



## Who Are We?

C1net is a BBSRC NIBB dedicated to the development and scalable production of C1 gas fermentation for the whole IB community. C1net provides a cross-sector forum with the goals to foster and enhance collaboration between industry and academia; develop skills and expertise; share best practice; define common research priorities; and target funding opportunities in C1 gas fermentation. The management board is currently 12 strong, with Professor Nigel Minton (University of Nottingham) as PI and Professor Davis Fell (Oxford Brookes) as Col.



## Progress

Membership currently stands at 442 with members from Europe, India, USA, Russia and Brazil and 395 followers on Twitter. All 12 POC awards of £50,000 have now been made, but we still have some BIVs...

## BIV Awards 2017

Congratulations and a £10K BIV voucher go to:

Jon McKechnie (Nottingham) and Stephen Poulson (Johnson Matthey) – “Cost Implications of Syngas CO2 content for Fermentation Process”

Rodrigo Ledesma-Amaro (Imperial College London) and Adriana Botes (Viderabio) – “Towards engineering C1 substrate utilisation in industrial yeasts”



**TIME IS RUNNING OUT, APPLY NOW:**

**FINAL BIV CALL CLOSES 31 MAY 2018**

APPLY HERE - <http://www.c1net.co.uk/Funding.html>

BBSRC NIBB Business Interaction Vouchers (£10K) will be used to encourage and support collaboration between academic partners and industrial partners within the C1NET framework. They will be awarded to undertake a defined piece of work by the academic partner for the industrial partner.



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[www.c1net.co.uk](http://www.c1net.co.uk)

## CALENDER (C1net Other)

8 – 10 January 2018

Energy Systems Study Group with Industry  
Manchester Conference Centre, Brighton  
[Read More](#)

15 - 19 January 2018

Metabolic Modelling Workshop 4, Park Inn,  
Nottingham  
[Read more](#)

25 January 2018

Beyond the business as usual: Innovate UK in  
the South West, Exeter  
[Read more](#)

25 - 26 January 2018

IBiolC18 – The 4th Annual Conference, Glasgow  
(Sponsored by C1net)  
[Read more](#)

2 February 2018

Sustainable Aviation Fuel: First Friday Research  
Highlights – Webinar (Innovate UK)  
[Read more](#)

8 February 2018

North West Innovation (KTN) – Unlock Your  
Business Growth and Productivity, Daresbury  
[Read more](#)

27 February 2018

Industry 4.0 – Innovation support event run by  
Innovate UK (KTN), Ipswich [Read more](#)

27 March 2018

Innovation South Showcase - event run by  
Innovate UK (KTN), Farnborough  
[Read more](#)

18 – 19 July 2018

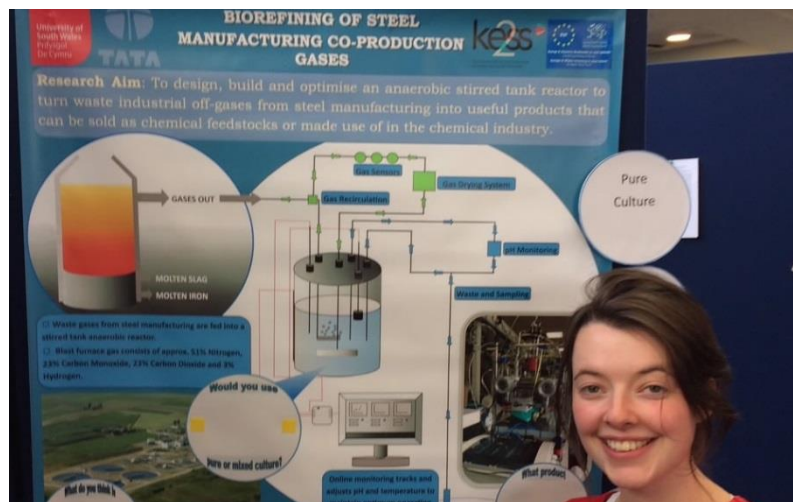
'Beyond the lab: developing your Industrial  
Biotechnology Career', University of York –  
Derwent College. Hendrix Hall  
More details to follow

20-23 September 2018

New Scientist Live, ExCeL Centre, London  
[Read more](#)

21-23 January 2019

C1net Final Conference, East Midlands  
Conference Centre, Nottingham  
More details to follow



Rhiannon Chalmers-Brown (South Wales) and her prize winning poster

## C1net Conference 3, Nottingham, 5-7 November 2017

While the UK households stoked up their bonfires polluting the atmosphere, gas fermentation scientists descended on Nottingham to further a technology to help address carbon emissions as November 5<sup>th</sup> marked the start of a 2 day conference on “Gas Fermentation”. Hosted by The University of Nottingham’s based BBSRC-NIBB “C1net” and organised by network manager Jacque Minton, the event was held at the East Midlands Conference Centre, Nottingham.

**“Great event. Nice giveaways. Nice introduction of awards of talks and posters. Great calibre of session hosts and speakers”**

Formally starting with a Welcome dinner at the Orchard Hotel, there followed 2 days packed with talks, pitches and posters. With the aim of bringing together academic and industrial scientists to commercially exploit C1 gas organisms as platforms for chemical manufacture, the conference attracted 111 attendees, 21 of whom came from industry. Delegates were mainly from the UK, with 21 from Europe and 2 from the USA. A total of 24 talks were presented, 5 of which were invited, the rest were selected from abstracts, or were Proof of Concept (POC) reports. Eminent scientist Rolf Thauer opened proceedings as chairman and there followed high calibre key note presentations from: Volker Müller (Goethe-University, Frankfurt), Linsey Garcia-Gonzalez (VITO NV), Sean Simpson (LanzaTech, USA), Christopher Brigham (University of Massachusetts, Dartmouth, USA), Guido Saracco (Istituto Italiano di Tecnologia, Italy) and Alexander Steinbüchel (University of Münster, Germany). Amid this star cast 6 PhD students also gained valuable oral presenting experience with Vera Salgado (Nottingham) and Rupert Norman (Nottingham) carrying away glittering prizes of novelty mugs. Additionally, 6 pitches were made in a fast-fired session to find partners for collaborative bids. A total of 36 posters were presented with a staggering 21 from PhD students with prizes for the best posters going to Anja Wiechmann (Frankfurt) and Rhiannon Chalmers-Brown (South Wales). Outreach was also on display thanks to Louise Dynes who showcased the new C1net stand which was premiered at the “New Scientist Liv”e exhibition earlier this year.



## **New Scientist Live!** **Excel Centre, 29 September -1 October 2017** by C1net member Pippa Strong

New Scientist Live! was a major science outreach event at the Excel centre in London, which showcased a wide range of UK science innovations, with examples ranging from astronomy to microbiology. There was everything from VIP speakers such as Tim Peake to hands on demos, for example VR headsets that allowed you to experience the reality of a dementia patient.

I was lucky enough to be on the organising committee of this outreach event for the SBRC Nottingham, which was funded by C1 net and SBRC Nottingham. Louise Dynes, Jacque Minton, Shelly Kelly, Alan Burbidge and myself worked together to develop a fun and interactive stand, which would highlight the great research we do here at the SBRC Nottingham. We designed a storyboard showing the various stages involved to go from concept to finished product and to help explain the science to everyone. We even had our own mascot Woody the Woodii, who helped walk people through each of the different steps. We started with an interactive computer model of a biochemical pathway, developed by Nicole Percy and Rupert Norman, which allowed people to decide how they would alter a pathway to produce the required end product. Next was a Don Whitley anaerobic cabinet that people could try, to give them an idea of what working in these cabinets was really like (especially as it was set to 37°C!). With kids queuing up for this exhibit on the weekend, it was certainly a major draw to the stand. Then there was a microscope showing what these bacteria actually look like, followed by a mini bioreactor to help explain how this process could be scaled up. Finally we had some examples of potential products, such as a model tyre and fuel tank, to demonstrate where the C1 compounds could end up after the bacteria had converted them into useful chemicals.

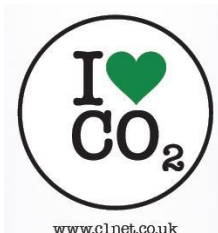


### **“Woodii makes the world go round”**

Woody the woodii drawings by Penny Strong

At the event itself we were helped by many wonderful volunteers, who all demonstrated their enthusiasm and passion for science in their conversations, convincing possible sceptics about the benefits of our research. With over 30,000 visitors attending over the 4 day event, there was certainly plenty of opportunity to reach lots of people. We had interest from a diverse range of backgrounds including; current scientists, potential future Nottingham students, children who we helped inspire with future possibilities and even artists and the media, who could help spread our research message even further. Overall I feel this was a great opportunity to highlight the wonderful cutting edge research of the SBRC and to educate and inform the general public.

**“Great stand! Good luck with your research!”**



## From Trash to Tank: Upcycling of Landfill to Fuel Demonstrated in Japan

SEKISUI CHEMICAL CO., LTD. ("SEKISUI"), the multibillion dollar Japanese diversified chemicals company and carbon recycling company, LanzaTech, have made significant progress on a waste to chemicals platform converting municipal solidwaste (MSW) to new products.

The technology that Sekisui and LanzaTech have developed and deployed in Japan at an existing incineration site, demonstrates the potential to upcycle the carbon in the trash to ethanol which can be used directly as a fuel or further converted to plastics, rubber and fibers. In this way, all the carbon in our trash can be recycled (and then recycled again and again). This is the future! A carbon smart circular economy!



[MORE HERE](#)



## FUNDING OPPORTUNITIES

SMEs in Europe can access services up to a value of:

€ 100,000 (with a SME cofunding share in cash of max. 50% from the SME) via BioBase4SME (Interreg funded)

[MORE](#) DETAILS

€ 60,000 (with a SME cofunding share in cash of max. 25% from the SME) via SuperBIO (H2020 funded)

[MORE](#) DETAILS



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