

Wave Photonics secures £4.5M (\$5.8M) to enable the widespread deployment of light-based chips

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Wave Photonics, a Cambridge-based deep tech start-up, has received £4.5M to develop on-chip photonics designs for quantum technologies, sensors, and datacentre applications. The UK Innovation & Science Seed Fund and Cambridge Enterprise Ventures led the round, with participation from Redstone QAI Quantum Fund, Kyra Ventures, Parkwalk's University of Cambridge Enterprise Fund IX (UCEF IX), and Deep Tech Labs. The investment round was complemented by non-dilutive funding via EIC and Innovate UK grants, taking the company's total funding to date to £5.4M (\$6.9M).

Integrated photonics uses the same scalable process used to make semiconductor electronics chips to make circuits for light. It's being used as the platform for energy-efficient communications, wearable healthcare sensors, rapid diagnostic tools, optical tensor processors, on-chip lidar, quantum computing and communication, and a host of other transformative technologies.

However, in contrast with the mature semiconductor chip process, taking a photonic integrated circuit (PIC) from a concept to mass production is long and often prohibitively expensive.

Wave Photonics was founded in May 2021 by James Lee and Matthew Anderson, two Cambridge Quantum Photonics PhDs, and Mateusz Kubica (CTO), a former quantitative finance VP with 10 years' experience in mathematical and computational modelling. Since its founding, the company has built and validated its core computational photonics design technology to reduce photonic product development time and aims to use it to unlock the transformative potential of integrated photonics.

Their mission is to help unlock valuable photonics markets by reshaping the inefficient and fragmented productisation cycle into an integrated and rapid process, analogous to the development of modern semiconductors.

This investment will enable the company to take its technology from a research manufacturing line to a commercial foundry, with a particular focus on solutions for frontier applications such as quantum technologies and biosensing.

James Lee (CEO), said "The team has spent the past few years building and experimentally validating our design technology – it's exciting to have the resources to begin deploying it to solve real industry problems."

Mark White, UKI2S Investment Director said "We are delighted to be co-leading this seed round for Wave Photonics. When we first met Jamie and his partners, we were very



impressed by both the vision and the promise of the very innovative approach taken to design for the next generation of integrated photonics."

Dr. Christine Martin, Head of Ventures at Cambridge Enterprise said "Cambridge Enterprise Ventures is pleased to follow our initial pre-seed investment and co-lead Wave Photonics' seed round with UKI2S. Integrated photonics is poised to disrupt high-value industries ranging from quantum computing to bio-sensing, and Wave Photonics' team and technologies are in a great position to enable and accelerate the adoption of next generation integrated photonics products".

Chiara Decaroli of Redstone said "Redstone has been impressed by what the team at Wave Photonics has achieved so far and are thrilled to support their next phase of growth and development. Integrated photonics is an expanding field with strong impact on quantum technologies, as well as diverse applications touching our everyday life. We believe Wave Photonics' products will play a significant role in shaping PIC's design in the future."

Alexandra Beckstein, QAI Ventures CEO and Co-Founder said, "As a pioneer in fostering a global quantum technologies ecosystem, QAI Ventures is thrilled to support Wave Photonics in its mission to solve real industry problems. This investment aligns perfectly with our vision to advance cutting-edge technologies that have the potential to reshape industries and improve lives. Wave Photonics' innovative approach to photonic integrated circuit design is a testament to the ingenuity and forward-thinking spirit we champion at QAI Ventures. We look forward to witnessing their continued success and impact on the future of quantum technologies and beyond."

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