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PRESS RELEASE

Advanced Recycling Conference 2025 Fuels Innovation Across Key Waste Streams

220 Global Experts Unite to Drive Breakthroughs in Advanced Recycling Technology, Infrastructure, and Industry Trust

Hürth, 03 December 2025: The **Advanced Recycling Conference** (ARC) 2025 brought together nearly 220 experts from 28 countries to spotlight pioneering advancements and foster industry collaboration in recycling across diverse waste streams including plastics, textiles, automotive and other materials. This year's program emphasized how continuous improvements in core technologies, such as physical recycling through extrusion and dissolution, chemical solvolysis, biochemical enzymolysis, and thermochemical treatments like pyrolysis and gasification, are being steadily optimized. A key factor are cutting-edge digital solutions including AI-driven sorting and blockchain traceability, enabling more reliable feedstock quality and scalable circular systems amid fluctuating waste volumes and mixed material challenges.

ARC 2025 also addressed the critical need for chemical recycling to regain credibility by demonstrating tangible advancements in process efficiency and transparency along the value chain. Innovative approaches in textile and automotive recycling were explored to overcome complex material blends and regulatory pressures, while integration of carbon capture and utilisation (CCU) highlighted the shift towards truly sustainable circular business models. A significant theme was the urgent need to expand recycling infrastructure to support the deployment of advanced technologies and meet regulatory targets. Extensive networking resulted in strengthened partnerships, further bolstered by a site visit to Chemiepark Knapsack, where participants witnessed industrial-scale deployment of these technologies in action.

Pathway to EU Targets and Renewable Carbon Growth

By bringing together stakeholders across technology, policy, and investment spheres, ARC 2025 laid out a clear pathway for meeting ambitious EU targets, such as increasing post-consumer recycled plastics in packaging to 10-35 % by 2030 and embedding 25 % recycled content in new vehicles. These cooperative efforts aim to overcome feedstock availability, variability and infrastructure challenges, fueling growth in renewable carbon value chains and advancing the defossilisation of the chemical industry. More details and updates on future events are available at https://advanced-recycling.eu.

Partners and Sponsors

The Advanced Recycling Conference is supported by visionary sponsors dedicated to advancing recycling solutions. Siemens supported the event as a gold sponsor. Buss ChemTech, Erema Group and Starlinger contributed as bronze sponsors.

The Advanced Recycling Conference is supported by industry and trade associations, non-profit organisations, research institutions and interest groups that are thematically linked to the conference: BCNP Consultants (DE), C.A.R.M.E.N. (DE), ChemCologne (DE), Chemical Recycling Europe (EU), Chemie-Cluster Bayern (DE), CLIB (DE), IBB Netzwerk (DE), ITA - International Centre for Sustainable Textiles (DE), kunststoffland.NRW (DE), Plastics Europe (DE), Renewable Carbon Initiative (International), VinylPlus(DE).

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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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