



HETEROMERGE

FUNCTIONAL 3D MICRO-PRINTING

Dr. Robert Kirchner
Strategy / Technology



Dr. Ye Yu
Fluidics / Materials



Man Ho Wong
Mechanics



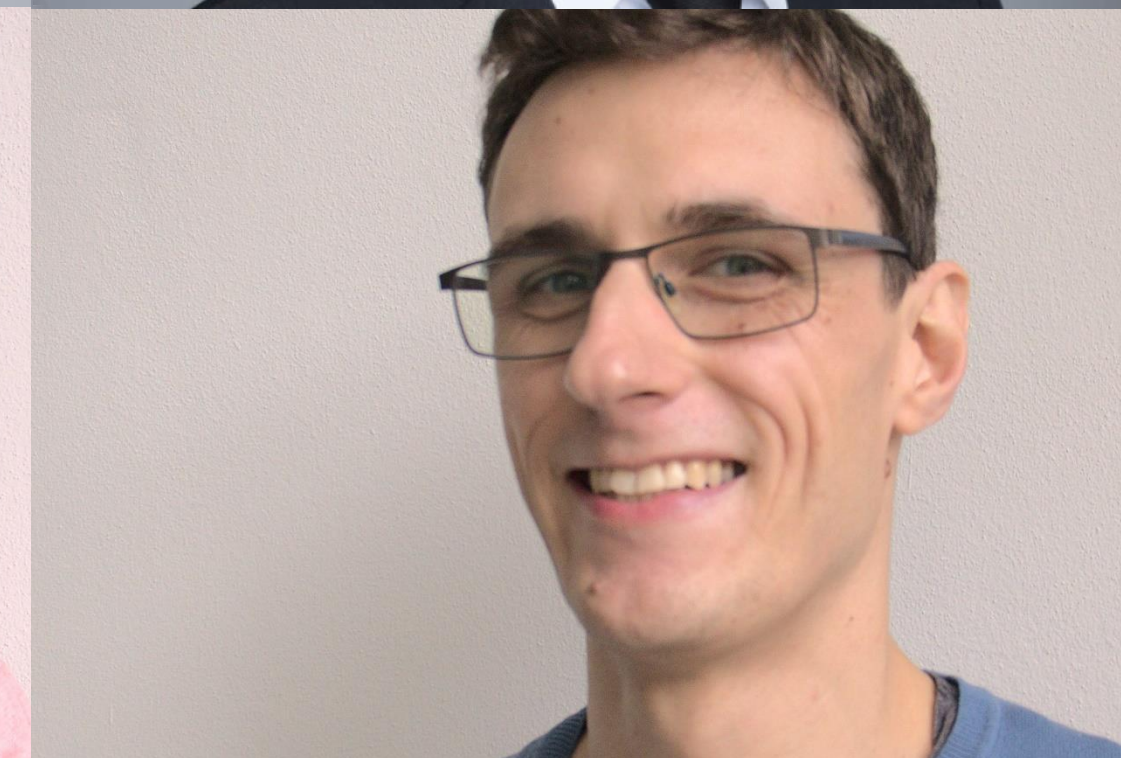
Jörg Knorr
Finance / Commercial



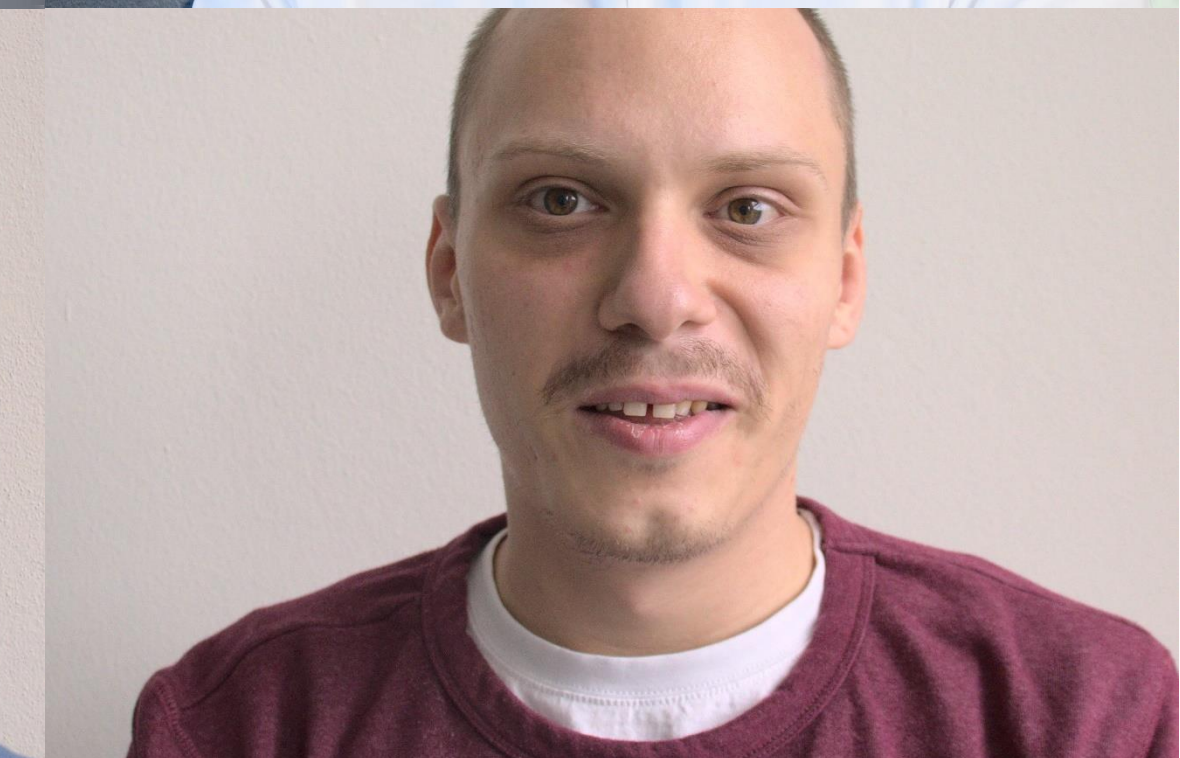
Siddharth Das
Software / Electronics



Madhuri Chennur
Process



Josua Zscheile
Software



Markus Peschtrich
Marketing, Media & Design

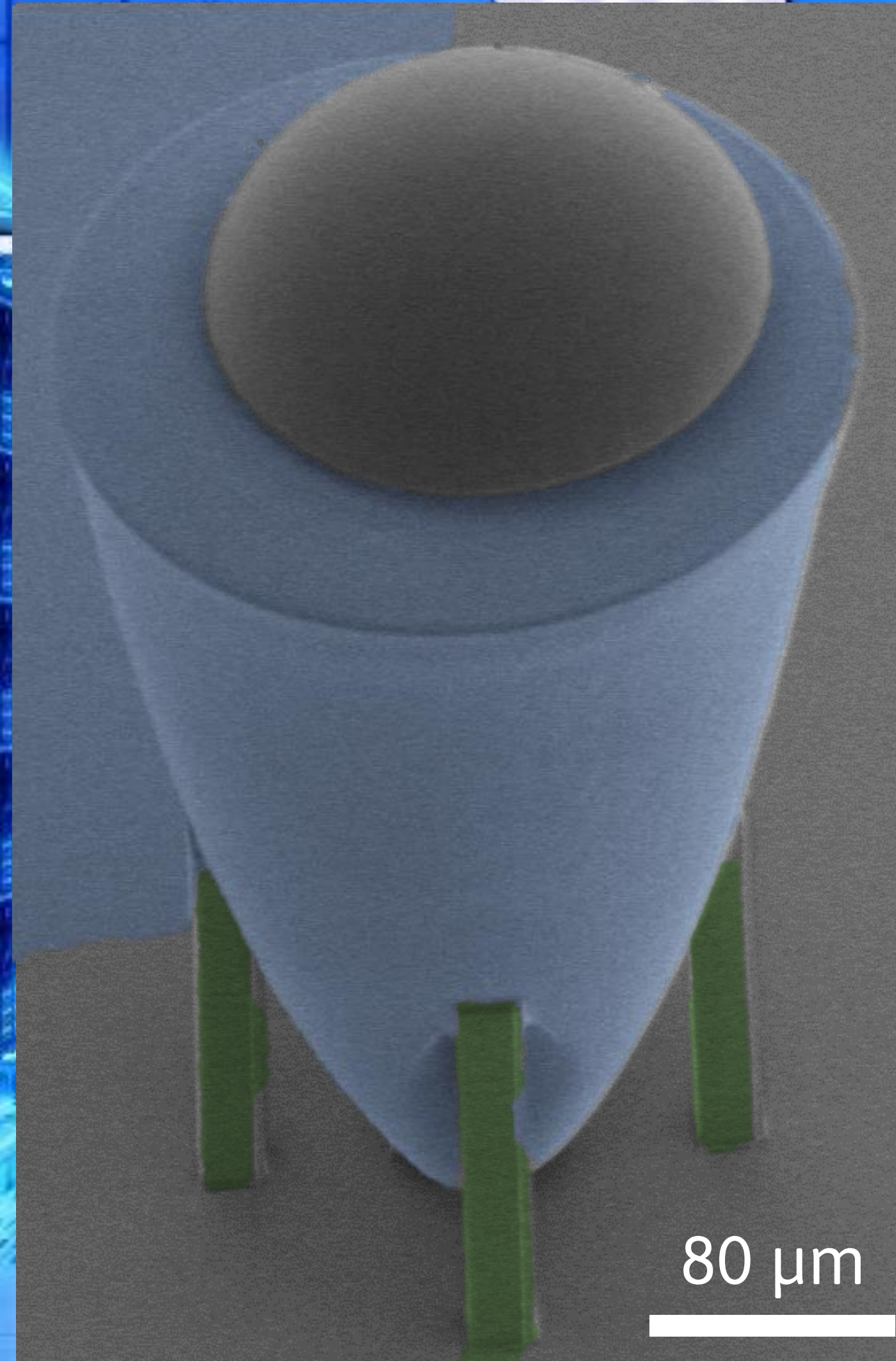
Advisory Board and Mentoring

Multi-photon lithography
(MPP or 2PP)



KEY INDUSTRIAL MARKET: INTEGRATED OPTICS AND CO-PACKAGED OPTICS

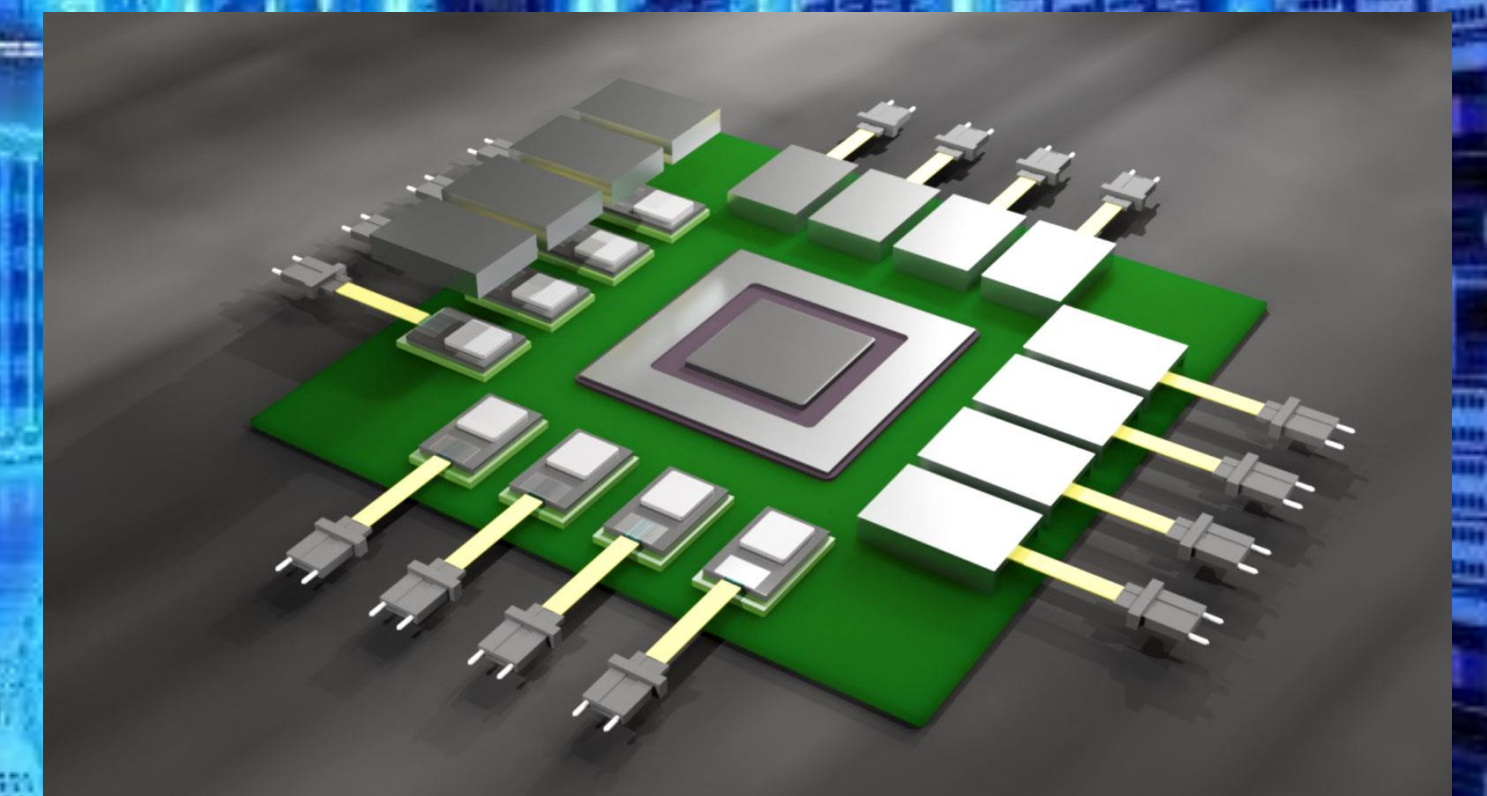
Free-form 3D micro-printing



3D printed compound optics



3D printed photonics

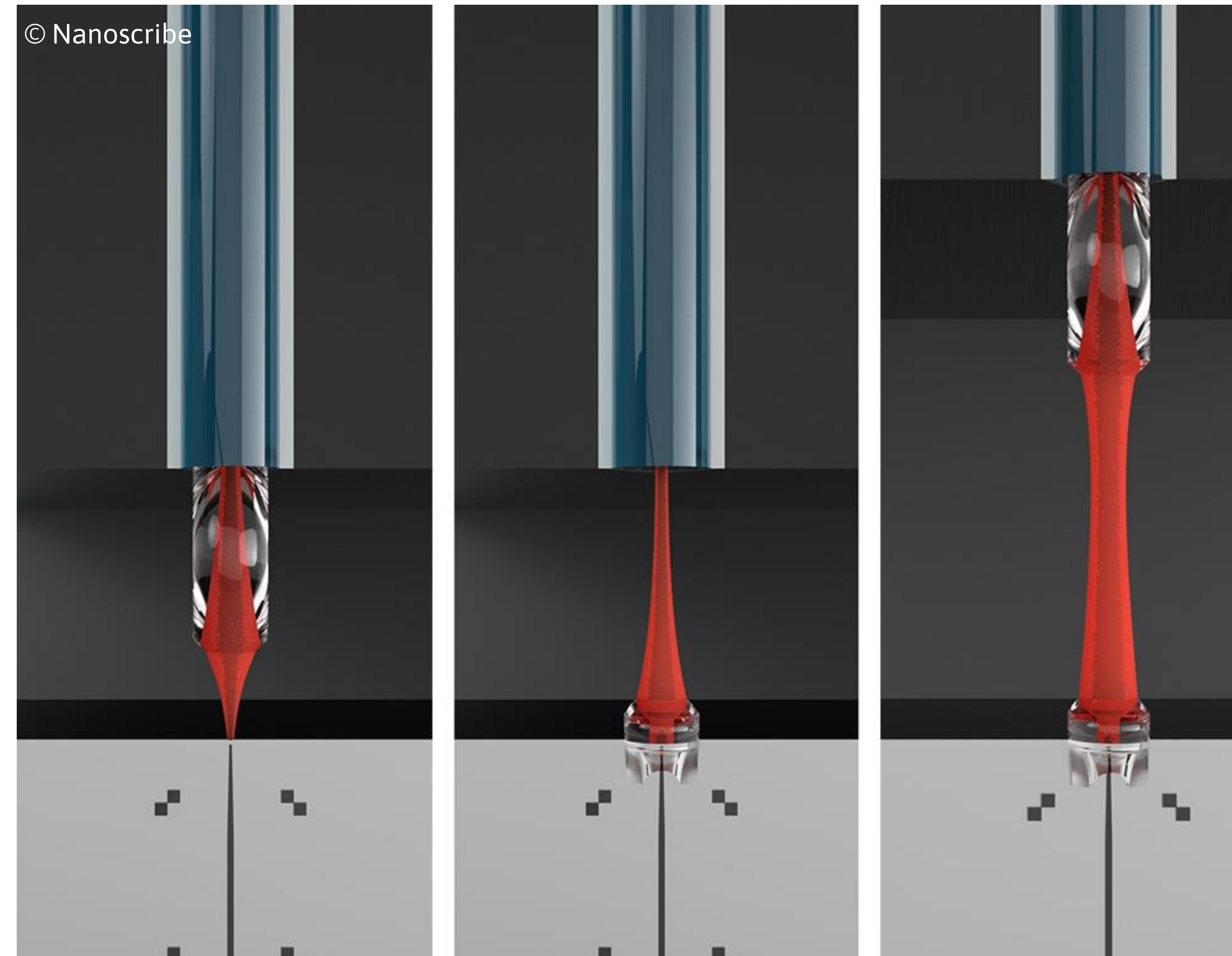


Multi-functional printing



MICRO-IMAGING OPTICS

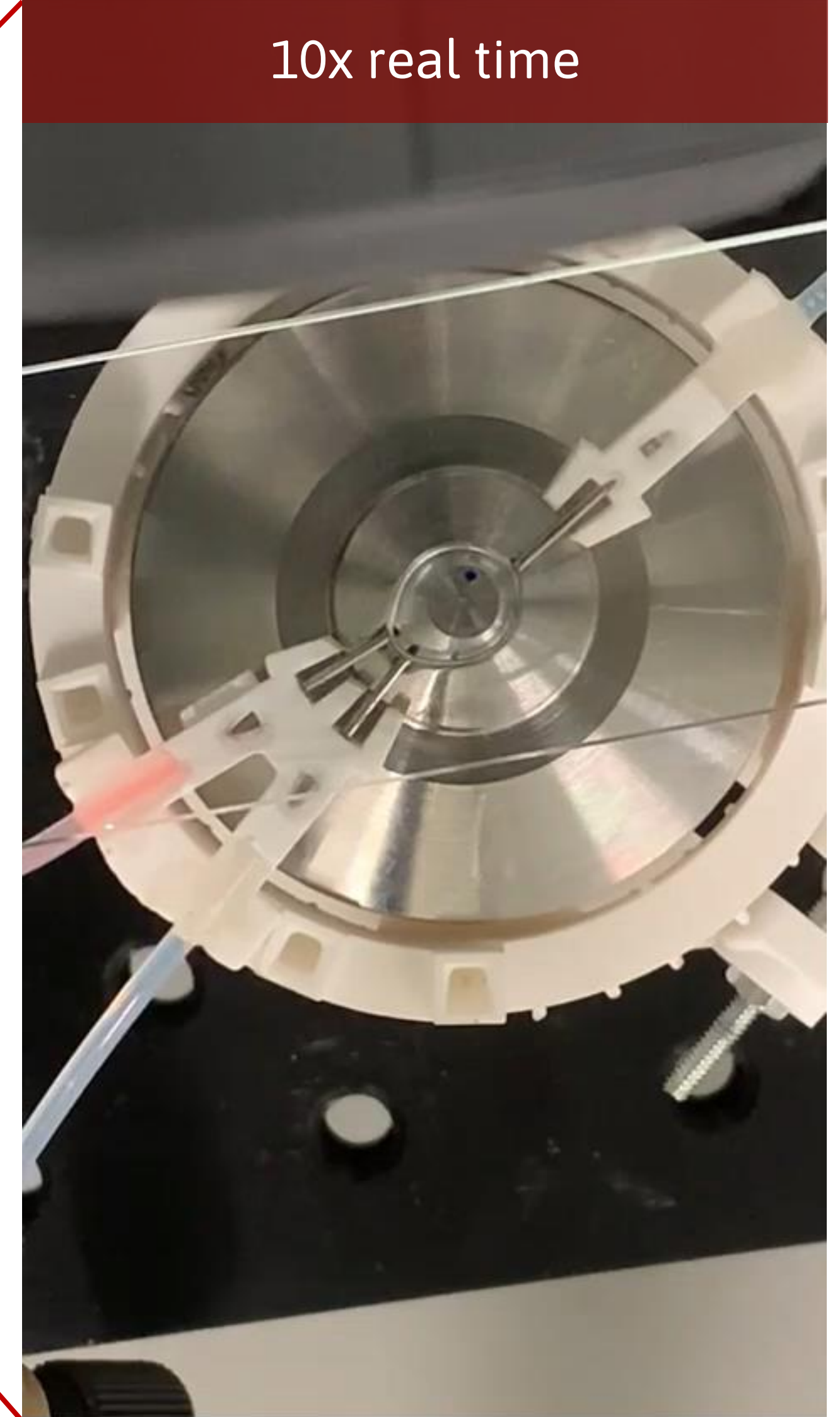
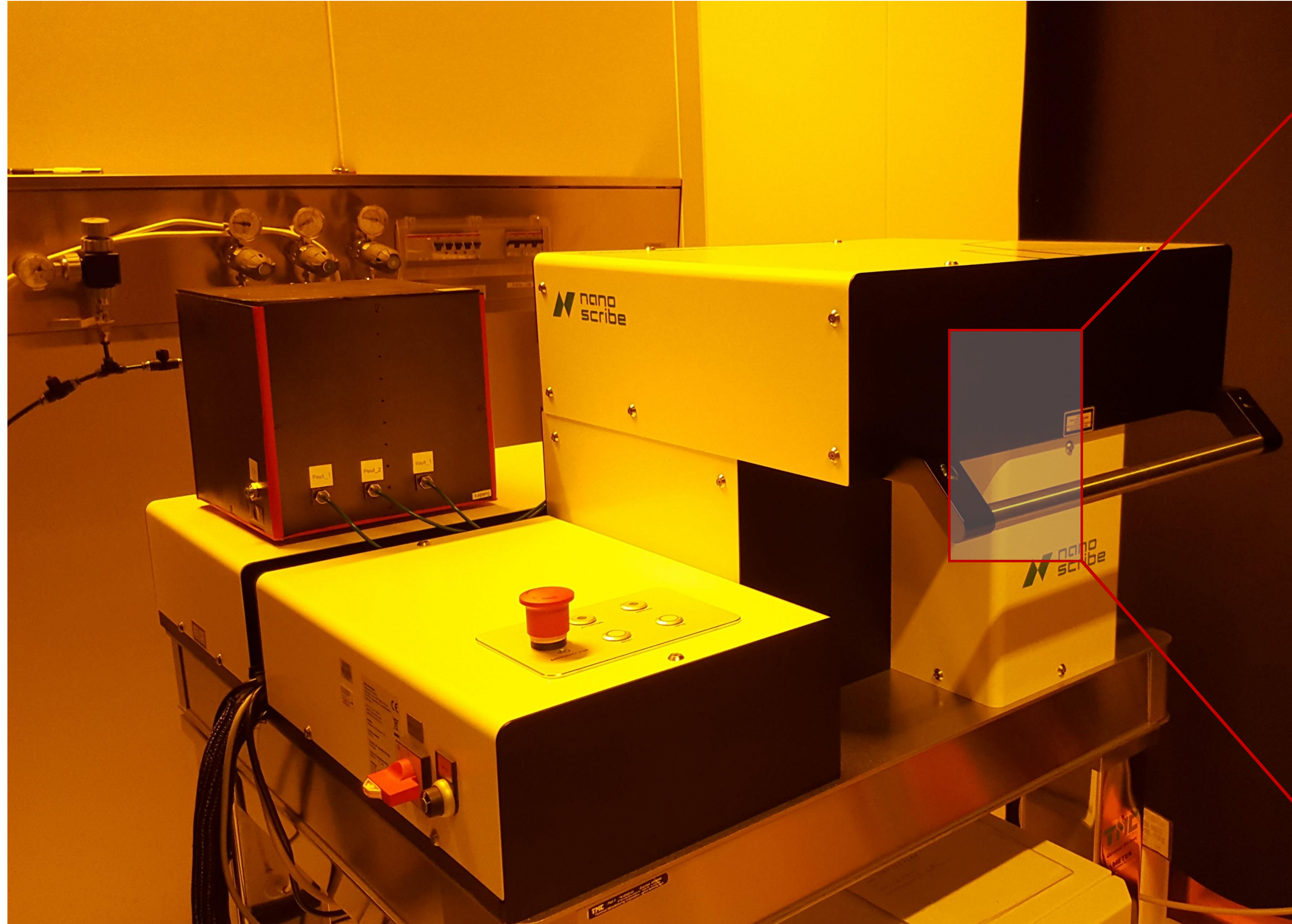
US\$ 5 bn (CAGR: 47%)*

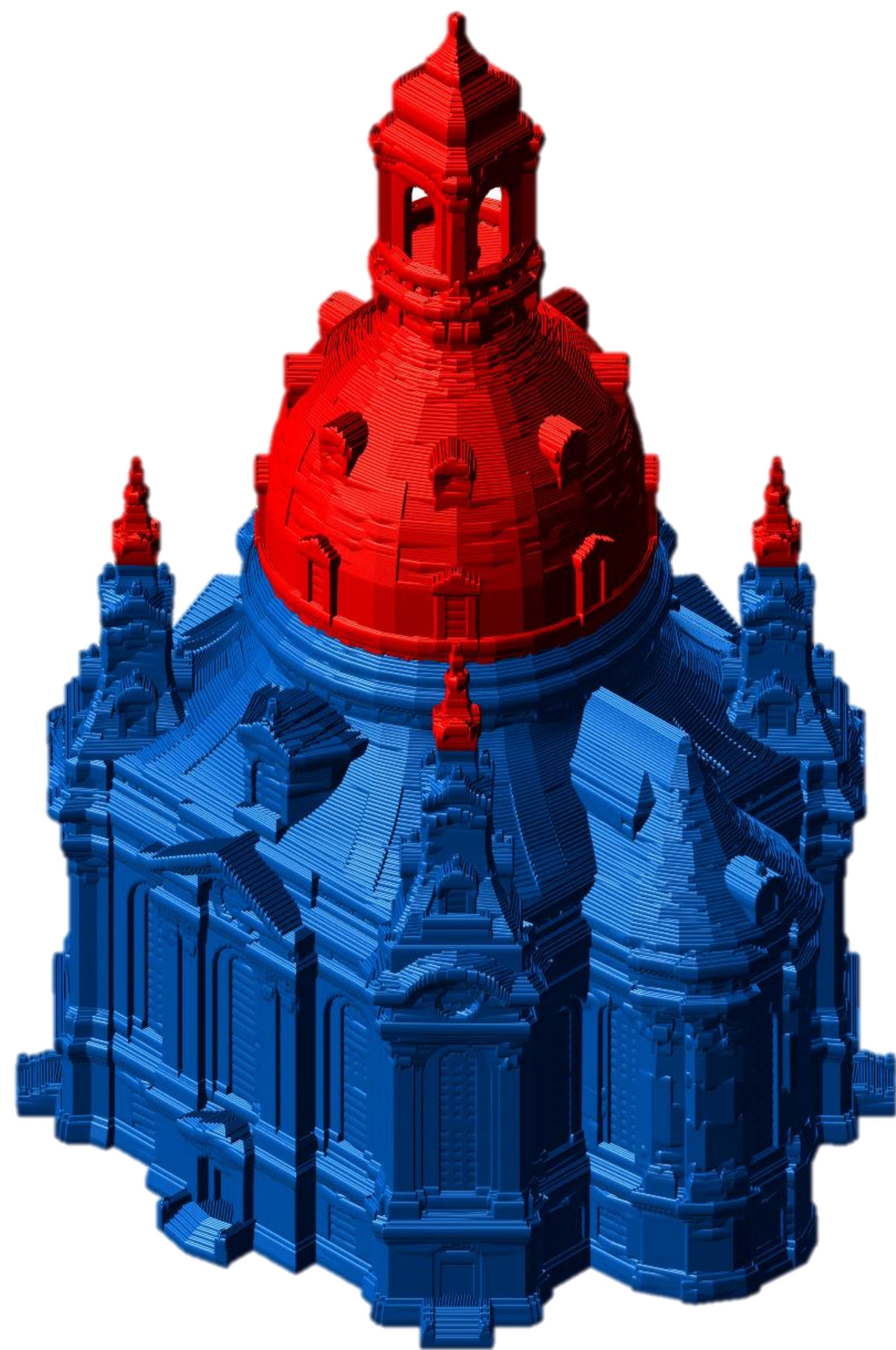


PHOTONICS PACKAGING

US\$ 10 bn (CAGR: 22%)*

* consolidated market reports



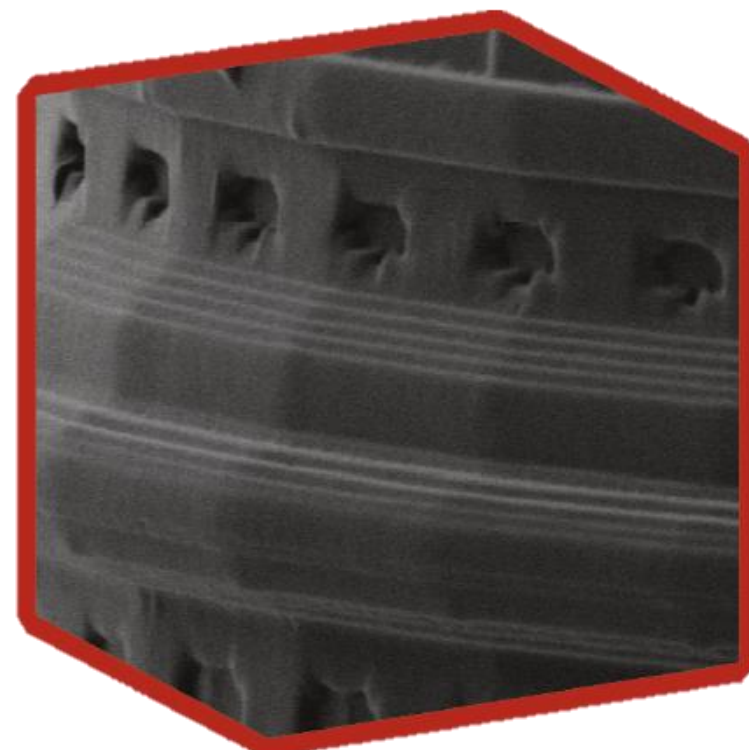


100 μm



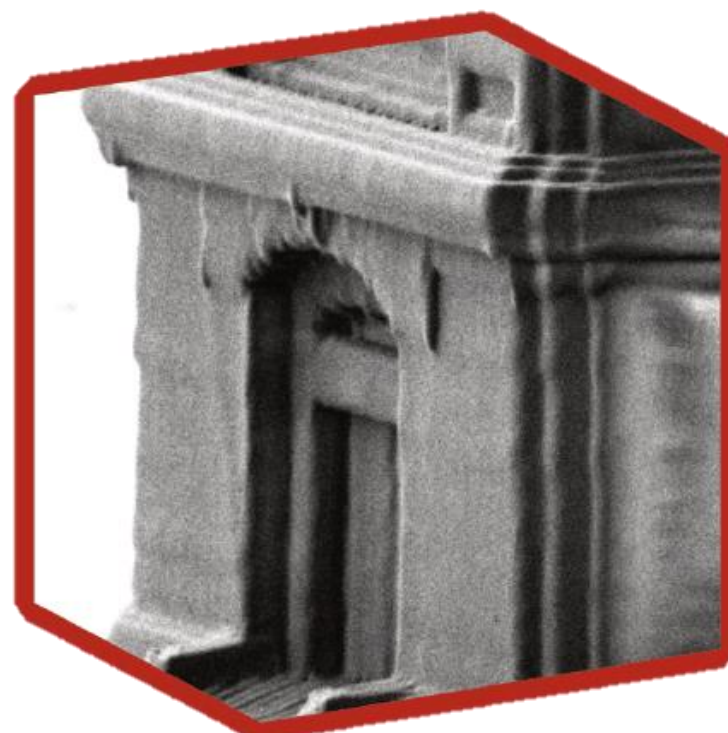
automated and fast material exchange (< 60 s PETA)

10x



Perfect placement accuracy (~ 10 nm)

100x



Substrate independent on active devices and wafer-level

∞

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Pilot customer program
System R&D
Company setup

Limited to 10 pilot customers
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www.heteromerge.com/pilotprogram



Universität Stuttgart

4th Physics Institute

Prof. Harald Gießen & Team

during MergeOne-

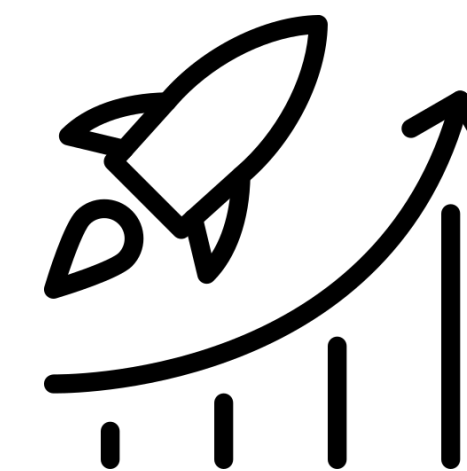
Training 30.09.2022

“In-situ material exchange in 2PP-systems,
this is a new fabrication paradigm!”



3D printing trend

(industrial awareness)



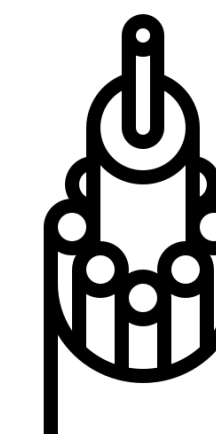
2PP enters industry 2-5 years

(R&D push + customers pull)



Photonics integration trend

(applications need)





CONTACT

Robert Kirchner

Dr.-Ing. | Managing Director

Office: + 49 351 463 43966

Mobile: + 49 1722 0026 26

robert.kirchner@heteromerge.com

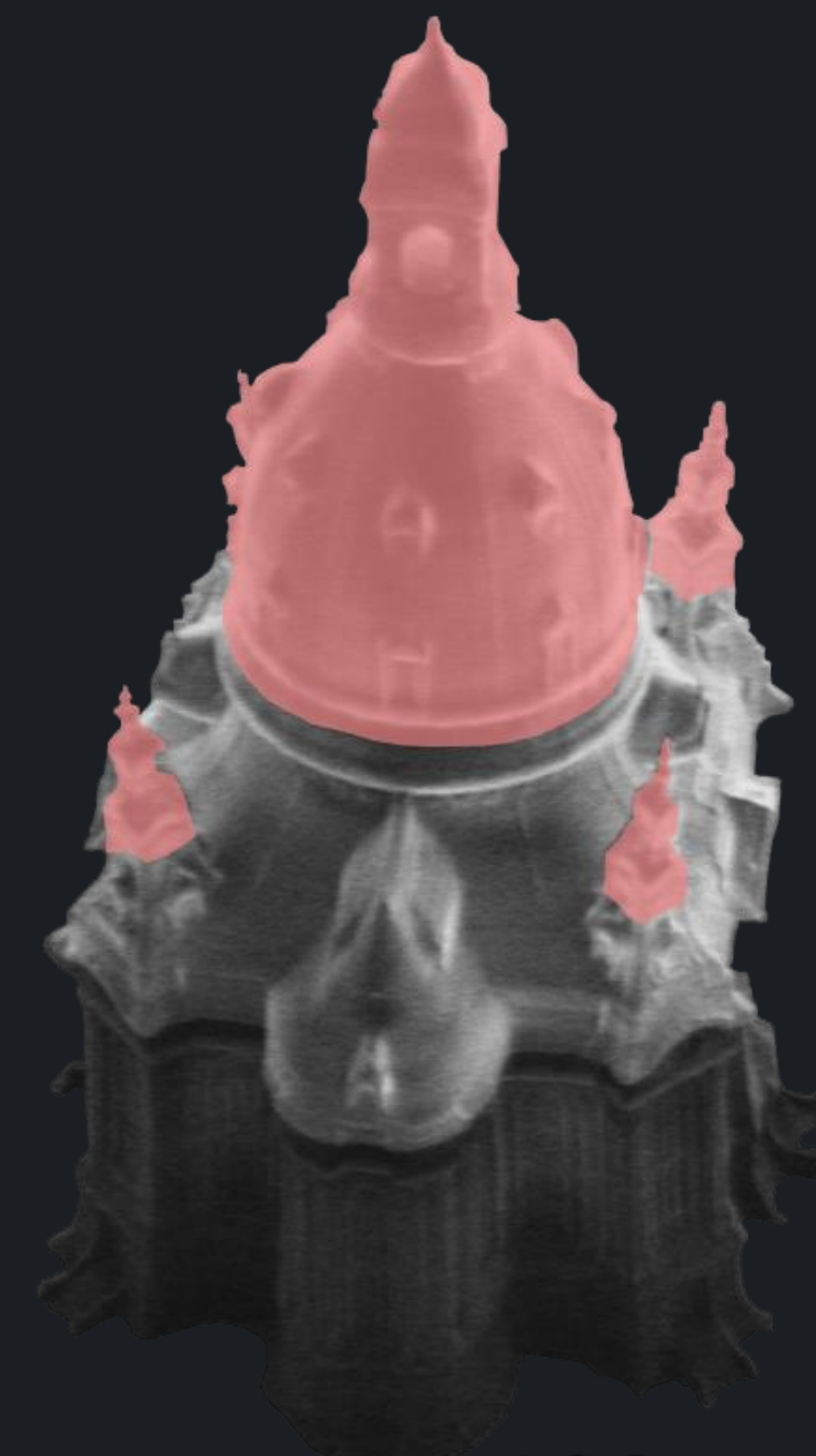
Jörg Knorr

Head of Finance

Office: + 49 351 463 40945

Mobile: + 49 1577 9570 970

joerg.knorr@heteromerge.com



100 μm

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Gefördert durch:



Bundesministerium
für Wirtschaft
und Energie

aufgrund eines Beschlusses
des Deutschen Bundestages



Existenzgründungen
aus der Wissenschaft



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für Deutschland



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Zusammen.
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