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PRESS RELEASE

Transforming CO_2 into Opportunities: The CO_2-Based Fuels and Chemicals Conference 2025

Preliminary program now available – exploring CCU technologies for a sustainable chemicals and fuels industry

Hürth, 18 December 2024: The CO_2-Based Fuels and Chemicals Conference 2025 has established itself as a pivotal event for industry professionals dedicated to advancing Carbon Capture and Utilisation (CCU) and Power-to-X technologies. Scheduled for 29-30 April 2025 in Cologne, Germany, and online, this conference serves as a vital platform for sharing insights, fostering collaboration, and exploring the latest developments in the field. Participants will engage with leading experts and organisations to discuss innovative approaches to utilising CO_2 as a renewable feedstock, addressing the challenges and opportunities that lie ahead in the transition towards a sustainable chemical industry.

As the global demand for CO_2-based products surges, with current production capacity for CO_2-based products exceeding 1.3 million tonnes, this conference will explore the pivotal role of Carbon Capture and Utilisation (CCU) in establishing CO_2 as a viable and sustainable renewable carbon feedstock. The event will delve into innovative technologies, market trends, and policy frameworks that are driving the transformation of carbon dioxide from a greenhouse gas liability into a valuable resource for the circular economy. The preliminary program highlights key topics essential for industry advancement and is now available at https://co2-chemistry.eu/program/.

Insights from industry leaders

The CO_2-based Fuels and Chemicals Conference features insights from leading companies such as Air Liquide, Celanese, Electrochaea, Fortum, Phlair, Revcoo, and RWE Generation, alongside with presentations from ambitious start-ups like Colipi, eChemicals and Skylea as well as esteemed research institutions like Fraunhofer IFAM and SINTEF. Participants will gain valuable perspectives on the diverse applications of CO_2 in sectors ranging from transport fuels to construction materials together with insights into the existing framework for CCU applications and developments in carbon capture technologies and green hydrogen production for a sustainable transformation of the chemical industry.

The preliminary program highlights key topics essential for industry advancement, addressed in dedicated sessions:

- Innovation, Strategy, and Policy
- Green Hydrogen Production, Biogenic CO_2 Sources and Carbon Capture
- CO_2 to Chemicals, Fuels, Materials and Polymers
- CO_2 Utilisation Technologies

Key sessions to look forward to

The conference will feature a series of key sessions designed to address the most pressing topics in Carbon Capture and Utilisation (CCU) and Power-to-X technologies. Here, experts from industry, science and policy will share their insights, discuss innovative solutions, and explore the future of CCU in various sectors.

Innovation, Strategy, and Policy: Discussing the critical political frameworks essential for promoting investment in Carbon Capture and Utilization (CCU) technologies within the broader context of sustainability and policy. Examining the current progress of CCU deployment in the European Union and discussing emerging frameworks for certification of CO_2-based fuels and materials.

Green Hydrogen Production, Biogenic CO_2 Sources and Carbon Capture: Exploring renewable CO_2 in sustainable production processes by sourcing biogenic CO_2 and advanced CO_2 capture technologies, as well as insights into the production of green hydrogen for a successful transformation.

CO_2 to Chemicals, Fuels, Materials and Polymers: Highlighting advancements in converting CO_2 into valuable fuels, chemicals, materials and polymers from chemical and biotechnological conversion, alongside new options in electrochemistry.

For more information please find the preliminary program at https://co2-chemistry.eu/program/.

Celebrating innovation in CCU

Additionally, the conference will showcase nominees for the “Best CO_2 Utilisation 2025” innovation award, recognising significant contributions to CCU technology. The award acknowledges outstanding innovations in the field of Carbon Capture and Utilisation (CCU), highlighting innovative technologies, materials, and services that advance the utilisation of CO_2 as a renewable feedstock.

During this session, six nominees will present their pioneering solutions, each demonstrating unique approaches to utilising CO_2 in various applications. The presentations will provide insights into how these innovations can contribute to reducing greenhouse gas emissions, enhancing sustainability, and promoting a circular economy. The Innovation Award “Best CO_2 Utilisation 2025” is sponsored by Yncoris, a service partner for the future-proof chemical industry. It is co-organised by nova-Institute and CO_2 Value Europe, the international association representing the CCU community in Europe and beyond.

Innovation submission is still open until 7 February 2025: https://co2-chemistry.eu/award-application/.

A unique platform for collaboration

What sets this conference apart is its commitment to fostering collaboration among industry leaders, researchers, and policymakers. By addressing both technological advancements and the political landscape surrounding CCU, the event aims to support the transition towards a circular economy and a sustainable future.

Mona Neubaur, Minister for Economic Affairs, Industry, Climate Protection and Energy of the State of North Rhine-Westphalia has once again taken on the patronage of the conference.

Additional information and registration details are available at www.co2-chemistry.eu.

Partnerships and sponsoring

The CO_2-based Fuels and Chemicals Conference 2025 is supported by numerous industry and trade associations, non-profit organisations, research institutions and interest groups, that are thematically linked to the conference: BCNP Consultants (DE), BBE – Bundesverband Bioenergie (DE), BioBase (AT), C.A.R.M.E.N. e.V. (DE), ChemCologne (DE), Chemie-Cluster Bayern (DE), CLIB – Cluster Industrial Biotechnology (DE), CO_2Value Europe (EU), Global CO_2 Initative (International),

IN4climate.NRW (DE), IBB – Industrielle Biotechnologie Bayern Netzwerk (DE), kunststoffland NRW (DE), Plastics Europe (DE), Renewable Carbon Initiative (International).

GIG Karasek supports the event as a sponsor.

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nova-Institut GmbH has been working in the field of sustainability since the mid-1990s and focuses today primarily on the topic of renewable carbon cycles (recycling, bioeconomy and CO_2 utilisation/ CCU).

As an independent research institute, **nova** supports in particular customers in chemical, plastics and materials industries with the transformation from fossil to renewable carbon from biomass, direct CO_2 utilisation and recycling.

Both in the accompanying research of international innovation projects and in individual, scientifically based management consulting, a multidisciplinary team of scientists at **nova** deals with the entire range of topics from renewable raw materials, technologies and markets, economics, political framework conditions, life cycle assessments and sustainability to communication, target groups and strategy development.

50 experts from various disciplines are working together on the defossilisation of the industry and for a climate neutral future. More information at: nova-institute.eu – renewable-carbon.eu

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