

## CIC2022 - The bio-industrial revolution is underway – the conference year in bioeconomy begins in Düsseldorf

Highlights of the CIC Hybrid Event on 01 and 02 February 2022 in Düsseldorf

Düsseldorf, 04.02.2022

01.02. and 02.02.2022 are not only good dates to get married, but also to open the conference year for biotechnology and the bioeconomy! On these two days, almost 200 participants gathered on site in Düsseldorf and online for the hybrid CLIB International Conference 2022. Under the motto "Technologies for a bio-industrial (r)evolution", advances from science, applied research and economic implementation were presented and discussed. Topics included synthetic biology and enzyme development, process optimisation, artificial intelligence and digitalisation as well as innovative process concepts. Speakers from 11 nations ranging from Japan and various European countries to the USA presented new developments and business models that promote the transformation towards a circular and bio-based economy. In addition to large companies such as Covestro, Evonik and BASF, start-ups and SMEs such as Altar, Biomatter Design, Checkerspot and iMean also presented their innovations.

The conference was opened by the North Rhine-Westphalian Minister for Economic Affairs, Innovation, Digitalisation and Energy, Professor Andreas Pinkwart. In his speech, he emphasised the importance of transforming industry towards more sustainability, resource efficiency and circularity. Biotechnology and bioeconomy will, he stressed, be important building blocks of this transformation, which is also reflected in current strategies of the NRW state government as well as the announced roadmap for bioeconomy in NRW. The state of NRW also wants to provide concrete support for the development towards a bioeconomy through the planned Bio Scale-Up Center NRW.

The fact that industry is already tackling this transformation and converting its processes to regenerative carbons was impressively demonstrated in the keynote speech by Markus Dugal, who presented the strategies and implementation projects of Covestro. Bio-based raw materials, recycled plastic streams and CO<sub>2</sub> will be important pillars of Covestro's future raw material mix. Various ways of catalysis including chemocatalysis, electrochemistry and biotechnology are being developed and implemented to transform these feedstocks into valuable building blocks. The development of biotechnological processes is still a long and labour-intensive process. Professor Akihiko Kondo from Kobe University showed in his keynote how to significantly accelerate the development of new microbial production strains. The biofoundry platform combines advanced technology to run an iterative the Design-Build-Test-Learn (DBTL) principle for rapid cell factory construction. Using metabolic design system (Design), rapid breeding technology using long chain DNA-transfected microorganisms (Build), rapid and accurate metabolic evaluation technology (Test), and machine learning or mathematical modelling for further improvement and new metabolic pathway design (Learn), novel pathways can be developed in record time.

One session was dedicated to the final of the Global Biobased Businessplan Competition (G-BiB). The teams from Methylation (im)Possible and Oater - OIY Solutions pitched their concepts to the auditorium and a 5-member expert jury of investors. The award of 5,000 EUR was presented to the winning team Oater by Friedrich Barth on behalf of the main sponsor of this year's G-BiB, the Global Entrepreneurship Center.

After two days of intensive discussions, the participants agreed that the revolution towards a sustainable bio-based economy is already in full swing, even if there are still many questions to be answered and some challenges to be overcome on the way ahead. The personal exchange and networking during the conference, although still somewhat limited by protective measures due to the Corona pandemic, motivated all participants and whetted their appetite for further events in 2022, a year that will certainly see many more new developments and successes in the bioeconomy.

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**CLIB** – Cluster Industrial Biotechnology is an international open innovation cluster for bioeconomy with a focus on industrial biotechnology. The approximately 100 cluster members are large (multinational) companies, SMEs, universities, academic institutes as well as other stakeholders active in the bioeconomy. Founded in 2007, CLIB has >10 years of experience in connecting stakeholders along and across value chains; in helping to set up project consortia, in developing tech transfer strategies, in providing policy advice and in promoting industrial biotechnology as a key driver for a sustainable bio- and circular economy.

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