



ClimateTech startup Cyclize secures €5 Million in Seed Funding for revolutionary plastic recycling technology

Munich, February 21, 2024 – Cyclize, the ClimateTech startup from Stuttgart, is forging ahead with €4.75 million in startup capital to initiate a revolution in the chemical industry – the goal: To replace fossil resources using innovative carbon recycling of plastic waste and CO₂.

The funding round is led by UVC Partners, with complementary investments from High-Tech Gründerfonds (HTGF), Aurum Impact, UnternehmerTUM Funding for Innovators, and high-profile business angels, including Dr. Klaus Schäfer, former CTO of Covestro, who will also join Cyclize's Advisory Board.

Full replacement of fossil resources

In an era of overdue change, Cyclize breaks conventional boundaries and reinvents the chemical industry. The industry, once firmly anchored in the use of fossil resources, must and wants to transform to achieve the net-zero emission targets. However, there is an additional challenge: Fossil resources don't only serve as an energy source. The industries' products intrinsically contain carbon, which is also derived from oil, natural gas, and coal. It is released when materials are incinerated after disposal. In total, plastics thus account for 15 percent of industrial CO₂ pollution. A typical building block for plastics, foams, adhesives, paints, and more is synthesis gas, a carbon monoxide and hydrogen mixture. So far, alternative technologies like electrolysis or mitigation strategies like carbon capture and storage (CCS) struggle to meet the growing demand for CO₂-neutral synthesis gas.

Cyclize offers a solution: A highly innovative plasma-based process that recycles mixed plastic waste of all kinds to produce synthetic gas, economically competing with fossil synthesis gas.

Cyclize sets groundbreaking standards to replace fossil resources unrivaled. *“With our process, we send a significant signal for climate-neutral chemistry. Our patented Cyclize Process enables chemical companies to remain competitive despite rising energy costs in Europe. Cyclize Plasma is not just the future of the chemical industry – it is an enabler for the circular economy: Turning plastic waste into a valuable raw material with monetary value,”* says Maïke Lambarth, co-founder and CEO of Cyclize.

Venturing into new markets: the net-zero revolution

The shift towards net-zero production opens new markets in Europe. Cyclize lays the foundation for the chemical industry through a low-threshold transformation. The company only replaces the first step of an extended value chain by offering synthesis gas that can substitute fossil sources. By retaining most of the value chain, existing process plants can continue to be used while keeping production costs low. Dr. Klaus Schäfer underscores the revolutionary potential of Cyclize: *“With their solution, they not only serve numerous chemistry segments that were previously dependent on fossil hydrogen and synthesis gas but also solve the global problem of recycling previously non-recyclable plastic waste. Cyclize is an innovation pioneer that decisively addresses the global challenges of our time.”*

Competitiveness through defossilization

Chemical companies cannot defossilize their industry using existing technologies while remaining economically viable. Lead investor Amanda Birkenholz knows: *“Cyclize's technology solves two problems of our civilization. Currently, only nine percent of globally produced plastic is recycled. The remainder is not further utilized and ends up in continuously growing landfills. However, the energy contained therein can be significantly used by Cyclize for the reforming process, simultaneously reducing electricity demand and operational costs significantly. Especially considering the current energy price policy, companies can secure a decisive advantage with Cyclize, utilizing a resource that has been scarcely used so far.”*

Further development of plasma technology and company

Cyclize has already attracted significant interest from industry and politics. Since May 2022, the spin-off from the University of Stuttgart has been supported by the EXIST Research Transfer program of the Federal Ministry for Economic Affairs and Climate Action (BMWK). With the capital raised in the seed round, the company elevates its implementation to the next level. Next, Cyclize will focus on scaling the technology and its application on an industrial scale with an expanded team. Also, test series with pilot customers who need synthesis gas or want to recycle complex waste streams are already planned. Thus, the young company actively advances technological development towards commercialization. Next milestone: Construction and operation of the first waste-to-synthesis gas plant of its kind in a chemical park to demonstrate applicability in the industrial environment.

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About Cyclize

Cyclize, a spin-off from the University of Stuttgart, has developed a technology to defossilize the chemical industry using mixed plastic waste and CO₂ as raw materials to produce synthesis gas (a gas mixture of carbon monoxide and hydrogen). This synthesis gas is a fundamental building block for advanced chemicals and is used in making plastics, methanol, hydrogen, and e-fuels. Until now, synthesis gas has been obtained through the linear use of fossil resources such as natural gas. The innovative plasma-based process replaces fossil resources with waste materials, enabling a circular carbon economy and avoiding hundreds of megatons of CO₂ annually by 2050. For more information: www.cyclize.de.

About UVC Partners

UVC Partners is a leading Munich- and Berlin-based early-stage venture capital firm that invests in European B2B tech start-ups from pre-seed to series A. With about €400 million in assets under management, UVC Partners typically invests between €500,000 and €10 million initially and up to €30 million per company. The portfolio includes category leaders in deep tech, climate tech, hard- and software, and mobility with various technologies and business models. As an independent partner of UnternehmerTUM, Europe's most extensive innovation and startup center, UVC Partners has access to proprietary deal flow, an industrial network of more than 1,000 corporates, and access to talent from the leading European technical university. The investments include Flix, Vimcar, planqc, Tanso, Isar Aerospace, TWAIICE, DeepDrive, STABL, and many more. They all benefit from the team's extensive investment and exit experience, their ability to build sustainable category leaders with a competitive advantage, and their passion for growing the game changers of tomorrow. For more information: www.uvcpartners.com.

About the High-Tech Gründerfonds

The seed investor High-Tech Gründerfonds (HTGF) finances tech start-ups with growth potential and has supported more than 700 start-ups since 2005. With the launch of its fourth fund, HTGF now has about 1.4 billion euros under management. Its team of experienced investment managers and start-up experts support young companies with expertise, entrepreneurial spirit and passion. HTGF's focus is on high-tech start-ups in the fields of digital tech, industrial tech, life sciences, chemistry and related business areas. To date, external investors have injected about 5 billion euros of capital into the HTGF portfolio via more than 2,000 follow-on financing rounds. In addition, HTGF has already successfully sold shares in more than 170 companies. Fund investors in this public-private partnership include the German Federal Ministry for Economic Affairs and Climate Action, KfW Capital and 45 companies from a wide range of industries. For more information: www.htgf.de.

About Aurum Impact

Aurum Impact is an impact investing firm backed by the Goldbeck Family Office. It empowers positive systemic change by investing in ambitious founders and impact funds within the focus areas of Circularity & Materials, Climate & Energy, Ecosystems, and Stable & Equitable Society. Initial startup investments focus on Pre-Seed to Series A companies. Upon investment, Aurum Impact acts as a long-term and trusted partner across every stage and commits to longer investment horizons to allow founders and funds to flourish. The portfolio includes companies like UNDO, CleanHub, and the Landbanking Group as well as the impact funds Planet A Ventures, Revent, and Systemiq Capital. Learn more at www.aurum-impact.de.

About UnternehmerTUM Funding for Innovators

UnternehmerTUM Funding for Innovators is the pre-seed funding initiative at UnternehmerTUM, Europe's leading center for innovation and business creation. UnternehmerTUM Funding for Innovators supports outstanding early-stage B2B start-ups in (deep) tech from the UnternehmerTUM ecosystem with the needed capital and network. The offer comprises prototyping grants, founder-friendly convertible loans as well as follow-on investments. The key focus is on identifying pioneering technologies and extraordinary teams that hold the promise of turning their ideas into scalable products. For more information: www.funding.unternehmertum.de/.
