



# EPSRC Centre for Doctoral Training in Sustainable Chemistry

University of Nottingham

**Newsletter**

**Issue 3  
March 2017**

Our Centre for Doctoral Training in Sustainable Chemistry has now recruited its third cohort of students. This Cohort is based in the new Carbon Neutral Laboratory (see below) for their first year, along with some members of Cohorts 1 and 2 who have also relocated to the CNL during the summer.

Although based in Chemistry, the CDT involves a number of partners: Chemistry, Engineering and Biosciences are actively involved in research projects and the Business School and Sociology & Social Policy are important partners in the training programme. All partners are represented in the CDT management structure, so please feel free to raise any issues with your representative.

## **The GSK Carbon Neutral Laboratories for Sustainable Chemistry - Official Opening 27 February 2017**

The new state-of-the-art GSK Carbon Neutral Laboratories building was officially opened by Sir Andrew Witty on 27 February 2017. The event was well attended by University of Nottingham staff, industrial and funding partners (such as GSK, HEFCE and the Wolfson Foundation), current students and alumni.

Following the speeches, the guests had the opportunity to participate in an interactive panel session on 'How Chemistry can take us to a sustainable future' involving contributions from Sir Andrew Witty (GSK), Professor Sir Martyn Poliakoff (University of Nottingham), Prof Dame Jessica Corner (University of Nottingham), Professor Paul Anastas (Yale University) and Dr Helen Sneddon (GSK).

### **CDT Partner School Representatives:**

#### **Chemistry:**

Chris Hayes, Steve Howdle

#### **Biosciences:**

Tim Foster, Ian Fisk

#### **Engineering:**

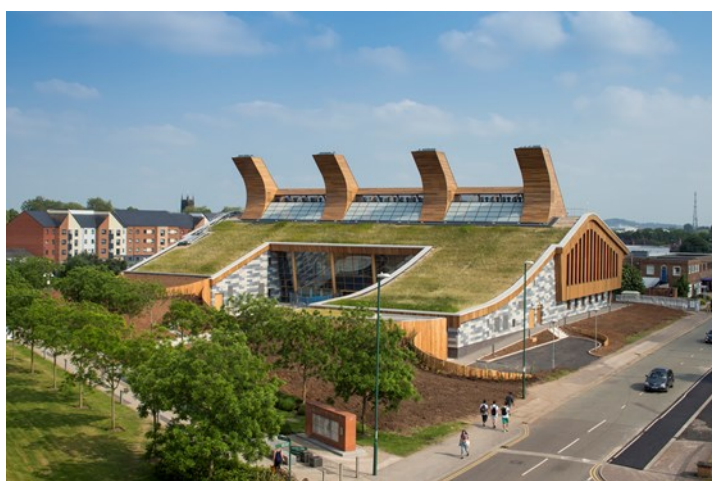
Sam Kingman, Victor Sans Sangorin

#### **Business School:**

Simon Mosey

#### **Sociology and Social Policy:**

Sujatha Raman



The GlaxoSmithKline Carbon Neutral Laboratory for Sustainable Chemistry officially opened by Sir Andrew Witty on 27 February 2017 and the home of the CDT.

## Welcome to Cohort 3



The Centre welcomed its third Cohort of Students at the Induction event, which took place on 29-30 September 2016 at the East Midlands Conference Centre. The students had the opportunity to meet academic staff from Chemistry, Biosciences and Chemical and Environmental Engineering as well as industrial partners and current students.



The first day focused on sustainability challenges with presentations from industrial partners including AstraZeneca, Bruker, Croda, GSK, Sygnature Discovery, Synthomer and UCB Celltech. In addition the students learnt about sustainability at the University of Nottingham from Andy Nolan, Director of Sustainability. On the second day the students were joined by academics from the Schools of Chemistry and Biosciences and the Faculty of Engineering who showcased their research and discussed the research opportunities in their respective groups.



### Industrial involvement

The Centre welcomes different forms of industrial involvement and these include facilitating student placements, visits to company sites, provision of training or direct financial support for a specific project. If you wish to be involved in any of the above activities, please contact Peri Williams at [perislava.williams@nottingham.ac.uk](mailto:perislava.williams@nottingham.ac.uk).



# Research Showcase

The Centre held its first Industrial Showcase in September 2016. The audience of approximately 70 industrial partners, academics and students had the opportunity to hear about the research taking place within the Centre, with Cohort 1 students presenting talks and Cohort 2 students presenting posters.



Winners of best talks and posters as voted by the audience. From left to right: Grace Lowe and Tim Douglas (best talks) and Jonathan Hunter and Meike Leu (best posters)



## CDT/CNL Symposium

**7 December 2016**

Our Centre and GSK Centre for Sustainable Chemistry held its first joint symposium in December 2016. The symposium attracted an audience of over 80 from the School of Chemistry and the Department of Chemical Engineering. The speakers were Prof Gill Stephens (University of Nottingham), Dr Antione Buchard (University of Bath) and Prof Mike North (University of York). The talks were followed by a poster session and networking.

## Visit to Bruker

**24 November 2014, Coventry**

The CDT in Sustainable Chemistry facilitated a visit to Bruker premises in Coventry for a group of CDT and School of Chemistry PhD students. The vast majority of participating students found the visit interesting and beneficial in terms of their research and professional development.

## Visit to The Eastcroft Energy from Waste Centre

**21 October 2016**

A group of PhD students from the CDT in Sustainable Chemistry and Synthetic Biology Research Centre DTProg visited Eastcroft Centre. The visit involved a presentation by FFC Environment, the company that operates the facility, and a tour with plenty of opportunity to ask questions and find out about the centre.



Students on a visit to The Eastcroft Energy from Waste Centre

# Outreach

## PubhD

**18 August 2016, Nottingham**

Cohort 2 student Jonathan Hunter presented his research to the general public at the PubhD event at the Cat and Fiddle Pub in Nottingham.

Further information about PubhD can be found on:  
<https://pubhd.wordpress.com/>

## FameLab

**2 & 20 February 2017**

Jonathan Hunter participated in the FameLab Competition, an international event involving scientists, mathematicians and engineers who are invited to give short presentations conveying a scientific topic of their choice. Jonathan's presentation title "Pull up a stool for a scatological tale" enabled him to progress to a regional final taking place on 20th February in Manchester.

## Engineering Christmas Lecture

**19 December 2016, Engineering and Science Learning Centre**

CDT students took part in the Engineering Christmas Lecture, an annual event hosted by the Faculty of Engineering and aimed at gifted and talented secondary school students. The event aims to showcase technological advances from a range of subjects and brings to life maths and science via interactive experiments. This year's event was the busiest so far, with over 360 school children, as well as a number of alumni guests in attendance. Vera Salgado, Jennifer Okoye, Jack Jordan and Rhona Savin of Cohort 3 were representing the CDT in Sustainable Chemistry with a stand full of exciting activities such as the dry ice in water experiment. This event was so successful that it was mentioned on the "Steve Wright in the afternoon" show on Radio 2.

## Gravity Fields Festival

**24 September, Grantham**

Cohort 2 student Teresa Ambrosio participated in the third Gravity Fields Festival which took place in September 2016 in Grantham. The festival involves events that explore physical sciences through science, art and heritage events and celebrates the area's close links to Sir Isaac Newton. Teresa was one of the demonstrators on the RSC stand.



CDT students participating in First LEGO League Midlands Final

## FIRST LEGO League Midlands Final

**6 January 2017**

Cohort 3 students also participated in this event involving children from four primary and secondary schools in the region, who competed in a series of heats. The challenge this year was Animal Allies and it focused on the interaction between humans and animals. There were a number of missions for the teams to complete using their custom built and programmed robots. After having to repeat the final due to an initial draw, George Spencer Academy won the nail-biting finale to win a place in the UK Lego League final to be held later this year. The event also featured exhibitions from Nottingham researchers on the day that were enjoyed by all.

## **Student Internship**

### **Laura Finney—The Conversation**

Cohort 1 student Laura Finney is currently completing her 10-weeks placement at the Conversation, a non-profit news and analysis website based in London. The Conversation publishes articles on current issues and research developments written by the academics from universities across the world. Laura has found her placement within the organisation extremely valuable, and as well as having some of her of her editorial work republished in many other media outlets, she has also become an author for the Conversation and has published an article on the chemistry of explosives.

<https://theconversation.com/five-of-the-most-explosive-non-nuclear-chemicals-ever-made-72702>

### **Future outreach events:**

Sustainable Chemistry Masterclass - 1&8 March 2017  
Science in the Park - 8 March 2017  
Wonder 2017 - 17 June 2017

## **Festival of Science and Curiosity**

**9-15 February 2017**

Mariana Gameiro and Tatiana Dias participated in this year's Festival of Science and Curiosity which took place in Nottingham. The festival is a week-long annual event which brings Science, Technology, Engineering and Maths to the public in Nottingham.

### **Research Twinning Programme - Visit to Joseph Whittaker Academy**

Starting in December last year Cohort 1 student Grace Lowe has been visiting her old School, the Joseph Whitaker Academy in Rainworth, as part of the Research Twinning Programme. The programme involves six visits to a year eight class, in which Grace has been teaching the students about batteries and will conclude with the students designing research posters to describe what they have learnt. In the past, winning posters have been taken to conferences to display with the PhD student's own poster.

## **Training**

### **Young Enterprise Scheme (YES)**

**October 2016**

The Centre was represented by two teams of five students in each competition: Environment YES and Biotechnology YES. The teams were cross-disciplinary and included students from both the first and second Cohort. The competition enable the students to gain an insight into life as an early stage start up team through 3 days of experiential learning, interacting with science based entrepreneurs, intellectual property lawyers, venture capital, investors and accountants.

### **Future training events**

Belbin team roles 27 - April & 1 June 2017  
How to shine in interviews -11 May 2017  
Managing research relationships -12 May 2017  
Using Video to present research -3 July 2017  
Communicating your science in Writing -4 July 2014

During the academic year 2016-17, in addition to the usual scheduled lectures and set training courses, CDT has facilitated a number of professional skills workshops and training courses, delivered by the Centre's external partners. These include the following:

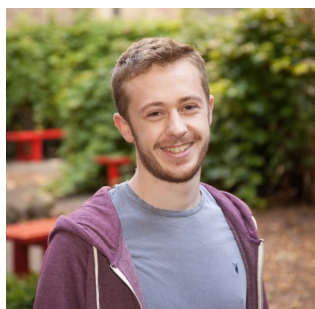
Industrial Challenge workshops - AstraZeneca, Croda, GSK, Unilever and Sygnature Discovery  
Britest Tools Workshop - Britest  
Interview Skills and CV Clinic -Helen Sneddon, GSK

The Art of Being Brilliant - Art of Brilliance

In addition, the Centre organised a team building event which brought together all students. The event involved a series of competitive challenges requiring creativity team work skills.



# Publications and poster presentations



Congratulations to CDT Cohort 1 student **Megan Thomsett** on publication of her first paper 'Progress in the synthesis of sustainable polymers from terpenes and terpenoids' in *Green Materials* and Cohort 2 student **Alex Kibler** on publication of 'Redox-active organic-inorganic hybrid polyoxometalate micelles' in the *Journal of Materials Chemistry*.

For more details please see:  
<http://suschem-nottingham-cdt.ac.uk/index.php/publications>

## CDT students poster presentations

Meike Leu-6th EuCheMS Chemistry Congress, Seville, Spain, 11-15 September 2016

Meike Leu and Jonathan Hunter- A Sustainable Future Through New Materials for Energy, Nottingham, 10 January 2017

Jonathan Hunter, 6th International IUPAC Conference on Green Chemistry Venice, Italy, 4-9 September 2016

All Cohort 2 students- CDT Industrial Showcase 28 September 2016

Cohort 1 & 2 students-CDT/CNL Symposium, 7 December 2016, Jubilee Campus

## Future events

**CDT/CNL Symposium - 22 March 2017**  
(School of Chemistry, University of Nottingham)

**Dragons' Den -10-11 April 2017**  
(Breadsall Priory Hotel, Derby)

**Visit to Croda -22 May 2017**

**Visit to Promethean Particles - 13 June 2017**

**Visit to GSK - 21 July 2017**

**Engineering and Science for a Sustainable Future Joint student-led conference - 26-27 July 2017**  
(University of Nottingham)

**Industrial Showcase - 27 September 2017**  
(Jubilee Conference Centre)

**Cohort 4 Induction - 28-29 September 2017**  
(Jubilee Conference Centre)



I hope that you have enjoyed reading our third newsletter.

*Chris Moody*

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