



Press Release

TRUMPF Venture to invest in startup for optical mini microphones

TRUMPF Venture leads investment round of 15 million euros in Norwegian startup sensiBel / Mini microphones enable studio-quality recordings thanks to optical MEMS / High market volume: experts forecast sales of eight billion MEMS microphones in 2022

Ditzingen, April 26, 2022 – Together with other investors, TRUMPF Venture GmbH is investing a total of 15 million euros in sensiBel, a Norwegian startup that has developed an optical MEMS microphone only a few millimeters in size. Such microphones are just as compact as other MEMS-based solutions on the market and deliver a significantly better quality of sound. “TRUMPF Venture is investing in sensiBel and will also provide strong support in the area of photonics,” says Dieter Kraft, managing director of TRUMPF Venture GmbH. “The optical MEMS microphone developed by sensiBel marks a real breakthrough capable of delivering studio-quality sound recordings. This technology enables speech recognition over greater distances and also in loud environments.” sensiBel currently has a workforce of around 20 employees. MEMS microphones are found not only in consumer electronics but also in, for example, medical devices and applications in the automotive industry. Experts forecast a market volume for MEMS microphones of eight billion units in 2022 alone.

Reaching new levels of sound quality

The investment round led by TRUMPF Venture GmbH involved the fund of the European Innovation Council (EIC Fund) and other venture capital investors from Norway, among others. “Based on tests with customers, we have been able to demonstrate a quality of transmission that was not technically feasible before the development of our microphone,” says Sverre Dale Moen, CEO of sensiBel. “With the backing of our investors, we can now move forward with international marketing.” sensiBel intends to use the new capital to ramp up mass production of MEMS microphones and to expand its research and development activities.

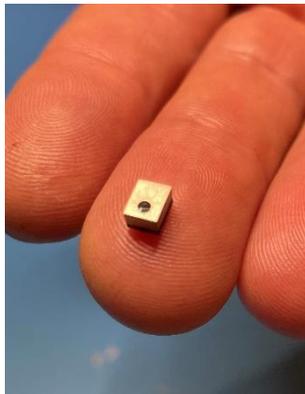


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Measuring sound by means of laser

MEMS microphones function by means of a membrane which is set in motion by sound waves. In the case of a conventional, capacitive MEMS microphone, this movement of the membrane is measured on the basis of changes to an electrical field between the movable membrane and a rigid backplate. By contrast, the optical system in the sensiBel microphone uses light waves to measure this movement. Light is projected onto the membrane, via a diffraction grating, by means of a vertical-cavity surface-emitting laser (VCSEL). This light is reflected and then captured and analyzed by photodiodes. Unlike the conventional method, this new technology enables the measurement of very small movements of the membrane and therefore very low levels of noise.

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sensiBel has developed an optical MEMS microphone that is only a few millimeters in size and delivers a significantly better quality of sound than previous MEMS-based solutions. (Source: sensiBel)



Microphones from sensiBel enable the measurement of very small movements of the membrane and therefore very low levels of noise. As a result, they deliver studio-quality recordings that are free of interference even in loud environments. (Source: sensiBel)





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About TRUMPF Venture

TRUMPF Venture extends the TRUMPF group's comprehensive activities to promote innovation and to detect disruptive technologies and business models early on. The corporate venture capital unit invests globally in early-stage start-ups whose activities are complementary or adjacent to the TRUMPF core business, such as advanced photonics and smart factory solutions. Funded start-ups benefit from an extensive network, deep domain knowhow, proven skills in scalability as well as support to access the TRUMPF group and its ecosystem. The requirements for a potential investment are a strategic fit, a high innovation leverage and differentiation in business model or technology, an experienced management team and risk adequate financial returns.

About TRUMPF

TRUMPF is a high-tech company offering manufacturing solutions in the fields of machine tools and laser technology. The Company drives digital connectivity in the manufacturing through consulting, platform products and software. TRUMPF is a technology and market leader in highly versatile machine tools for sheet metal processing and in the field of industrial lasers.

In 2020/21, the company employed some 14,800 people and generated sales of about 3.5 billion euros. With over 80 subsidiaries, the TRUMPF Group is represented in nearly every European country as well as in North America, South America and Asia. The company has production facilities in Germany, France, the United Kingdom, Italy, Austria, Switzerland, Poland, the Czech Republic, the United States, Mexico and China.

Find out more about TRUMPF at www.trumpf.com

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