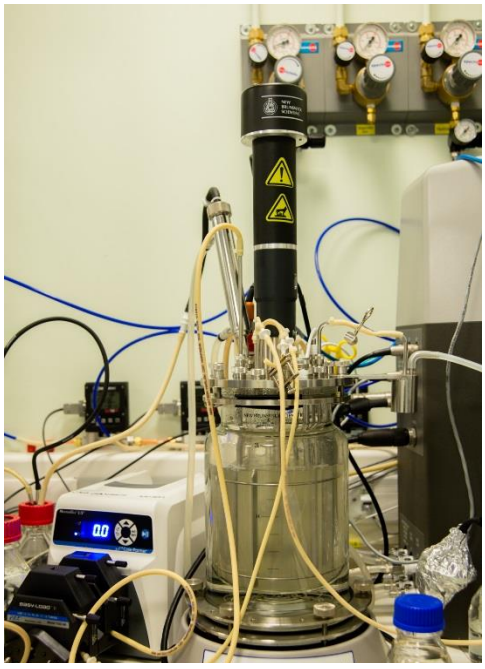
C1net Newsletter

October 2016

Issue 10

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 CoI.
.



Progress

Membership currently stands at 322 with members from Europe, India, USA, Russia and Brazil and 289 followers on Twitter.
A total of 8 POC awards of £50,000 have now been made.

2016 POC CALL NOW CLOSED

The C1net 2016 POC call "Gas-to-value: fermentation-based conversion processes" closed on 14 September 2016 and the projects are now under assessment for funding. We hope to be able to announce the successful projects early November.

BIV CALL OPEN – £10K

Business Interaction Vouchers (£10K) are still available and will be used to encourage and support collaboration between academic and industrial partners within the C1net framework.
APPLY HERE - http://www.c1net.co.uk/Funding.html

GAS FERMENTATION REPORT

In July C1net released the report which it commissioned from eminent company E4Tech. "The commercial and strategic opportunity offered by gas fermentation in the UK"
DOWNLOAD REPORT

NEXT METABOLIC MODELLING WORKSHOP
SAVE THIS DATE 23-27 January 2017

This will be held in Nottingham led by David Fell and his team.
More details to follow shortly by email.

Jacque Minton Network Manager
Centre for Biomolecular Sciences
University of Nottingham
University Park,
Nottingham, NG7 2RD
www.c1net.co.uk

News and Events

October 2016

Issue 10

CALENDER (C1net Other)

4-6 October 2016
Synbiobeta, San Francisco
http://synbiobeta.com/conferences/san-francisco-2016

11 October 2016
The 2016 SfAM Early Career Scientists Research Conference, London
https://member.sfam.org.uk/SfAM/Events

18 October 2016
Biowaste to Value: How can policy makers help? Preconference practical workshop, SECC, Glasgow
http://www.efibforum.com/pricing/ticket-prices

18-20 October 2016
The European Forum for Industrial Biotechnology and the Bioeconomy
SECC, Glasgow http://www.efibforum.com/

19-20 October 2016
7th CO2 Utilisation Summit 2016. Lyon, France
http://www.wplgroup.com/aci/event/co2/

2-3 November 2016
Innovate 2016, Manchester
https://www.events.ukti.gov.uk/innovate-uk-2016/

10-11 November 2016
Gas Fermentation Workshop, Vienna, Austria
http://clostridia.boku.ac.at/wordpress/

14-16 November 2016
Synthetic Biology UK 2016, Edinburgh
https://www.biochemistry.org/Events/tabid/379/View/Conference/Page/1/MeetingNo/SA186/Default.aspx

8-9 December 2016
CBMNet Event: Social and Political Challenges for the Bioeconomy, Sheffield
http://cbmnetnibb.group.shef.ac.uk/event/cbmnet-event-social-and-political-challenges-for-the-bioeconomy/

23-27 January 2017
Metabolic Modelling Workshop 3. Details soon.

15-16 February 2017
Biobased World, Cologne, Germany
http://www.biobasedworld.de/en/home.html

22–24 March 2017
Directing Biosynthesis V, Warwick
http://www.rsc.org/events/detail/22912/

C1net CoI David Fell keeps in the loop at the Welcome BBQ

C1net Conference 2 – Chemicals from C1 Gas UNotts, 24-26 July 2016

This summer's heat wave lasted just long enough to allow a jaded sun to shine upon the C1net conference on "C1 gas fermentation". The event was held at the East Midlands Conference Centre, University Park, Nottingham, giving visiting delegates the opportunity to visit the SBRC research laboratories as well as enabling a large number of Nottingham students to attend a high calibre international conference.
Formally starting with a Welcome BBQ at the Orchard Hotel, there followed 2 days packed with talks, pitches and posters.

With the aim of bringing together academic and industrial scientists, the conference attracted 108 attendees, 24 of whom came from industry. Delegates were mainly from the UK, with 12 from Europe and 2 from the USA. A total of 29 talks were presented, 10 of which were invited; the rest were selected from abstracts, or were Proof of Concept (POC) reports. Eminent veteran scientist Rolf Thauer topped the bill with his key note talk "How Acetogens Form Ethanol when Growing on Syngas", but space was also made in the programme for 4 PhD students to gain valuable oral presenting experience. Additionally, 13 pitches were made in a fast-fired session to find partners for the four POC funds of £50,000 on offer. 17 posters were presented along with an Outreach display by Outreach Officer Louise Dynes, showcasing the new C1net board game "Game of Fuels" for use in schools.

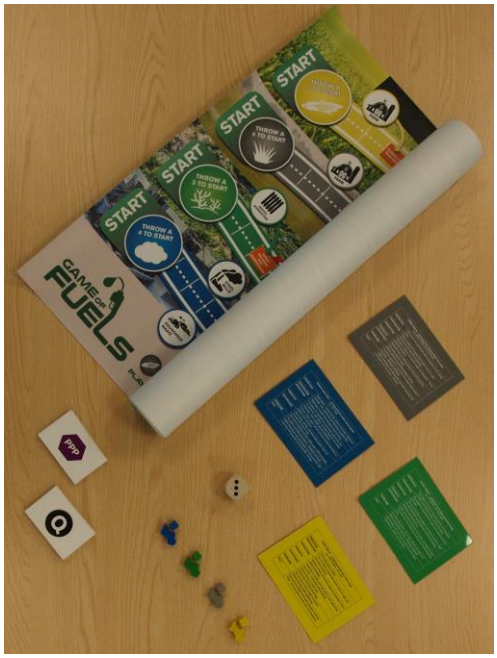
Delegates gave good feedback for the conference. They appreciated the high calibre of invited speakers, the mix of academia and industry, the PhD student presentations, and the ample opportunity to network. Many new relationships were forged which we are hopeful will initiate new collaborations.

"I honestly thought it was one of the best programmes of any meeting I have been to".

News and Events

October 2016

Issue 10



Game of Fuels Launch at IU Graduation Nottingham, 12 July 2016

The University of Nottingham's Widening Participation team, run a Family Learning Programme with the Educational Charity "Into University" (IU) http://intouniversity.org/ to provide after school academic support to underprivileged pupils. This year's programme culminated with a graduation event at the University of Nottingham and provided an opportunity for C1net to launch the new "Game of Fuels".

"Game of Fuels" is the brain child of C1net members Louise Dynes and Jacque Minton and is an interactive board game targeted at secondary school pupils, years 7 & 8. The game aims to help educate pupils about renewable energy particularly "advanced fuels" and the techniques and challenges involved in developing them. The players proceed through the necessary steps and required technologies for a sustainable bioenergy production. The game concludes when one of the players has developed their entire bio-industrial line production and has made their final product.

The event drew a total of 130 visitors: primary children, their parents and carers from 3 underprivileged Nottingham communities. We ran the game twice, with two sets of 8 children. Each session took about 30 minutes. Although the game was enjoyed by all, we felt that it was a bit too advanced for the age group. Indeed it was not intended for such a young audience but we were very keen to pilot it, and learned a lot about how we should use it in the future.

Sampling at Bio Dynamic, 18 August 2016

by C1net member, Nathan Dixon
Research technician, University of Nottingham

Our endeavour to isolate novel methanotrophs has lead us to many interesting places in search of potential strains. Recently, such a location was Bio Dynamic's anaerobic digesters.
Bio Dynamic is a Nottingham based company specialising in anaerobic digestion of food waste materials for the end purpose of green energy generation. The aim of this company is a "zero to landfill" approach to waste management. The site in Colwick currently converts 50,000 cubic tons of food waste, from the hospitality industry and food processing plants, per year. This food waste would normally be placed in to landfill sites; generating the greenhouse gas Methane. The methane produced by the digestion of these waste materials is used to power generators that supply approximately 4 M/wh to the national grid.
Our hope is that novel methanotrophic strains may be found in the high methane environment of the anaerobic digesters. To this end a samples of the digestate were obtained to undergo enrichment and isolation protocols.

BioDynamic

http://www.biodynamicuk.com/

The Last Word

October 2016

Issue 10

LanzaTech Produces Jet Fuel from Waste Gases for Virgin Atlantic

Lanzatech Jet Fuel "Lanzanol" was produced in China at the Shougang demonstration facility. The innovative alcohol-to-jet (AtJ) process was developed in collaboration with Pacific Northwest National Lab (PNNL) with support from the US Department of Energy (DOE) and the help of funding from HSBC.

LanzaTech and Virgin Atlantic are now set to continue to work with Boeing and assuming all approvals are achieved, Lanzanol jet fuel could be used in a first of its kind proving flight in 2017.

Sir Richard Branson said: "This is a real game changer for aviation and could significantly reduce the industry's reliance on oil within our lifetime. Virgin Atlantic was the first commercial airline to test a bio-fuel flight and continues to be a leader in sustainable aviation."

FULL PRESS RELEASE

C1net gas fermentation

Jacque Minton Network Manager
Centre for Biomolecular Sciences
University of Nottingham
University Park,
Nottingham, NG7 2RD
www.c1net.co.uk

@C1Net_NIBB

Superbio

New €3.8 million SuperBIO project to support industrial innovation within the EU bioeconomy

SuperBIO is an innovation project supported through the EU Horizon2020 funding programme. The € 3.8 million project supports the development of promising industrial value chains in the bioeconomy. It therefore engages with the EU bio-based business community. The project provides 10 different types of innovation services to third party SMEs which are funded by the project for 75%. As such, it brings these value chains closer to reality. The SuperBIO consortium includes four industrial cluster organisations (from Belgium, France, Spain and Poland), and six service providers (from the UK, Germany and Belgium).

FULL PRESS RELEASE

More details: l.pfaltzgraff@nnfcc.co.uk