



NEWSLETTER

November 2022

Who We Are

The Carbon Recycling Network is one of six Phase II BBSRC Networks in Industrial Biotechnology and Biotechnology and Bioenergy (NIBB). The NIBB promotes aspects of carbon recycling which support the re-use and exploitation of single carbon (C1) greenhouse gases: CO, CO₂ and CH₄. The focus is on gas fermentation, primarily using chemoautotrophs, and also seeks to explore the potential of anaerobic digestion (AD) as a gas fermentation feedstock generator.

The Carbon Recycling Network 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 this area. The management board has 13 members. Professor Nigel Minton (University of Nottingham) is the PI for the BBSRC award and is supported by five CoIs.

Progress

The membership continues to grow and the NIBB's total now stands at 753 with 148 members from industry. There are currently 119 European members, plus a further 58 International members primarily from: USA, India, Brazil & S Korea. We have 757 followers on Twitter.

Over the past year we have:

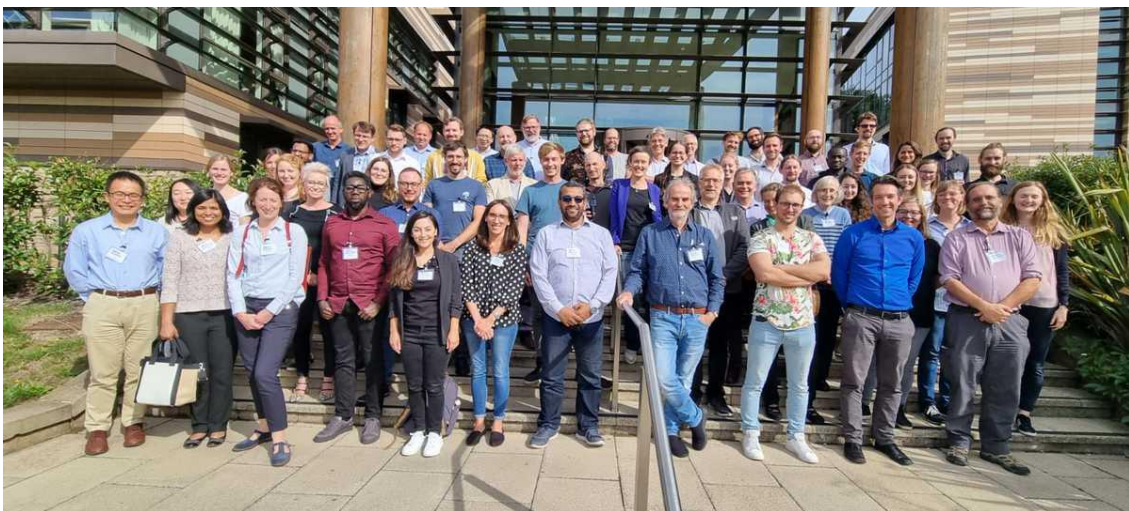
- delivered an online RRI workshop,
- delivered an international face-to-face conference (September 2022),
- completed 2 industry exhibitions and 3 outreach activities,
- completed a Proof of Concept funding round,
- ongoing support for Business Interaction Vouchers.

Carbon Recycling Annual Conference

Back in September 2022, we had our annual conference which was held at The East Midlands Conference Centre in Nottingham.

A total of 89 scientists working in the field registered for the third in the series of the Carbon Recycling NIBB's conferences. Presentations spanned academia and industry, included basic science to scale-up, from established research leaders to early career researchers.

It included topics as diverse as single-cell protein production, electrochemistry and computational modelling using diverse chassis including aerobic bacteria, anaerobes, Cyanobacteria and mixed communities. Feedback received confirmed that the conference was informative, valued and enjoyable indicating that the Carbon Recycling community is vibrant and relevant.



Attendees at The Carbon Recycling Network Conference

Recent Funding Awards and Calls

PoC Awards 2022 Joint Call: The Carbon Recycling Network and BBNet

“NO CARBON LOST: Eliminating CO₂ Production from Biomass-based Fermentation Processes”

Two of the BBSRC NIBBs: the Carbon Recycling Network and the Biomass Biorefinery Network (BBNet) came together to fund proof of concept projects whose aims fell within the scope of: improving the conversion of biomass to fermentable carbon (sugar) underpinned by the design, building and testing of innovative organisms (monocultures & synthetic communities) and bio-processes that can maximise the conversion of this sustainable carbon to chemical commodities without CO₂ release. The call closed on 28 July 2022. Proposals were reviewed by an academic panel in September. Awards of approximately £50K go to each of:

- Katalin Kovacs - University of Nottingham
- Matthew Reilly - University of York

Our congratulations go to them.

The next PoC call is scheduled for Spring 2023.

Carbon Recycling Funding: Business Interaction Vouchers (BIVs)

There is **NOW UP TO £20K** available per BIV. There is an open call for BIVs which are reviewed on an ad hoc basis. Please visit <https://carbonrecycling.net/funding-opportunity/> for further details.

Biomass Policy Engagement Update

By Joanna Sparks

The Carbon Recycling Network's policy engagement is led by Dr Joanna Sparks, who is the Policy Fellow for the network and for the Biomass Biorefinery Network, the Supergen Bioenergy Hub, and the High Value Biorenewables Network. Joanna's

role is to act as a connection between our research communities and policy makers working in the area.

Following a stakeholder workshop in the summer, we will soon be publishing a policy briefing on biological CO₂ utilisation. Alongside this we hope to publish some blogs by ECRs on policy relevant topics.

If you would like to get involved in any of this work or if you just have a question, please contact Joanna on j.sparks@aston.ac.uk.

Metabolic Modelling Workshop

Mark Poolman

In May of this year members of the Carbon Recycling Network hosted a training workshop to introduce participants to the basic theoretical and practical principles underlying metabolic network modelling and analysis. Participants came from a wide spectrum of industrial and academic backgrounds and spectrum of experience ranging from post-graduate students to Professors. There was an equally wide range of specialist interests with some participants having no prior experience of computational biology, to those from computing and engineering fields with very little prior knowledge of biochemistry and metabolism.



As far as the training team were concerned, this represents an ideal mixture, and practical work was conducted in groups which were specifically chosen to include a wide a range of interests as possible. Approximately half the timetable was given over to formal talks introducing concepts and their real-world applications, and the remainder given over hands-on practical work. Practical tasks were devised to

illustrate questions arising from the problem of redirecting metabolism towards generating novel products or utilising novel substrates, for example: What impact does a new pathway have on energy and redox metabolism? Should some parts metabolism network be blocked to ensure more efficient routes to the product?

All delegates enjoyed themselves, not least because the course was held in a historic hotel situated in the centre of Nottingham's well known and vibrant Lace Quarter. An area with many pubs and night clubs, facilitating the all important but informal social networking opportunities that workshops such as this provide.



Changes to NIBB Management

If you attended the Carbon Recycling Conference in early September you will have heard that Louise Dynes, the network manager who had been in post from the start of Carbon Recycling's journey, has moved on to a new role. Nigel Minton and the NIBB's management team expressed their grateful thanks to Louise for managing and developing the network so well over the past three years.

The task of managing the network now falls to a team of two:

- Dr Alan Burbidge; the Centre Manager of the SBRC-Nottingham takes on the role of network manager, and
- Ms Loretta Waddon becomes the network coordinator.

That means new faces and a change of contact details:



[Dr Alan Burbidge](#)



[Ms Loretta Waddon](#)

But you can also contact the network through the general emails:

carbonrecycling@nottingham.ac.uk or ccnet@nottingham.ac.uk

Alan has been in post as the SBRC Centre Manager since 2014. Prior to that he has been involved in university technology transfer and his background is in plant molecular genetics.

Loretta has been with the SBRC as the Director's PA since 2016. Her career with the University of Nottingham began in 2003 with The School of Pharmacy. She holds a BSc degree in Information Technology with a background in web design and programming.

UK Government, Net Zero Review: Call for Evidence

The BEIS Secretary of State has commissioned an independent review of the government's approach to delivering its net zero target. As part of this they are running a call for evidence, to provide an open channel to the general public to give their views on the transition, in particular giving a voice to the public and small and medium enterprises (SMEs). The call for evidence has questions specifically aimed at businesses, academics, and individual members of the public and we would encourage network members to respond.

The link is here: [Net Zero Review: Call for evidence](#)

Industrial Biotechnology Funding Round-Up

UKRI Funding Opportunities can be accessed here: <https://www.ukri.org/opportunity/>

Of particular interest:

[Pre-announcement: Green Transition Ecosystems](#) - Closing Date: 6 April 2023

Apply for funding to conduct research to address distinct challenges posed by the climate crisis, including but not limited to realising net zero goals.

[Net zero living: pioneer places](#) - Closing Date: 30 Nov 2022

UK registered businesses and local authorities can apply for a share of up to £2 million to plan for a place based demonstration of ways to accelerate progress towards net zero.

[Pre-announcement: ESRC centres](#) - Closing Date: TBC

Apply for funding to establish an ESRC centre. ESRC centres are world-leading centres of excellence that carry out interdisciplinary, cutting-edge and impactful research in the social sciences and beyond.

[Circular economy for SMEs: innovating with NICER, round 2](#) - Closing Date: 7 Dec 2022

UK registered businesses can apply for a share of up to £1.5 million to research, test and develop step-change circular economy approaches. This funding forms part of the UK Research and Innovation National Interdisciplinary Circular Economy Research programme (NICER).

[Pre-announcement: purchase mid-range equipment for biosciences research:](#)

[ALERT 2022 - Closing Date: 15 Dec 2022](#)

Apply for funding for mid-range equipment for research across BBSRC's scientific areas. This is the latest round of ALERT funding. You must be a researcher or a research technical professional from an eligible UK research organisation to apply for funding.

[Industrial Biotechnology: Opportunites - Knowledge Transfer Network](#)

KTN's IB team have compiled a list of the latest funding calls of relevance to Industrial Biotechnology: Opportunities - Knowledge Transfer Network - KTN (ktn-uk.org).

- [Reimagining Manufacturing and Materials - Critical for a Net Zero Future](#) - joint competition briefing on **29 Nov 2022**.

[IBioIC Funding Opportunities:](#)

IBioIC - A networking and support organisation that connects industry, academia and government.

[Spin-Out Support Programme:](#)

Facilities Access Fund - SMART: SCOTLAND grant for SMEs - Scottish Enterprise (scottish-enterprise.com).

[Royal Society Entrepreneur in Residence](#)

The Royal Society Entrepreneur in Residence (EiR) scheme aims to increase the knowledge and awareness in UK universities of cutting edge industrial science, research and innovation.

Possible future source of funding:

[Advanced Research and Invention Agency \(ARIA\): policy statement](#)

The NIBB Communities

[Algae-UK](#)

Exploiting the algal treasure trove Algae-UK

[BBNet](#)

Biomass Biorefinery Network BBNet: Biomass Biorefinery Network

- Open Call for BIVs
- [2nd BBNet Conference:](#)
"Green Futures" What's next for biorefineries? Re-imagining carbon sources for the 21st century. The role of biorefineries.
22-24 March 2023, Crowne Plaza Harrogate, Kings Road, Harrogate, HG1 1XX, United Kingdom.

[E3B](#)

- [Proof of Concept awards](#)
- [Early career researcher conference travel fund](#)
- [Early career researcher fellowship planning visit fund](#)
- [Collaboration-building workshop fund](#)

[EBNet](#)

EBNet (Environmental Biotechnology Network). Various funding schemes from time to time.

[HVB](#)

HVB (High Value Biorenewables Network)

- [HVB Training Workshop: Communicating for Impact](#)
- This workshop is to help participants to think strategically about what they say and how they say it with the aim of creating effective communications with different audiences and assisting career development.

Training Courses

[National Horizons Centre](#)

At the National Horizons Centre, we offer a range of courses for continuing professional development (CPD) in biosciences, informed by the latest research and delivered by academic experts in a world-class research environment. All of our courses are delivered from the NHC's state-of-the-art facilities. We provide theoretical knowledge and hands-on experience with cutting-edge technologies, helping to create an industry-ready workforce. We are a National Training Centre for Advanced Therapies and have specialist expertise in providing the technical skills required for biopharma and vaccine manufacturing.

Job Vacancies

[NNFCC](#)

Open position at NNFCC - no deadline for applications.

“NCFCC is seeking high quality candidates for the post of Research Analyst, Senior Research Analyst or Consultant; employment will be for an initial period of 12 months with potential for extension.

The posts suite recent graduate with either first or post graduate degrees looking to apply their analytical; logic and investigative skills to support strategic analysis and problem-solving assignments to address industry needs in the renewable materials and circular economy sector.”

Full details available at: <https://www.nnfcc.co.uk/company#careers>

[IBioIC](#)

Vacancies advertised through IBioIC, more information [here](#).

Upcoming Events

HVB Training Workshop: Communicating for Impact

Date: 7th December 2022, 9:30 to 16:00

Venue: Principal York, Station Rd, York YO24 1AA

Registration and networking from 9:30, training from 10:30, finish at 16:00

We've all been asked the question "what do you do?", but we might not realise how important it could be to think carefully about how we answer. This workshop will help participants to think strategically about what they say and how they say it with the aim of creating effective communications with different audiences and assisting career development.

The workshop will include sessions on:

- Communicating strategically - why it's important to have a plan.
- Using social media to promote yourself and your work, expand your reach and engage with others.
- Body language and how to present yourself confidently (even if you feel terrified!)

The session will be facilitated by Alice North and Chris Hiscocks from BioVale, with contributions from communications manager Emma Needham, graphic designer Phil Roberts and actor Thomas Frere.

For more details visit [HVB Training Workshop: Communicating for Impact](#)

Alternatively email hvb-network@york.ac.uk

Recent Appointment

Anike Te Appointed Aegis Professor of Engineering Biology



Anike Te, Chief Strategy Officer for international materials company Lucideon, has joined the Bristol BioDesign Institute as an [Aegis Professor in Engineering Biology](#). This prestigious appointment strongly aligns with our vision to be leading innovators in biomolecular and biosystems design and their translation, and for Bristol to be an internationally recognised centre in engineering biology.

Anike has experience in identification and adoption of new technologies into industry in healthcare, energy, construction, aerospace and ceramics in an international context. She has recently focused on the potential of synthetic biology to unlock sustainable, next generation materials.

Anike has also accepted a position on the Scientific Advisory Board for our UKRI-funded Bristol Centre for Engineering Biology, BrisEngBio, which was established to accelerate the translation of discovery synthetic biology research to address global challenges and boost the UK's bioeconomy.

Anike will work across our portfolio of synthetic and engineering biology projects, surfacing and supporting the translation of novel therapeutics, diagnostics and materials. She will advise on the growth of our industrial networks to include new industries and new geographical regions, and mentor our new entrepreneurs.

Commenting on her appointment, Anike said: "It is a great honour to join the University of Bristol as an Aegis Professor in Engineering Biology. It's a great opportunity to bring together academia and industry in an innovative, collaborative approach. Lucideon is becoming increasingly involved in synthetic and engineering biology. It's a very exciting area of science, which touches on many industries and

technologies, and creates solutions to real-world issues, both in the UK and internationally".

Contact

If you would like to share a story in the **next newsletter** please contact:

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**The Carbon Recycling Network: A BBSRC UKRI Network in
Industrial Biotechnology & Bioenergy (NIBB)**



**Biotechnology and
Biological Sciences
Research Council**

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