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PRESS RELEASE

AI Circular Economy Conference 2026: How AI Powers Progress from Chemical and Material Innovations to Data Security – Preliminary Program now Published

Leading experts highlight the diverse role of Artificial Intelligence (AI) across circular chemistry, materials, and industrial innovation

Hürth, 30 October 2025: The AI Circular Economy Conference 2026, organised by nova-Institute, is taking place on 4–5 March 2026 in Cologne, Germany, and online. This international hybrid event will bring together experts from the new chemical and plastic industry, recycling, biotechnology, CO_2 utilisation (CCU) and digital sectors to explore the transformation towards circular and renewable carbon systems by artificial intelligence (AI). By linking technological innovation with sustainability goals, the conference will demonstrate how AI can make processes, materials and business models smarter and more efficient across the entire value chain — from feedstock and production to recycling and reuse.

Preliminary Program now Published

The preliminary program reflects the thematic scope of the event, spanning topics from process optimisation and data-driven industrial transformation to discovery of new circular materials, biotechnology and cybersecurity. This diversity highlights that AI is driving innovation at every stage of the renewable carbon value chain, from molecular design and production to system-level management and policy. These are the first confirmed speakers of the preliminary program:

- **Delphine Largeteau, Schneider Electric**: “Unlocking Digital Circularity: A Game Changer!”
- **Rosario Othen & Florian Pohlmeyer, RWTH Aachen University**: “From Data to Decisions: Digital Twins and Data Spaces for a Sustainable Process Industry”
- **Dr. Dennis Krause, Covestro:** “From Digital Polyurethane Processing to AI: Generating Insights into Production Readiness of Circular Solutions“
- **Dr. Zora Rerop, Dahlia Biotech**: “Efficiency and Scale in Industrial Biotechnology: How Can AI Help Build Europe’s Renewable Chemical Future? – Challenges and Insight”
- **Prof. Dr. Christian Hummert, Federal Agency for Innovation in Cybersecurity (Cyberagentur)**: “AI and Cyber Security in the Chemical Industry”
- **Dr. Xaiza Aniban, ExoMatter GmbH**: “AI-Powered Acceleration of Sustainable Materials Discovery”
- **Johanna Kutschenreuter, Ehrenmüller GmbH:** “KIKS – AI-Powered Platform for the Plastics Industry”
- **Alexis Cuquel, Kanadevia Inova**: “Optimizing Biomethane Production through AI-Driven Feed Planning in Anaerobic Digestion Plants”

Advisory Board Ensures High Quality

The Conference Advisory Board plays a pivotal role in determining the scientific and thematic focus of the AI Circular Economy Conference. It brings together leading experts from research, industry and digital innovation to ensure an independent and high-quality program. All members of the board are carefully curated. Together, they represent the entire value chain, from chemical production and biotechnology to digital transformation. Their collective expertise has informed the selection of the initial speakers announced in the provisional program, guaranteeing that the conference will reflect the most pertinent developments at the intersection of AI, chemistry, and sustainable materials. Members of the advisory board are:

Dr. Lars Börger, Michael Carus and Achim Raschka (nova-Institute); Dr. Tina Buchholz (German Chemical Industry Association – VCI); Dr. Christine Bunte (PlasticsEurope Deutschland); Dr. Patrick Glöckner (Evonik); Prof. Dr. Dirk Hecker (Fraunhofer IAIS); Dr. Tobias Klement (Cluster Industrielle Biotechnologie – CLIB); Dr. Wolfgang Lippert (Microsoft); Nils Janus (Covestro); and Alex Dickmann (German AI Association – KI Bundesverband).

Circular Economy – Unlocking the Potential of Renewable Carbon with AI

nova-Institute proudly presents its new highlight event, bringing together the best innovators, researchers, and practitioners of this fundamental digital transformation of our society: The AI Circular Economy Conference, 4-5 March, 2026 in Cologne and online. This groundbreaking conference will explore how advanced AI tools and applications are shaping the future of circular and sustainable materials by **unlocking the full potential of renewable carbon from biomass, carbon capture utilisation (CCU), and recycling**:

Key topics are:

- Transparency and traceability, digital passport
- Modelling and simulation
- Discovery of new circular materials and technologies
- Process optimisation
- Sustainability assessments
- Supply chain management
- Cyber security
- Strategic autonomy
- Visit https://ai-circulareconomy.eu for more information.

Find all nova publications here: https://renewable-carbon.eu/publications/

Find all nova press releases, images and more free-for-press material at https://nova-institute.eu/news/pr/

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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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