

HETEROMERGE

FUNCTIONAL 3D MICRO-PRINTING

Functional 3D Micro-printing

The Power of In Situ Material Exchange
in 2-Photon Polymerization

Dr. Robert Kirchner

EPIC Online Technology Meeting on AM

HETEROMERGE GmbH | Gostritzer Str. 61 | 01217 Dresden

MACRO



optical quality ✓

MILLI



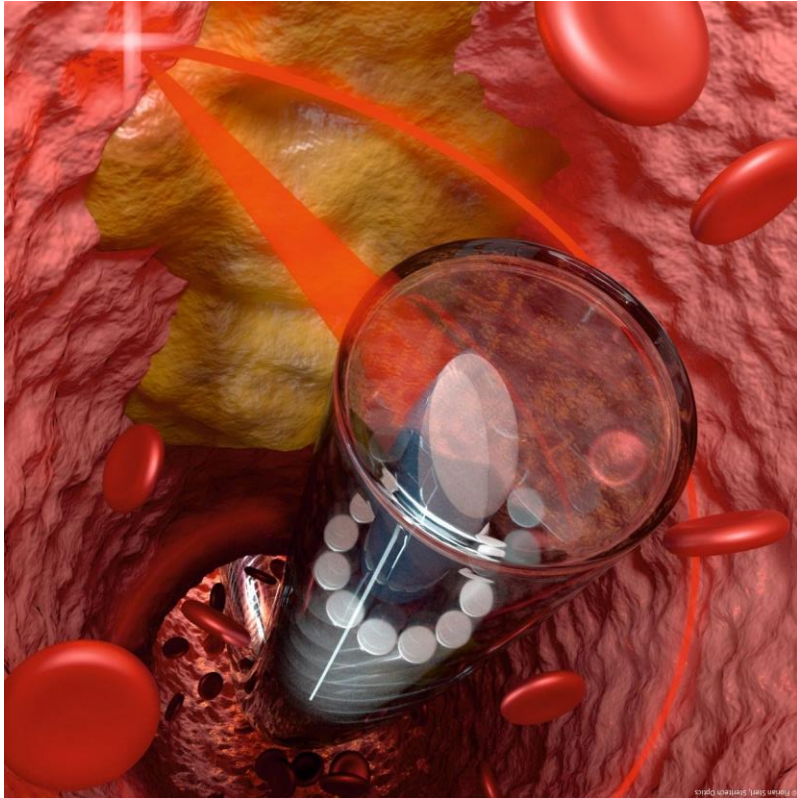
optical quality ✓

MICRO



optical quality ✗

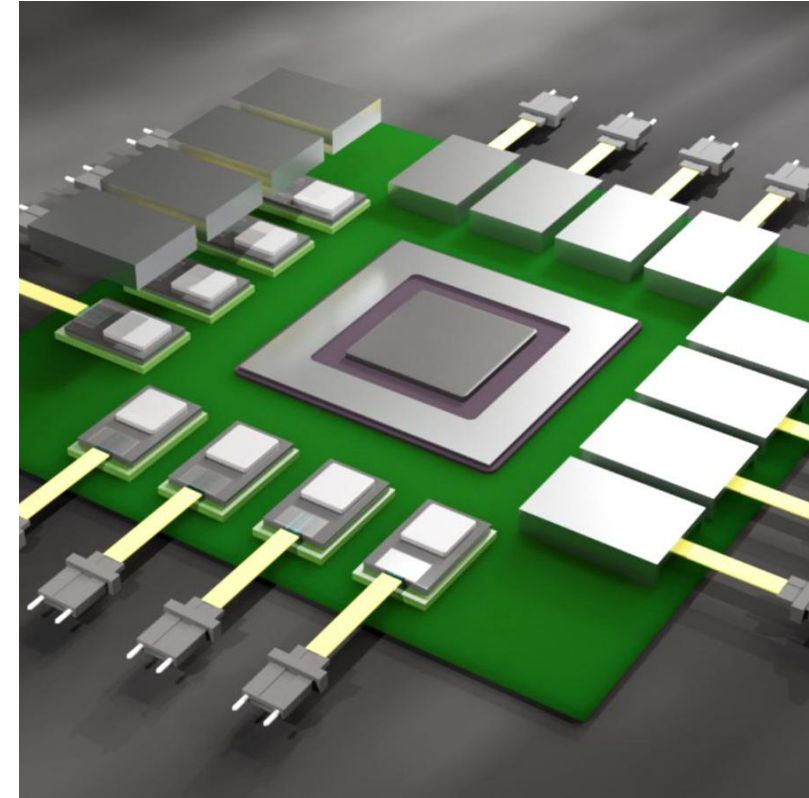
MEDICAL IMAGING



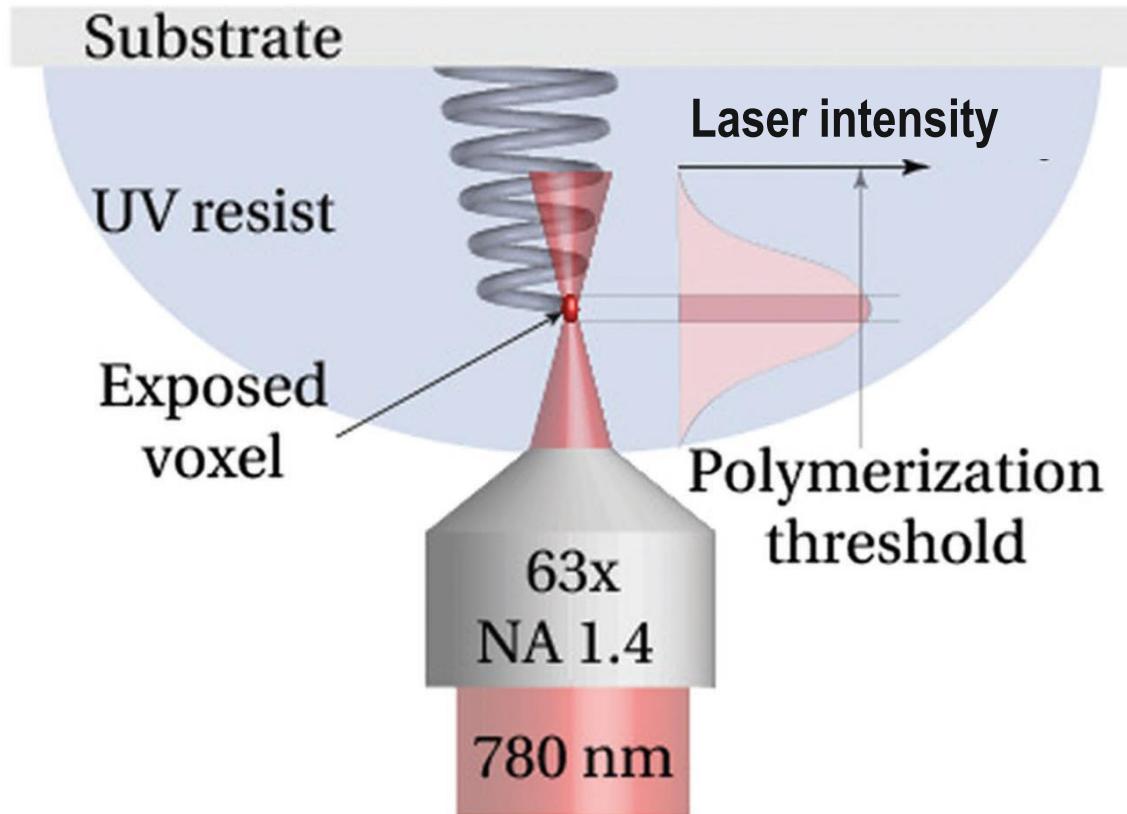
SMART APPLICATIONS



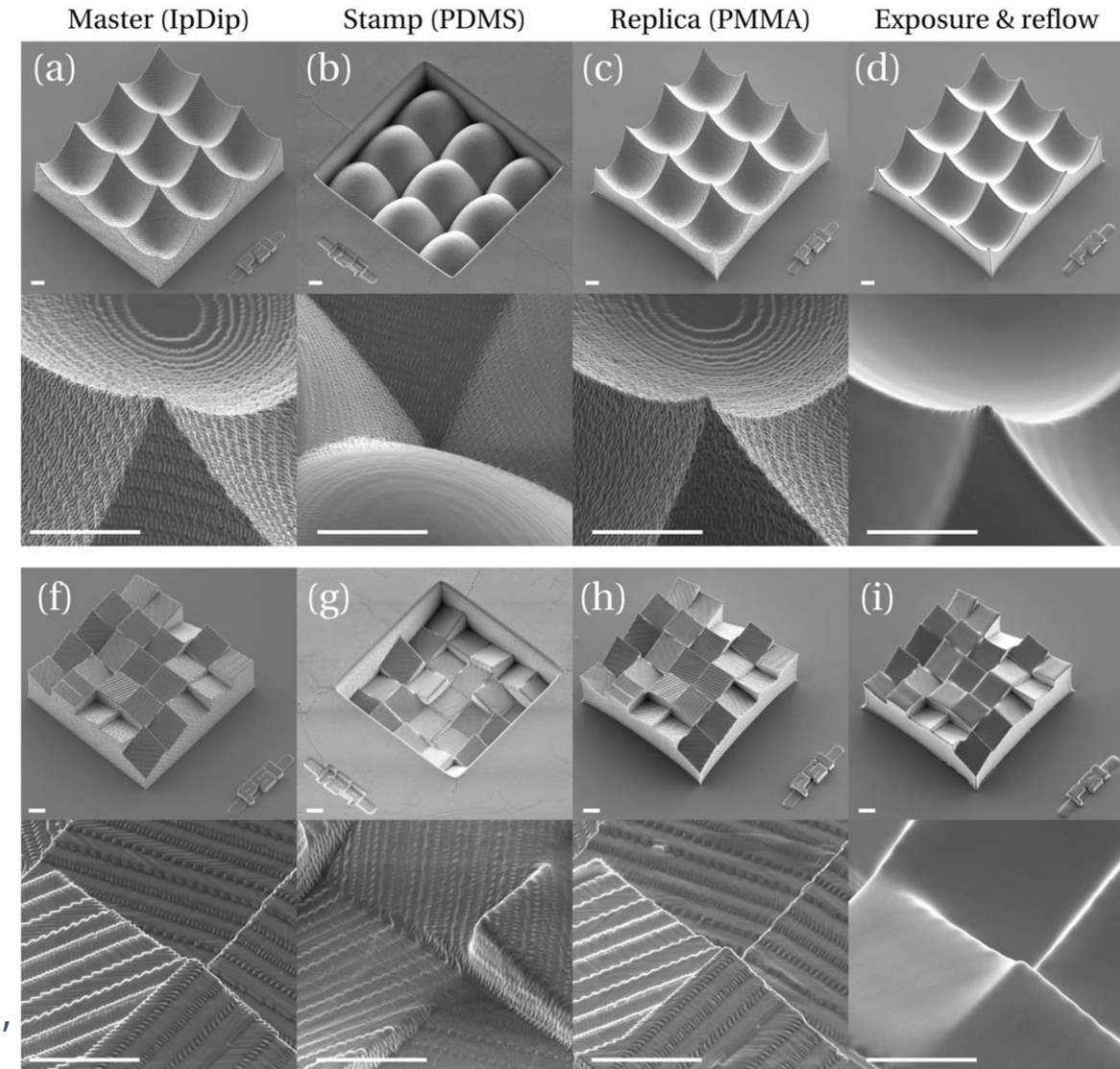
PHOTONICS PACKAGING



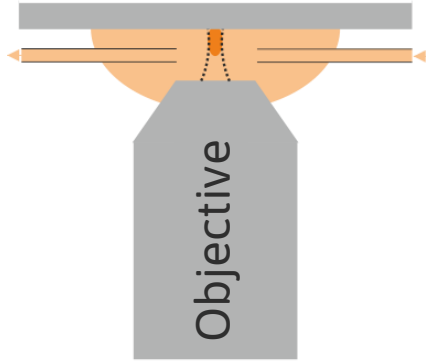
2PP: high resolution 3D printing



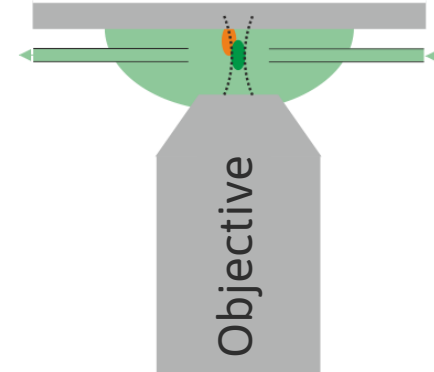
N. Chidambaram and R. Kirchner et al. Adv. Mater. Technol. 2017, 1700018 | N. Chidambaram and R. Kirchner et al. J. Vac. Sci. Technol. B 34(6), Nov/Dec 2016



Printing Material A

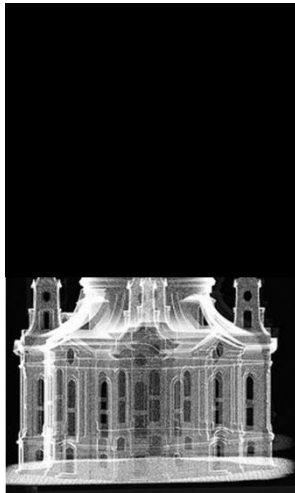


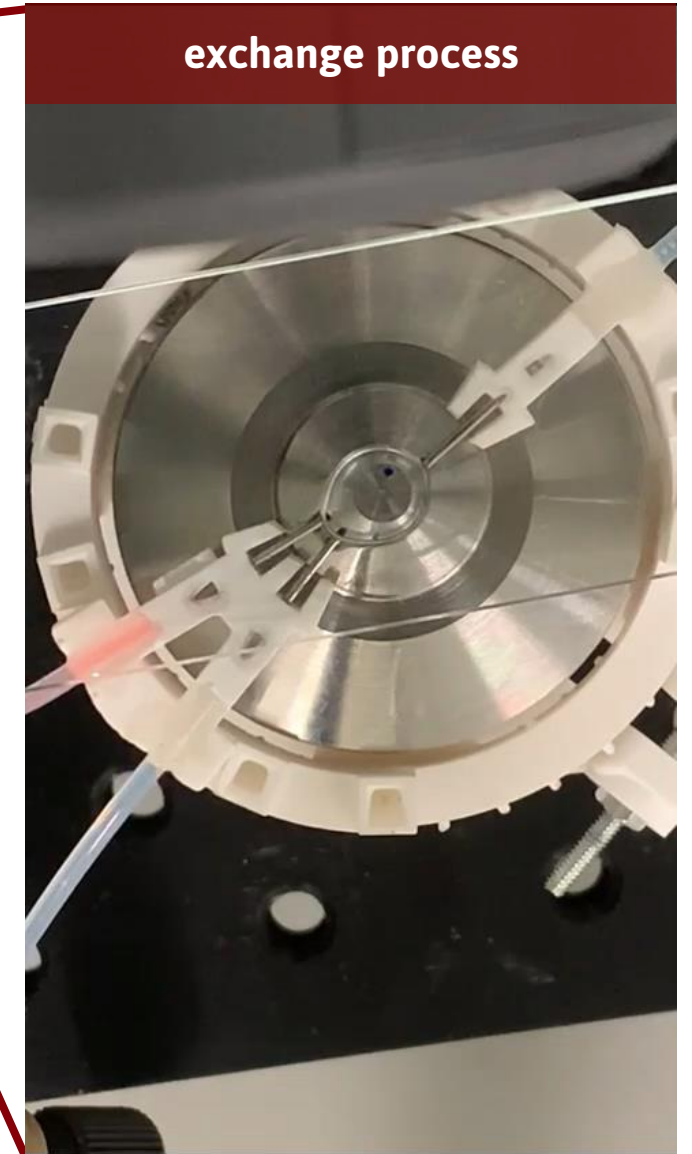
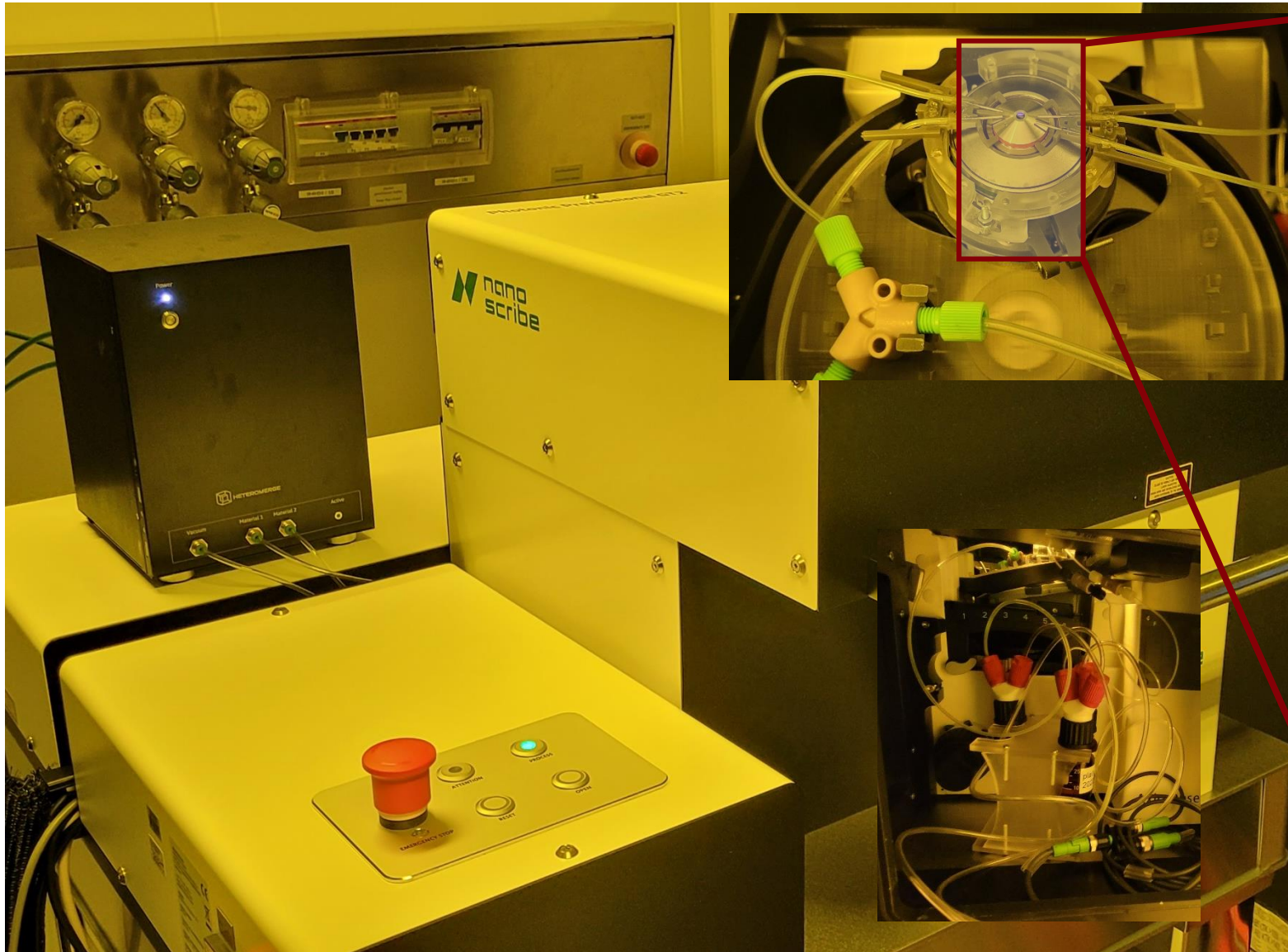
Printing Material B

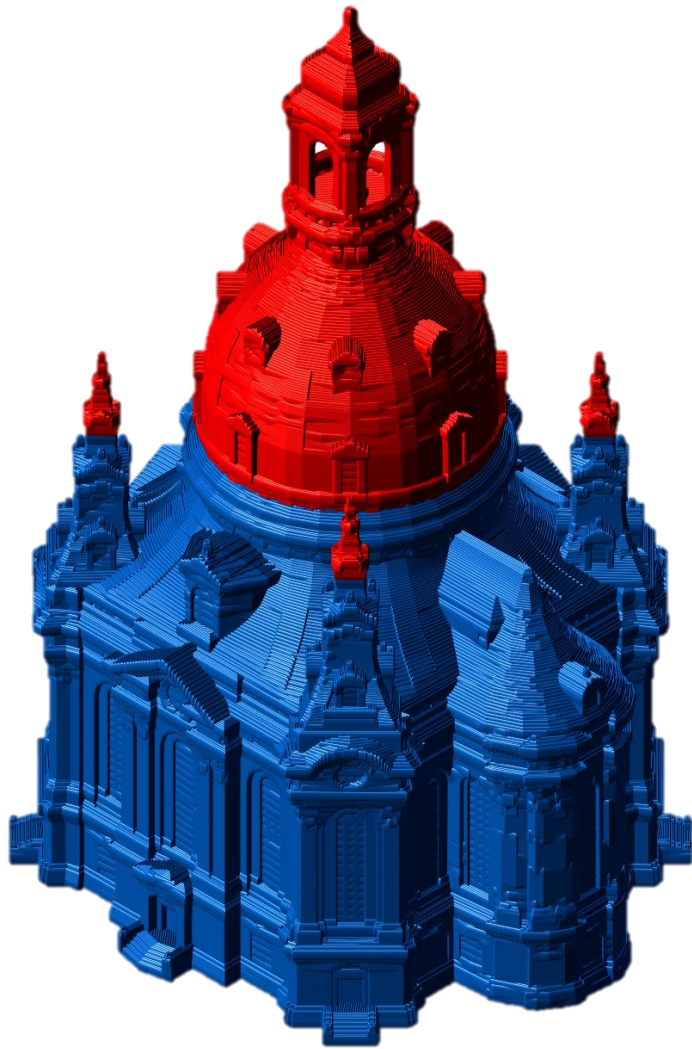


Material exchange

Start over





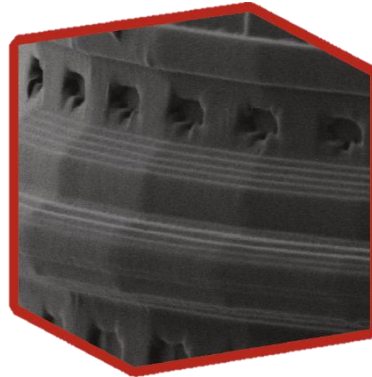


100 μm 



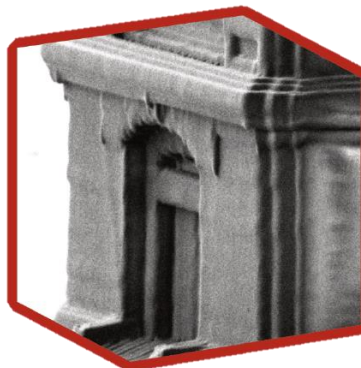
automated and fast material
exchange (< 60 s PETA)

10x



Perfect placement
accuracy (~ 10 nm)

100x

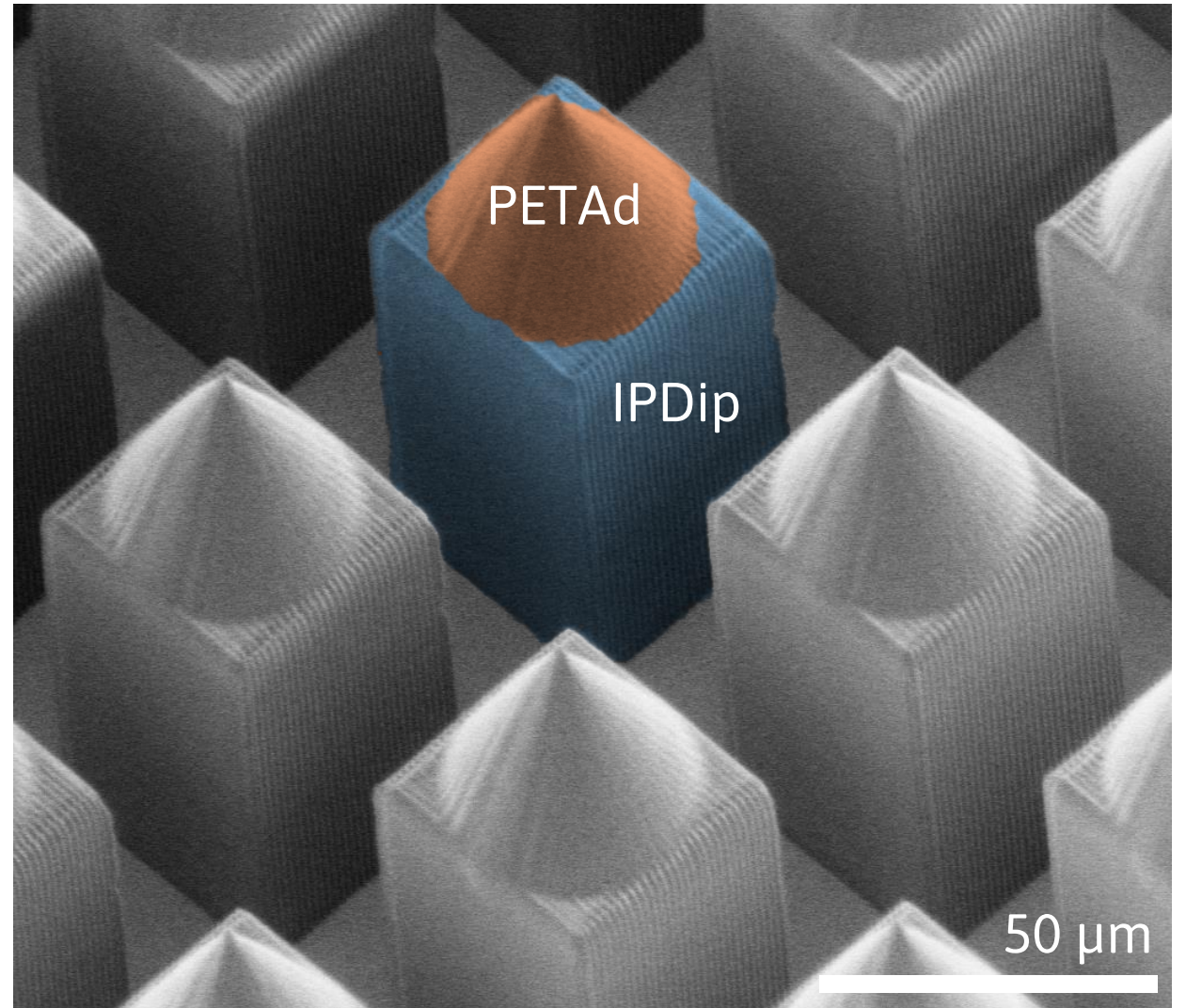
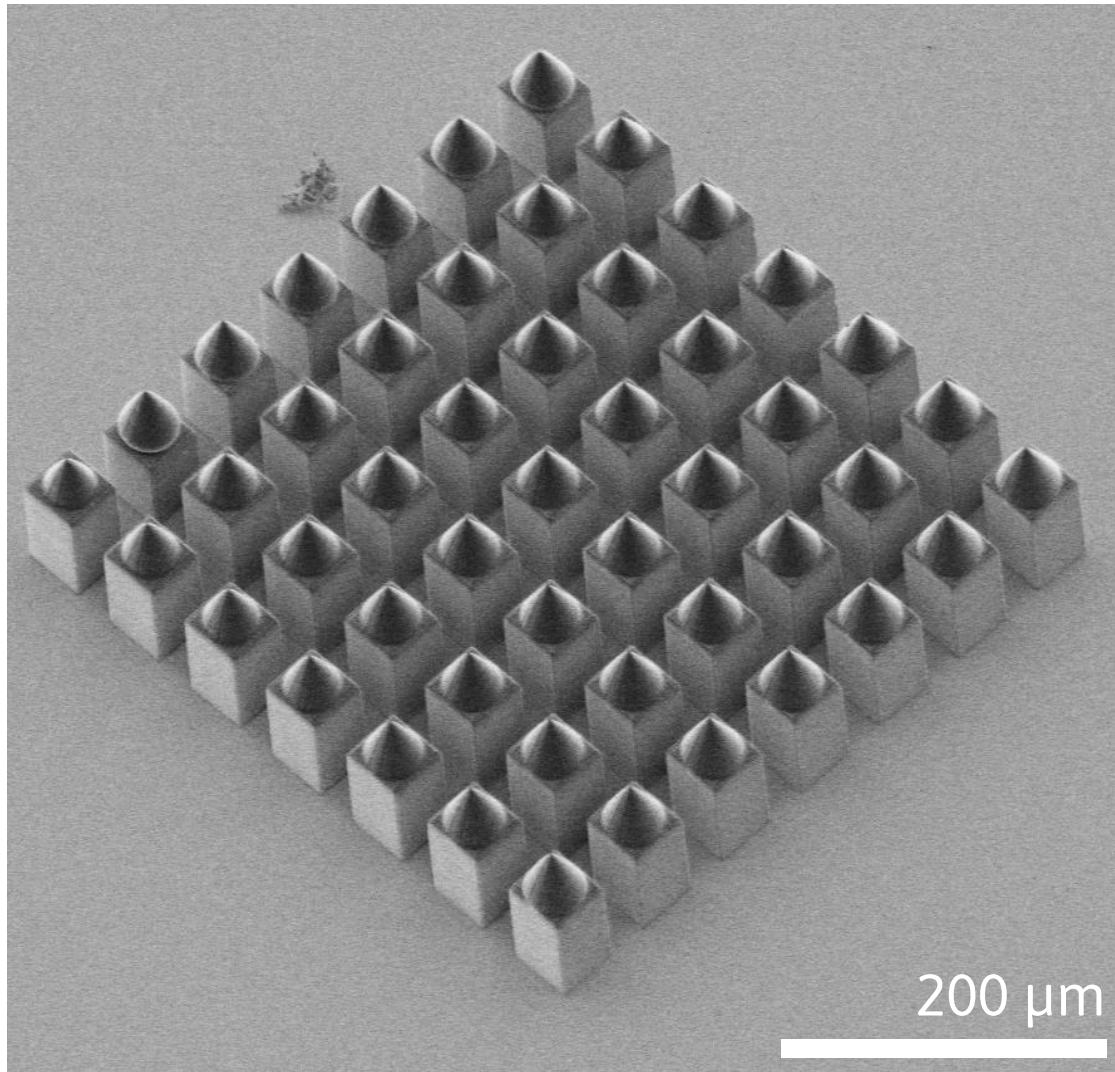


Substrate independent
on active devices and
wafer-level

∞

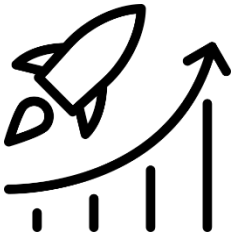


Use cases & customer stories





We do develop a multi-material processing system as add-on to existing 2PP systems.



We offer the full system including technology and service. We also offer process development and joint feasibility studies with new customers.



We look for your micro-additive needs to make them come true with our printing solutions. We are driven by optics/photonics and expanding our knowledge.



WE ARE HIRING
Sales Engineer
Development Engineer



TALK TO US

Dr. Robert Kirchner | CEO
robert.kirchner@heteromerge.com

HETEROMERGE GmbH
Gostritzer Straße 61
01217 Dresden

Tel.: +49 351 463 43966 | info@heteromerge.com

