

HumminK raises €700K in seed funding round led by Elaia Partners to launch a new nano-additive manufacturing technology



HUMMINK

Press Release

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HumminK is a deeptech startup that develops a novel additive manufacturing technology at the nanometric scale. Spun-off from the Ecole Normale Supérieure and Institut Pierre-Gilles de Gennes, in Paris, HumminK recently raised a seed financing round led by Elaia Partners, with the participation of Beeyond and PSL University. With its breakthrough direct printing technique, HumminK's mission is to provide the semiconductor, screen or molecular diagnostic industries the tools to design, fast-prototype and manufacture at the nanoscale.

At the heart of French academic excellence

HumminK is a deeptech startup that emerged from a collaboration between Ecole Normale Supérieure, CNRS, Institut Pierre-Gilles de Gennes, and PSL University. It was founded in 2020 by Amin M'Barki, PhD, and Pascal Boncenne, alongside a team of brilliant researchers from the ENS Physics Laboratory: Pr. Lydéric Bocquet, Dr. Alessandro Siria, and Dr. Antoine Niguès. HumminK was joined in this adventure by successful and experienced entrepreneur Christophe Bureau, who envisions great industrial opportunities for HumminK's technology.

Supported by strong entrepreneurial and academic actors

In order to develop its first prototyping machine, set up a first team of engineers, and reach its target markets, Hummink just raised a seed round of €700K, led by Elaia Partners through the PSL Innovation Fund, and Beeyond. Beeyond was identified by Elaia as a strategic partner due to its past experience in spinning-off technologies from academic research.

Anne-Sophie Carrese, partner at Elaia, explains : *“The strong technological differentiator of the solution invented by the scientific founders, their business experiences, as well as the large size of the market with promising first commercial leads, convinced us to invest at the creation of Hummink. At Elaia, we are proud to have helped build the team in a role as the startup’s operating partner. The first year will be decisive in positioning the product on the market.”*

The company was previously supported by PSL University, that granted an exclusive license on its core IP, and funded its initial proof-of-concept. Today Hummink is accelerated by PC’up, the incubator of ESPCI-PSL University, and is at the center of a european ERC POC grant called “NanoPrint”.

Additive manufacturing and nanotechnology to design the future

“There is plenty of room at the bottom” said the famous Nobel-prize winning physicist Richard Feynman, advocating for a bottom-up approach to manufacturing, by assembling elementary building blocks at the atomic scale. Since then, the immense technological progress in computer processors, or molecular diagnosis techniques proved him right. But still today, there is remaining room at the bottom, and the industry lacks the ability to build large objects with such precision.

Hummink brings freedom of design to the nanometric scale (one nanometer is one millionth of a millimeter). With its breakthrough additive technology, Hummink is able to deposit any liquid material on any surface. *“Imagine yourself shrunk to the nanometric scale, drawing with the smallest fountain pen in the world, filled with the ink of your choice! You now have an unprecedented freedom to design and test new structures”* explains Amin M’Barki, CEO of Hummink. Within the size of the smallest drop printable by an inkjet printer, Hummink can draw a maze of lines and figures.

Hummink enables unprecedented designs to build new prototypes and provide the products of tomorrow

Nanometric additive manufacturing is an emerging need in various fields such as semiconductors, screens or molecular diagnostics. It can be leveraged for miniaturization efforts, in vitro medical devices, microsensors, microrobotics, and printable electronics, for instance.

After decades of pursuing Moore’s Law, the semiconductor industry is progressively shifting the manufacturing paradigm towards *More-than-Moore* or quantum computing, meaning more stacking and needs for sub-micron designs with novel materials.

Meanwhile, the molecular diagnostics sector is pursuing the race towards better lab-on-chip and point-of-care, where the miniaturization of complex designs is the key for improvement.

These industries alone invest around 100 billion dollars in equipment per year, and the market size of nanotechnologies is forecasted to reach 120 billion dollars in 2025 (Source: Industry Arc Nanotechnology Market Forecast). However, the lack of flexible manufacturing tools at this scale still creates multiple barriers. Hummink will help industries alleviate them by providing a technology that can print any liquid, in a dimensional gap that is still unexploited, adding versatility and flexibility, to the freedom of design. The related benefits could be extremely high

and potentially transformational.

Hummlink is already raising interest from big industrial players

Hummlink has already raised interest from companies in the semiconductor, screen, and molecular diagnostics industries to design first proof of concepts and establish long term collaborations.

About Hummlink

Hummlink is an early stage deeptech startup. We provide a unique additive manufacturing technology at the nanometric scale, allowing you to deposit any liquid, on any surface, with unprecedented resolution. Hummlink is a spin-off from École Normale Supérieure, CNRS, Institut Pierre-Gilles de Gennes, and PSL University. hummlink.com • contact@hummlink.com



Pascal Boncenne (COO) & Amin M'Barki (CEO)

About Elaia

Elaia is a European top-tier VC firm with a strong tech DNA. We back tech disruptors with global ambition from early stage to growth development. For the past 18 years, our commitment has been to deliver high performance with values. Learn more <http://www.elaia.com> • @Elaia_Partners

About Beeyond

As a consulting company in the field of disruptive innovation, Beeyond has 15 years in company creation and growth support. It operates - and has an established track record - in various industries - medical devices, pharma, automotive, luxury - from blank page to the first revenue.

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