

Entalpic raises €8.5 Million to pioneer AI solutions for decarbonizing industrial chemistry

[Paris, September 2024] – [Entalpic](#), an innovative startup at the forefront of generative AI technology for materials discovery targeted to the chemical industry, announced today that it has successfully secured €8.5 million in seed funding. This investment is led by Breega, Cathay Innovation & Felicis, alongside contributions and insights from industry and academic advisors Jörg Weiser (ex-Managing Director at Schrödinger), Gilles Wainrib (co-founder at Owkin), Thomas Wolf (CSO and co-founder at Hugging Face), Arnaud Robert (ex CDO & Excom at Sanofi), Michal Valko (Principal Llama Engineer at Meta, ex-Deepmind) and Yoshua Bengio (Turing award, founder and scientific director at Mila). Entalpic emerges from a collaboration between researchers at Mila, the world's premier research lab specializing in machine learning for climate action, and a leading executive from Owkin, a unicorn company renowned for its use of AI in drug discovery. Leveraging this expertise, Entalpic is set to redefine material and molecule discovery for a more sustainable future.

Transforming Chemistry with AI

Entalpic's state-of-the-art AI platform is designed to generate and evaluate new materials and molecules that could replace outdated industrial chemical processes. This platform swiftly formulates and tests chemical hypotheses through a series of automated experiments, enriching the knowledge base with actionable data. By integrating diverse data sources—from numerical quantum simulations and physical lab experiments to academic literature and patents—Entalpic leverages the latest in AI technology, including Large Language Models (LLMs), Active Learning and Graph Neural Networks.

Focusing on Sustainable Industrial Practices

Focusing on critical processes such as electrochemistry and catalysis, Entalpic is developing solutions for energy storage, fertilizer production, and pollution control. The company not only determines the optimal chemical formulations but also perfects the manufacturing processes to ensure reproducibility—a current industry gap. Entalpic's business model strategically integrates open and proprietary research, fostering collaboration on initiatives such as green hydrogen production while advancing in-house developments with industrial clients.

Leadership Rooted in Expertise

Entalpic was co-founded by a trio of French AI and machine learning experts, each bringing a deep understanding of technology's role in material science. [Mathieu Galtier](#), CEO, is an alumnus of Mines ParisTech with a PhD conducted at INRIA, ENS, and Oxford, focusing on the intersection of machine learning and neuroscience. Formerly the Chief Data & Platform Officer at techbio pioneer Owkin. [Victor Schmidt](#), CTO, graduated from École polytechnique and UCL, with a PhD from Mila Institute on ML for climate change. [Alexandre Duval](#), CSO, is also holder of a PhD in machine learning for materials, from CentraleSupélec and Inria, and formerly researcher at Amazon on LLMs.

Endorsements from the Community

Yoshua Bengio, full professor at Université de Montréal and scientific director at Mila noted: "Climate change represents a formidable challenge, and Entalpic's scientifically robust approach is a promising contribution to its mitigation."

Thomas Wolfe, CSO at Hugging Face added: "Entalpic is at the vanguard of the emerging field of ML for science, fundamentally transforming chemical research, and paving the way for major breakthroughs."

Victor Schmidt highlighted, "Our team's expertise places us at the forefront of applying AI to chemical industries, promising significant business and ecological benefits."

Looking Ahead

"Our goal is to forge robust partnerships with key industry players," stated Galtier "With operations in France, Germany, and Canada, and plans to expand into the US and Asia, we are ready for significant growth."

Investors shared their enthusiasm: "New deep-learning approaches, like GNNS and simulations, will revolutionize the approach to scientific discovery. Electrochemistry and catalysis are some of the most ambitious areas to disrupt in the chemicals industry, and Entalpic is the team to lead this change," said Gabriella Garcia, Deal Partner at Felicis. "Supporting Entalpic's technology in AI for materials science is a significant step towards decarbonizing the chemical industry and achieving global sustainability goals. We are excited to support their journey towards transforming vast traditional industries."

Industrial chemistry represents a vast and critical sector with a market size reaching several trillion dollars and a significant environmental impact. For instance, the ammonia production process, which is pivotal for fertilizer manufacturing, operates on a single, high-impact process that accounts for more than 1% of global CO2 emissions. Despite its scale, the field has seen limited innovation, characterized by outdated infrastructure and a pressing need for modernization. Developed countries have shown a renewed interest in revitalizing this sector especially due to the need for an ecological transition. The potential for disruption is clear, demanding innovation-driven efforts to drive transformative change.

"The founding team's entrepreneurial experience and profound expertise in AI align perfectly with our investment vision through Cathay Innovation new AI early-stage pocket. As one of Owkin's first employees, Mathieu developed the company's data partnership network with industrial leaders. This expertise is further enhanced by the two co-founders, who are recognized by the AI community for their contribution and to discover new 3D materials capable of revolutionizing industries," said Jacky Abitbol, partner at Cathay Innovation. "Their vision of combining their independent expertise with the needs of industrial partners for addressing critical pain points will drive an acceleration in industry practices and contribute to the global decarbonization of processes."

"From the moment we met the team, we were blown away by their exceptional skill set and their complementary expertise. Their vision is perfectly aligned with Breega's values, making this partnership a natural fit. The opportunity to revolutionize material discovery in the chemical industry is fantastic. Given that chemical processes have remained unchanged for decades, we see a massive potential to drive innovation and accelerate the decarbonization of this sector, propelling it into a new era of sustainability." said Maximilien Bacot - Co-Founder and COO at Breega

For more information about Entalpic and its vision for the future of industrial chemistry, visit <https://entalpic.ai/> or contact info@entalpic.ai

About Entalpic

Founded in 2024, Entalpic is a startup at the forefront of generative AI technology for the chemical industry, having secured €8.5 million in seed funding from leaders like Breega, Cathay Innovation, and Felicis. Emerging from a collaboration between Mila, the premier machine learning lab for climate action, and Owkin, a unicorn company in AI for drug discovery, Entalpic leverages deep expertise to develop AI solutions that decarbonize industrial chemistry. The company's advanced AI platform designs catalysts to optimize chemical processes in areas like energy storage, fertilizer production, and pollution control, blending open and proprietary research. With plans to expand globally, Entalpic is set to transform the chemical industry and drive significant advancements towards sustainability.

About Breega

Breega propels pioneering and purpose-driven founders from idea into impact. We closed our first fund in 2015 and now have \$700m AUM and +100 trailblazing portfolio companies among which Exotec (robotics & software), Moneybox (fintech), Alice & Bob (quantum) or 011H (climatetech). Crafted for founders by founders, we built Breega to provide start-ups with the help we wish we'd had. And we've created an investment proposition that's purposefully designed : an Investment squad of former founders and startup scalers that have been through the highs and lows and a Scaling Squad comprised of vertical experts from the finest startups to power your scaling journey (GTM & Governance, RH & Talent, Growth, Branding). We invest in tech, deeptech and digital startups, focusing on pre-seed to Series A+ across Europe and Africa with offices in Paris, London, Barcelona, Lagos & Cape Town.

About Cathay Innovation

Cathay Innovation is a multistage venture capital firm, affiliated to Cathay Capital, investing in founders building transformative businesses across Europe, North America, Asia, Latin America and Africa. Its platform connects founders with investors and its ecosystem of leading Fortune500 corporations to help startups scale and transform industries with consumer to enterprise and AI solutions in commerce, fintech, digital health and mobility / energy. Founded in Paris in 2015, Cathay Innovation now manages over €2.5B AUM with additional offices in Berlin, San Francisco, Shanghai and Singapore and has invested in over 100 startups including Chime, Pinduoduo (NASDAQ: PDD), Glovo, Wallbox (NYSE: WBX), Owkin, Getaround, Ledger, ZenBusiness, Alma, Descartes Underwriting and more.

To learn more, visit us at www.cathayinnovation.com or follow us on LinkedIn or [Twitter @cathayinnov](https://twitter.com/cathayinnov).

About Felicis

Founded in 2006, Felicis is a venture capital firm investing in companies reinventing core markets, as well as those creating frontier technologies. The firm was the first to offer a Founder Development pledge, providing needed resources to help founders scale themselves. Felicis focuses on early-stage investments and currently manages over \$3B in capital across nine funds. The firm is an early backer of more than 49 companies valued at \$1B+. More than 100 of its portfolio companies have been acquired or gone public, including Adyen, Credit Karma, Cruise, Fitbit, Guardant Health, Meraki, Ring, and Shopify. The firm is based in Menlo Park and San Francisco in California. Learn more at felicis.com.