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QSENSATO is the 12th venture based on ICFO IP

New company to develop and markets atomic-photonic chips for quantum sensing and metrology applications

January 27, 2025

ICFO is proud to announce the launch of **QSENSATO, the 12th deep tech venture** based on ICFO IP, generated through collaborative research conducted between the Atomic Quantum Optics group led by ICREA Professor at ICFO Dr. **Morgan Mitchell** and the section of the CNR-IFN led by **Dr. Roberto Osellame** in Milan. **The company is focused on developing and commercializing integrated vapor cells and atomic sensors for quantum sensing and metrology applications**. By leveraging patented femtosecond laser-written vapor cells (LWVCs) and integrating them with photonic structures, QSENSATO aims **to deliver unparalleled precision and size reduction in its products for industries requiring enhanced robustness and durability, such as space, defense, remote sensing, and automotive as well as in biomedical and lab-on-chip applications**.?

QSENSATO, headquartered in Bari, Italy, was officially constituted in May 2024 b co-founders**Dr. Vito Giovanni Lucivero**, CEO & Founder, **Dr Annalisa Volpe,** Head of processing and microfluidics & Co-founder, and **Dr. Domenico Tulli,** Tech advisor & Co-founder. The company will exploit the technology of LWVCs thanks to **an exclusive patent, licensed by ICFO, CNR and PoliMi**.

i¿½Thanks to the unique combination of exquisite sensitivity and miniaturization, quantum sensors are poised to replace conventional sensors in several strategic industries, from medical diagnostics and lab-on-chip applications to space communications and environmental monitoring,i¿½ explains **QSENSATO CEO Vito Giovanni Lucivero**. i¿½Support from ICFO's Knowledge and Technology Transfer team and an exclusive patent license to QSENSATO s.r.l., has made it possible for us to start transferring research from the lab to real world applications,i¿½ Lucivero underscore

. i¿Duringhis time as a postdoc in our group and later a visiting scientist, Gianvito helped to greatly expand our expertise in laser-written vapor cells and their potential for atomic quantum sensing. We are excited to continue working together both academically to advance the technology and explore new applications and to support the success of this commercial venture,i¿½ comments **Prof. Mitchell**.?

ICFO is deeply committed to empowering entrepreneurs and transforming cutting-edg

research into impactful solutions for society. By supporting ventures like QSENSATO, ICF ensures that advanced technologies developed within its research environment find thei way into real-world applications that benefit people and industries

i¿½At ICFO, we work hand in hand with talented scientists and innovators, to help th ir breakthroughs reach society,i¿½ says **Dr. Silvia Carrasco**, Vice-Director of Innovation, Sponsored Research, and Public Engagement. i¿½QSENSATO is an inspiring example of h w entrepreneurial vision and scientific excellence can come together to develop transformati e technologies that address critical challenges across a range of industries.i

?½ QSENSATO is an academic spinoff accredited by the University of Bari Aldo Moro, and ims at the tech transfer of the research products of the newly established AQuTech group, le by Dr. Vito Giovanni Lucivero, and of those conducted in laser processing and microfluidic by Dr. Annalisa Volpe at the **Physics Department UNIBA-POLIBA**. These activities are framed both in the National Quantum Science and Technology Institute (NQSTI), the Italian hub for quantum technologies, and in the departmental excellence project QUASIMODO: i¿½Quantum Sensing and Modeling for One Healthi?

½. Only recently constituted, the startup is already showing signs of a strong start. It rece ved second prize at the Start Cup Puglia 2024, a Jury mention from Studio Torta (IP) at the fina of the [Entis GI Startup Program] in Capri, including an interview for Forbes Italia, and was among the finalists of the [National Innovation Prize (PNI) at the University of Tor Vergata] (Rome) in December 2024.

Congratulations to the QSENSATO team, poised and motivated to bridge the gap between atomic quantum sensing and integrated photonics, two worldwide emerging technologies.