



microcaps

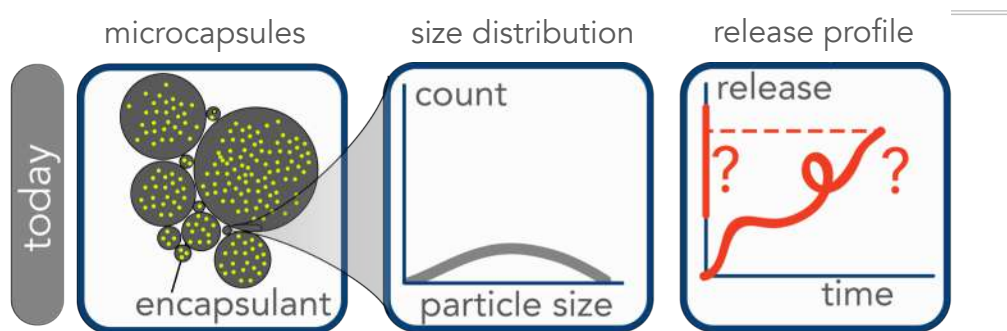
precise microencapsulation at industrial scale



We scale precise microencapsulation up by 1000x

Challenge

Microcapsules and microparticles are industrially used to **protect and deliver active materials**, such as drugs in medication, fragrances in creams and aroma in food. However, today all microencapsulation processes at industrial scale have neither control over their capsule size nor a uniform size distribution. This leads to less precise dosing, less control over the release profile and reduced stability.

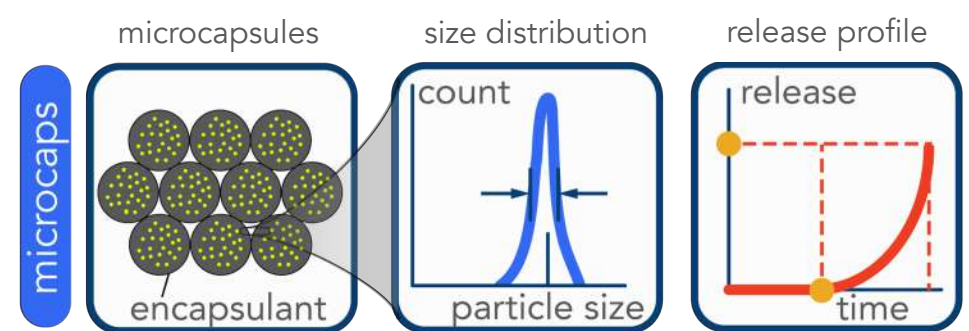


Solution

We developed a prototype that enables a scalable device to produce precise microparticles based on microfluidics

We increase controlled microcapsule and particle production by a factor of 1000 relative to today's processes

We envision an upscalable encapsulation micro-factory, which enables size control, precise dosing and increased stability



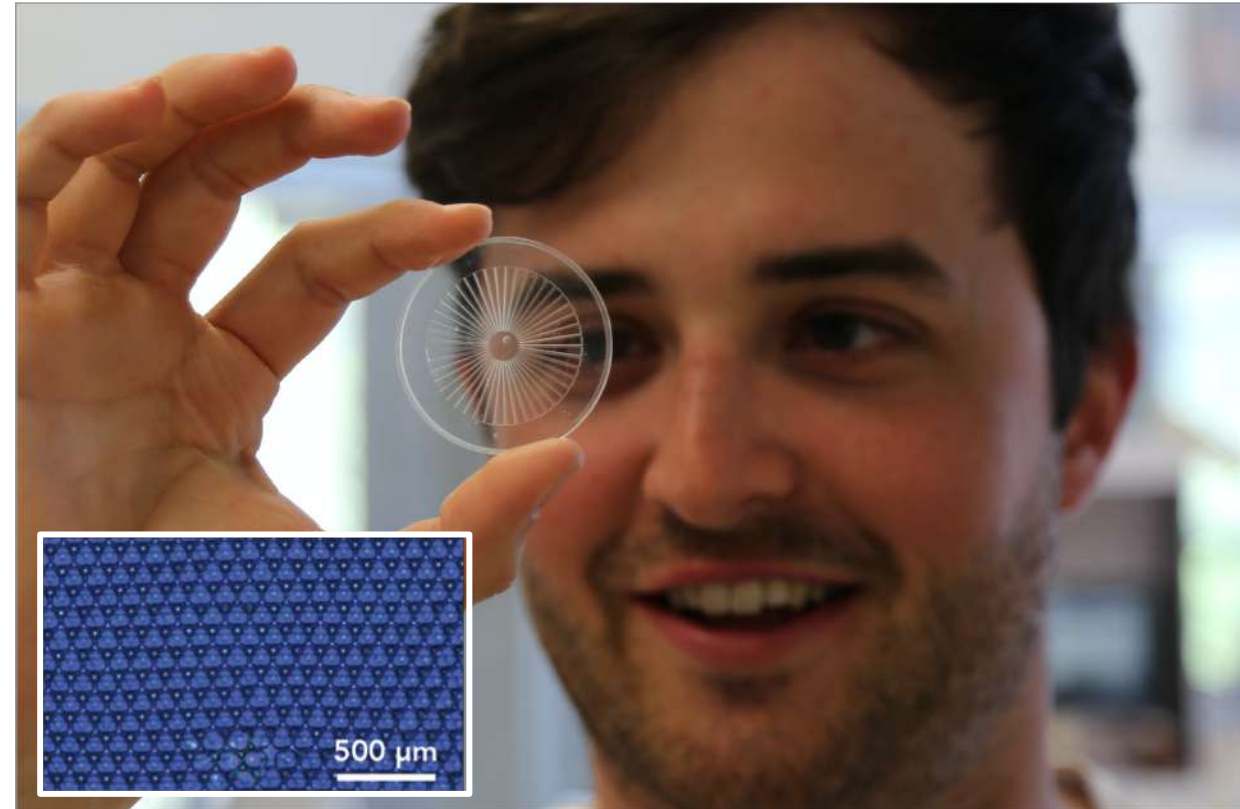


We developed and patented a novel solution

Our technology

Microfluidics provides an exquisite tool to create monodisperse capsules with controlled volumes, but current methods only allow limited throughputs of around 5 mL/h

- ▶ Our technology is based on step emulsification and can be **stacked up** in three dimensions, which allows throughputs of up to **5000 mL/h**
- ▶ Our devices are made of glass which allows us to process almost **any type of material**
- ▶ This solution is **patented**





We enable laboratory precision at industrial scale



HIGH THROUGHPUT

- ▶ Parallel multichannel setup
- ▶ Full scalability



SIZE CONTROL

- ▶ Precise and fine-grained control
- ▶ Large size range: 10 – 2000 μm



FLEXIBILITY

- ▶ Free material composition
- ▶ Flexible batch sizes



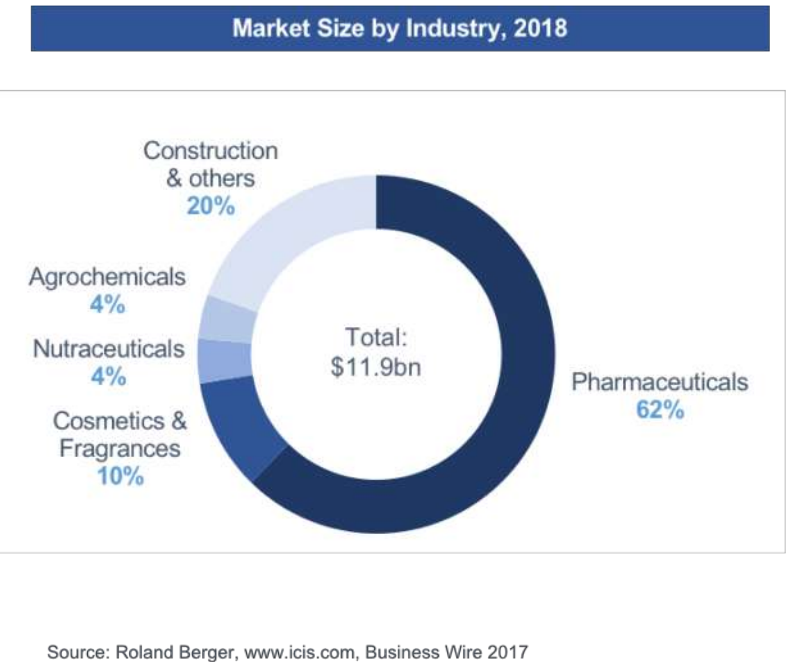
ROBUSTNESS

- ▶ Runs around the clock
- ▶ Minimal manual labor required



A market with a huge potential

- ▶ Our market analysis shows that the encapsulation market is **profitable with a sustained growth** of more than 10% per year
- ▶ We see great potential for our technology in **mid- to high-value products** of this market
- ▶ We are looking for first customers to conduct **proof of concepts (PoC)** that will lead to our first use cases



Roadmap





Meet the team



Alessandro Ofner
CEO & FOUNDER

PhD Material Science
FOUNDER

R&D product
development



Michael Hagander
CTO & FOUNDER

BSc Mech. Engineer

production line
development



Vittoria Picece
R&D CHEMISTRY

BSc Interdis. Sc.

ingredients and
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PRODUCTION SCALEUP

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ADVISORY BOARD

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Board Member Volvo AB
40 years consulting

Strategic Advisor



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R&D Pharma



Marketing



Sales



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