posters and short talks.

Science out of the Lab – York Festival of Ideas



Argh! We escaped our normal lab environment for two days and migrated to a new and interesting place, a white marquee on Parliament Street with lots of people about. Originally Annie didn't think she would be able to attend, so handed organisation over to a group of PhD students (scary thought). The festival theme this year was "Tick Tock", so we took a huge stand entitled "Tick Tock - A Lemon Clock", linking lemon batteries, liquid crystal displays and how electrons can also power people.

The focus of our stand was a large voltaic cell powering a liquid crystal wall clock. On one side, Craig Archbold from the Materials group brought some of the liquid crystal outreach activities. There was huge interest in how people's tellies work. In the centre, the public could connect lemons, potatoes or diet coke to make a battery to power various devices. Most people had seen the lemons and potatoes before, but no one had tried with diet coke and many didn't think it would work. It was lovely to hear all the enthusiasm and gasps of "wow"! The other side of the stand was about how electrons can power people. Lindsey Flanagan from Alison Parkin's group was our electrochemistry expert and had cleverly devised a sort of game with



pool noodles, whereby the flow of an electron (marble) through the respiratory system triggered protons (ping pong balls) movement and ATP production. This worked really well until small hands started stealing the protons!

Thanks also to our volunteers, Eleanor Morris and Katie Smith for helping out for a few hours.

There were lots of other York chemists taking part in the event as well, for example Dr Kirsty Penkman and other members of Bioarch talking about dating proteins; Dr Tom Dugmore from Green Chemistry talking about getting useful materials from food waste; and lots of volunteers helping out on the RSC stand (run by Jo Buckley, a York alumna) with an array of tasty experiments exploring the chemistry of foods.

On the Friday, over 1000 people came through the tent and 1300 on the Saturday. With the lovely weather at the weekend, the marquee got rather warm. The LCD clock showed a temperature of 28.5°C! Hopefully we've inspired a few more scientists and convinced many people who announced "I'm not a scientist" that actually they are! Saturday evening we were captured and sent back to the university to return to our original habitats.

Demonstrators Drinks Reception and CODY Awards

The Department of Chemistry appreciates the huge efforts of all Graduate Teaching Assistants (GTAs) who work as demonstrators to support delivery of the undergraduate courses. GTAs play a crucial role, both in the teaching laboratory and in non-lab courses, a role that is both varied and challenging. Many of our GTAs make a huge difference to the experiences of undergraduate students.

In recognition of these efforts, a drinks reception was held on Thursday 16th June to celebrate the collective contribution to the Department from all demonstrators. In addition to this, a few demonstrators received a special commendation for their efforts and were awarded prizes for the "Chemistry Outstanding Demonstrators of the Year" (CODY).

Nominations and comments were sought from undergraduates via the Staff-Student Committee reps, Practical and Maths Course Organisers, and David Pugh for laboratory-based demonstrators. From this consultation, a shortlist was drawn up, which comprised the following students:

Craig Archbold, Joe Atkin, Rachel Bean, Robin Brabham, Sarah Chambers, Marina Chanidou, Aimee Clarke, Ben Coulson, Tom Downes, Emily Flack, Claire Fowler, Shani Garraway, Sam Griggs, Scott Hicks, Adam Hughes, Paul Jones, Josh Kirsopp, Tamara Mielke, Eleanor Morris, Pedro Nunes, Cezary Poplawski, Amy Ruddlesden, Tom Sanderson, Emma Thimbleby, Chris Unsworth, Adam Vaughan, Lizzie Wheeldon, Ellis Wilde.

The 2016 winners were identified by the selection panel which consisted of Richard Douthwaite, Nick Wood, Glenn Hurst, Charlotte Elkington and David Pugh. Congratulations to the winners of the 2016 CODYs:

Ben Coulson, Scott Hicks, Cezary Poplawski, Amy Ruddlesden, Emma Thimbleby and Chris Unsworth.

It had been agreed by the panel that each student can only win one CODY award. However, the following 2015 winners were also commended in 2016: Rachael Castle, Jess Milani, Julia Sarju, Lyndsay Ledingham, Lucy Milner and Rachel Smith.

The motivation behind the CODYs was that while all GTAs are expected to exhibit certain key skills, some are recognised as have performed exceptionally well in the role. The following are comments our CODY 2016 prize winners received:

"Ben Coulson will never just give you the answer, he always makes us work it out... a teaching scholar who really gives extra"

"Scott Hicks was very proactive in supporting students; he offers regular contributions and

corrections to student materials to try and improve courses for the future"

"Cezary Poplawski is very diligent in his attention to detail, especially in the marking and feedback given to students"

"Amy Ruddlesden exhibits tremendous patience introducing students to new techniques for the first time"

"Emma Thimbleby puts substantial efforts into preparing for her teaching, especially in the production of briefing materials"

"Chris Unsworth - Chris is the sun on a gloomy lab day, When he comes through the door we all cheer hurray! His smile, his shoes and his bants, All stop us in the middle of our frustrated rants, So for all his hard work, loveliness and kindness we say ... thanks."

Awards were presented by Dr Richard Douthwaite, Chair of the CODY Panel. Richard thanked all of our GTAs, course organisers and teaching labs staff for their valuable contributions throughout the year. Thanks also to Abby Storey who once again designed and made the awards.



Winners with Richard Douthwaite I-r Amy Ruddlesden, Emma Thimbleby, Ben Coulson, Scott Hicks, Cezary Poplawski.



CODY Award made by Abby Storey.



Winner – Chris Unsworth

Dr Avtar Matharu at 11th GC3 Innovators Roundtable





Dr Avtar Matharu was an invited International speaker and panellist at the 11th Green Chemistry & Commerce Council (GC3) Innovators Roundtable, 24-26th May, Burlington, Vermont, USA. The Roundtable encourages reflection and discussion of important current and future issues in green chemistry and importantly is delivering an agenda for the 'mainstreaming' of green chemistry in academia and industry.

Avtar gave an overview of accelerating green chemistry at a global level: building international collaborations and the role of education. He was joined on the Panel by Dr Petra Greiner, Head of International Chemicals Management (pesticides), German Environment Agency and Dr Nitesh Mehta, Director Green Chemistree Foundation, India.

The GC3 Roundtable is a must-go-to event for senior business leaders and leading practitioners in green and sustainable chemistry both from academia, governmental and non-governmental organisations.

New Starters

Hello!

Dr Javier Remon Nunez, PDRA with JHC Room: F111; Extension: 4547; Email: javier.remonnunez@york.ac.uk

Organic Plenary Session, Tuesday 21st June 2016



The organic chemistry group held another excellent plenary session for three final year PhD students last Tuesday, chaired professionally by Dr Ana Campo Rodrigo of the Smith group, showcasing a broad range of disciplines ranging from synthetic methodology to functional biomaterials chemistry.

Mickey James gave a polished talk on the synthesis of spirocyclic heterocycles, detailing the progression of his PhD work, culminating in several impactful publications. Nadiah Mad Nasir followed up with the development of new methods for the synthesis of dihydropyrans and stereodivergent tetrahydropyrans, capping off her achievements with an elegant total synthesis of diospongin B. Finally, Vânia Vieira eloquently discussed the orthogonal self-assembly of bioactive and biocompatible hydrogels, detailing the controlled release of Heparin with future applications in tissue engineering.

These captivating talks were interposed with informative and insightful questions from the audience, followed by a dynamic tea and coffee session where the chemistry was discussed further. This plenary exemplifies the quality of research that happens within the department here at York. Great job everyone!

Doctors Liddon & Donald, Postdoctoral Research Associates working for Professor Richard Taylor.

Dr Glenn Hurst Leads Summer Activity for Natural Scientists in Chemistry



On the 2nd, 3rd and 6th June, Dr Glenn Hurst led an optional summer activity for students going on to study chemistry in natural sciences in their second year. The activity started with the students enhancing their practical skills by exploring the rheological properties of a "green" gel. Dr Brendan Garrett and Glenn developed this new experiment in partnership with third year students completing a mini-project in green chemistry. Students really appreciated this research-led teaching initiative and were fascinated by Brendan's work on smart gels as contrast agents for magnetic resonance imaging.

The second aspect of the activity comprised of the students working in groups to establish and run a sustainable chemistry company, which they would then pitch to the "Dragons" who included Jill Webb from the York Management School and our very own Dr Brian Grievson and Glenn. This cross - departmental initiative led by Glenn enabled the students to enhance their personal development skills (by working in a team, making phone calls and presenting their work) whilst being able to contextualise their knowledge with an industrial focus. The activity ended with an interactive workshop on stereochemistry led by Professor Andy Parsons.

Feedback was very positive and Glenn would like to thank all staff in the teaching laboratories especially Liza for the time they put into making this activity a reality.

Dr Rob McElroy's New Role as RenewChem Manager



On 1st June, after more than 5 years as a PDRA within the Green Chemistry Centre, Dr Rob McElroy took up his new position as RenewChem Project Manager. This new venture looks to increase ties between the Department of Chemistry and industry having a wide variety of members from multinationals down to SMEs and covering a broad range of chemical sectors. He will act as a subsidiary supervisor for RenewChem PhD students and aid in developing the multi-disciplinary, cross-university Centre for Graduate Training (CGT) in

Sustainable Chemical Manufacturing which will include E-learning and CPD content guided by the industrial partners, relevant to current challenges and applicable to a wide range of graduates.

See http://www.york.ac.uk/renewchem for more information on the RenewChem Project.

RSC Joliot-Curie Conference to be Held in York

Focus on Fellowships and Independent Careers in Academia

This year York will be hosting the RSC Joliot Curie conference on Tuesday 6th and Wednesday 7th September 2016. For more information see:

http://www.rsc.org/events/detail/21600/joliot-curie-conference-2016

This is a fantastic conference aimed at supporting the aspirations of Early Career Researchers, particularly those who are under-represented in academia. We would like to stress, however, that all PDRAs are welcome to register.

This year the focus is on advice and support for postdoctoral researchers who aspire to establish an independent career in academia (e.g. by applying for fellowships). There will be a poster session where attendees can present their research.

To encourage good participation from York researchers and to demonstrate the value we place in our research staff, the department will pay the registration fee for around 20 York Chemistry PDRAs.

If you are interested in attending, please email <u>leonie.jones@york.ac.uk</u> explaining - in just a couple of paragraphs - why you would like to attend and what you think you would gain from the conference. The deadline for receiving expressions of interest has been moved back to 30th June 2016.

Last year several members of the department attended and found it to be a very interesting and worthwhile event. You can read more about it in Chemistry update:

https://www.york.ac.uk/media/chemistry/news/chemistryupdate/October_2015.pdf



Bio-Based Porous Carbons Symposium—17th June

On 17th June, the Green Chemistry Centre of Excellence (GCCE) hosted Bio-Based Porous Carbons Symposium, a follow up to the 2012 event "Starbons Day".

Starbons® are a novel family of mesoporous polysaccharide based carbonaceous materials developed at the GCCE, with surface functionalities tunable from hydrophilic to hydrophobic. This novel technology produces a Starbon® continuum of mesoporous materials from polysaccharides to activated carbon. Starbons® are now moving towards the early stages of commercialisation.

The symposium was very successful this year. Research presentations demonstrated new perspectives for the Starbon® technology. Dr Robin White (Fraunhofer Institute for Solar Energy Systems, Germany) demonstrated an opportunity to produce nitrogen–doped carbonaceous materials for catalysis and metals adsorption. Dr Peter Shuttleworth (Instituto de Ciencia y Tecnología de Polímero, Spain) introduced a novel class of Graphene-Starbon® hybrid materials suitable for electrochemical applications. Professor Mike North (GCCE, UK) reported successful Starbon® applications in CO_2 capture. These results have been recently published in *Angewandte Chemie*.

Importantly, a few companies gave their feedback on Starbon® from a commercial perspective. Dr Stewart Lee from Trio Healthcare is very confident in the commercialisation of Starbon® technology for the development of an ostomy care product. Further successes came from collaboration with Novel Laboratory Automation and Miniaturisation (Anatune, Cambridge). Mr Jeff Stubbs also demonstrated very promising results for Starbon® application for SPE cartridges.

JEOL Postdoc Poster Competition (3rd August)



The inaugural JEOL-sponsored postdoc poster competition will be held in the Department on Wednesday 3rd August. We want to celebrate the world-class research that is being done by our researchers.

Cash prizes will be offered for the best posters, with freedom to spend the money on consumables or travel that will benefit your future career. We would encourage all postdocs to consider entering. This is a great opportunity to showcase your research.

As well as prizes, winners will be given the opportunity to present their research in a departmental seminar to be held later in the year.

Please save the date, start to plan your poster (you're probably already designing one for summer conferences) and look out for further information.

Research Staff Development Event 2016 The Concord



On 9th June the third University-wide shared practice event on research staff development was held in the Treehouse in the Berrick Saul building. This event is part of the University's activities for the Concordat to Support the Career Development of Researchers:

http://www.york.ac.uk/admin/hr/researcher-development/staff/concordat.htm#tab1

Chemistry was well represented, with Luisa Ciano, Brendan Garrett and Dan Raines all taking part. Derek Wann was there in his role as "postdoc champion", as was Leonie Jones as Employability and Diversity Officer who looks after the Chemistry department's Concordat action plan.

The aim of the event was to discuss career development for research staff and topics covered included:

- Introduction and showcase of resources to support Career Development
- Destination stats on what research staff do
- Showcase of alumni profiles and possible mentoring relationships

The presentations for the day will eventually go online and we will publicise the link to those resources when it is live.

The part of the presentation on mentoring was widely thought to be the most informative. The Alumni Office (DARO) and Careers have put together a database of former York students so that current students and staff can use the career profiles to learn more about the world of work as well as to contact York graduates who might act as an external mentor. There are lots of Chemistry alumni signed up, working in a wide range of industries. See the webpage for more information:



https://www.york.ac.uk/services/careers/app/profiles2/?

Another useful tip for researchers in planning and managing their training needs was to use the Vitae resources. You can see what they offer and obtain access here using your university email address: https://www.vitae.ac.uk/



Jane Dalton gave an overview of the University's Careers in research online survey (CROS) results, highlighting issues such as researcher mobility and feeling recognised and valued (see the <u>Autumn 2015 Equality & Diversity Newsletter</u> for more on Chemistry's CROS results).

After a coffee break the group was split into two. Derek and Leonie joined Research Chairs and

other interested senior staff from many different departments to share best practice surrounding research staff development, while Luisa, Brendan and Dan attended the talk on funding opportunities. Derek and Leonie were able to point to researcher development being at the heart of our Athena SWAN action plan and highlight events such as the post doc forum meetings, forthcoming JEOL UK postdoc poster prize (3rd August, watch out for further information soon) and the RSC Joliot Curie Conference in September. We also picked up on some fantastic initiatives from other departments, particularly around building an independent track record for research staff. Ideas from a number of departments included running a fellowship development scheme (for internal and external applicants), providing small competitive grants for independent research or vacation bursary students and running an entrepreneurship course. We heard how the Centre for Health Economics ask those who attend courses to provide a review of how useful it was, in the past they have sent 5 female staff on leadership training courses and 3 have since been promoted. They also maintain a bank of successful promotion applications from those who are happy to share their CVs so others can learn from their experience.

The funding opportunities talk for the postdoctoral researchers focused on different fellowships which are available to apply for (both national and European level) and support offered by the university to aid applications. Alongside central university support, several departments provide Research Facilitators to focus on subject specific funding, so if you are interested please contact Andy Goddard, who provides this here in Chemistry.

Derek Wann, Leonie Jones, Luisa Ciano, Daniel Raines

Prof Richard Taylor at SFST Conference in Rennes



On 1st June, Professor Richard Taylor gave the main plenary lecture at the SFST conference in Rennes. He should have asked what SFST stood for – it was Symposium Francophone de Synthèse Totale. Two days of lectures in French severely tested his schoolboy memories. However, it was a memorable meeting in terms of both chemistry and gastronomy. Richard's lecture was called "Tout ce qui brille n'est pas or": Silver and Copper for Spirocycle Synthesis (with Aimee Clarke, Michael James, John Liddon and Will Unsworth as co-authors).

Green Impact Awards



Nick Abbott receiving the Award on behalf of the Chemistry.At.York Green Impact team. Lisa Mayer and Angela Longman are the other team members. This is our fifth year, having started in 2011/12 (the year Green Impact started at York) and we have finally achieved the Gold Award! We achieved a total of 412, 90 points more than last year including half of the Bonus criteria. Next year we hope to retain our Gold Award. Auditors Comments: "The team was very dedicated to the cause. Information was displayed all around the department as well as clearly in the newsletter. Excellent job!".

Angela has now stepped down from her role, we thank her for her contributions over the past three years. We are looking for new members of staff to join. If you are interested in learning more about the Department, green issues and enhancing your CV, please email Nick on <u>nick.abbott@york.ac.uk</u> for more information. We would also welcome contacts from students who can also play a role in our team.



WACL Waste Warriors Green Impact team receiving their Silver Award! From left to right: Katie Read, Jim Hopkins, Tomas Sherwen, Sina Hackenberg and Martyn Ward Not pictured: Jenny Hudson-Bell, Ruth Purvis and Jamie Minaeian.

Despite a busy year of field work they achieved a total of 272 points – an improvement on last year's bronze award and are already making progress towards achieving a better total next year when they will be going for gold!



Tabitha Petchey is receiving the Bronze Award on behalf of the Green Chemistry Green Impact team. Tabitha led the team this year with help from Andrea Munoz Garcia and Duncan Macquarrie. This is our third year, having started in 2013/14 and we achieved a total of 117 points. Quote from the team "Next year, we plan to address some of the impacts associated with the lab as this will provide some significant improvements."

New Arrivals

I am sure you will all be delighted to hear that Sarah Wilkie and Jacqui Hamilton & Andrew Rickard have had baby boys recently and all are doing well. We pass on our congratulations to Jacqui and Andrew, Sarah and Brett.

Ryan Jack Rickard arrived on 2nd June, weighing 6lb 3oz and Jenson Arlo Wilkie arrived on 15th June, weighing 7lb 14oz.



Sarah with Jenson Arlo Wilkie

Ryan Jack Rickard

YSBL Helps Flush Away Poverty by Twinning a Toilet

Members of YSBL have got together to support the <u>York Toilet Twinning</u> initiative (part of the wider <u>toilettwinning.org</u> campaign) by raising £60 to buy a loo in Burundi.



Inspired by the student team promoting York Toilet Twinning as part of Biology's Green Week, we realised that with a lab of ~60 people, it would only take a £1 donation from everyone to raise enough to twin a toilet. Each individual loo purchased will benefit a household. A block of toilets, for a school for example, costs £240, so either option is easily achievable and can make a big difference.

As the website explains, 2.4 billion people worldwide lack access to the basic sanitation facilities we all take for granted, and around the world approximately one third of schools lack access to safe water and adequate sanitation. While the World Health Organisation's global targets for improving access to drinking water (part of the Millennium development goals) were met, improvement of sanitation remains well short of its target across wide areas of the world. And obviously, the two are inextricably linked, as poor or no sanitation leads to water contamination, causing a range of diseases.

The York Toilet Twinning project aims to twin every toilet on campus with a latrine in the developing world. When you contribute enough to fund a twin, you get to choose the country you will support, and receive a certificate with a photo to go on the wall in the York loo.

So let's see if we can add more toilet twins to Latrine no. 1604 in Kinzanza, Burundi!

Green Chemistry Win Chemistry Football League



Congratulations to the Green Chemistry team who have won the Chemistry League for the first time in 10 years. A well deserved victory!

