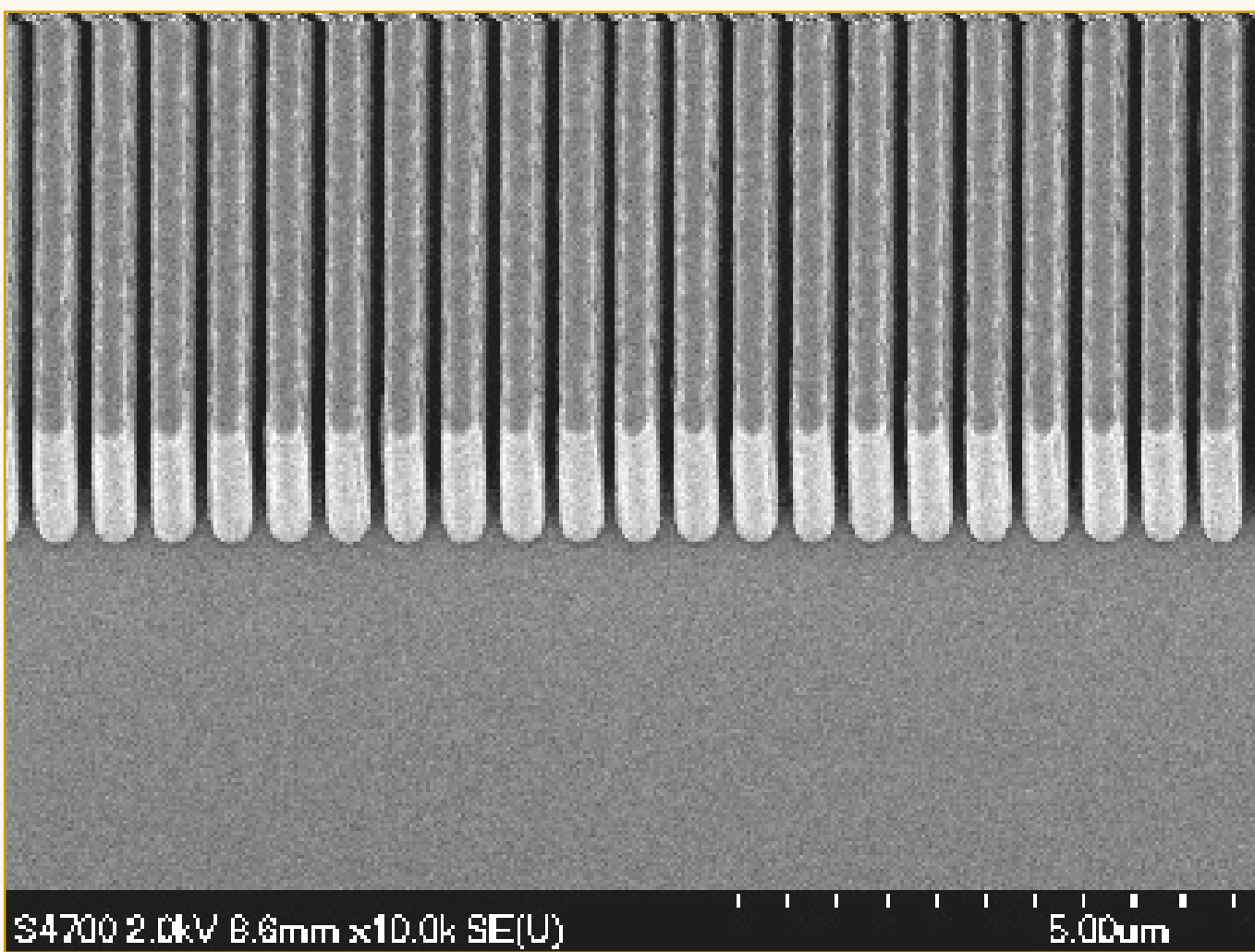
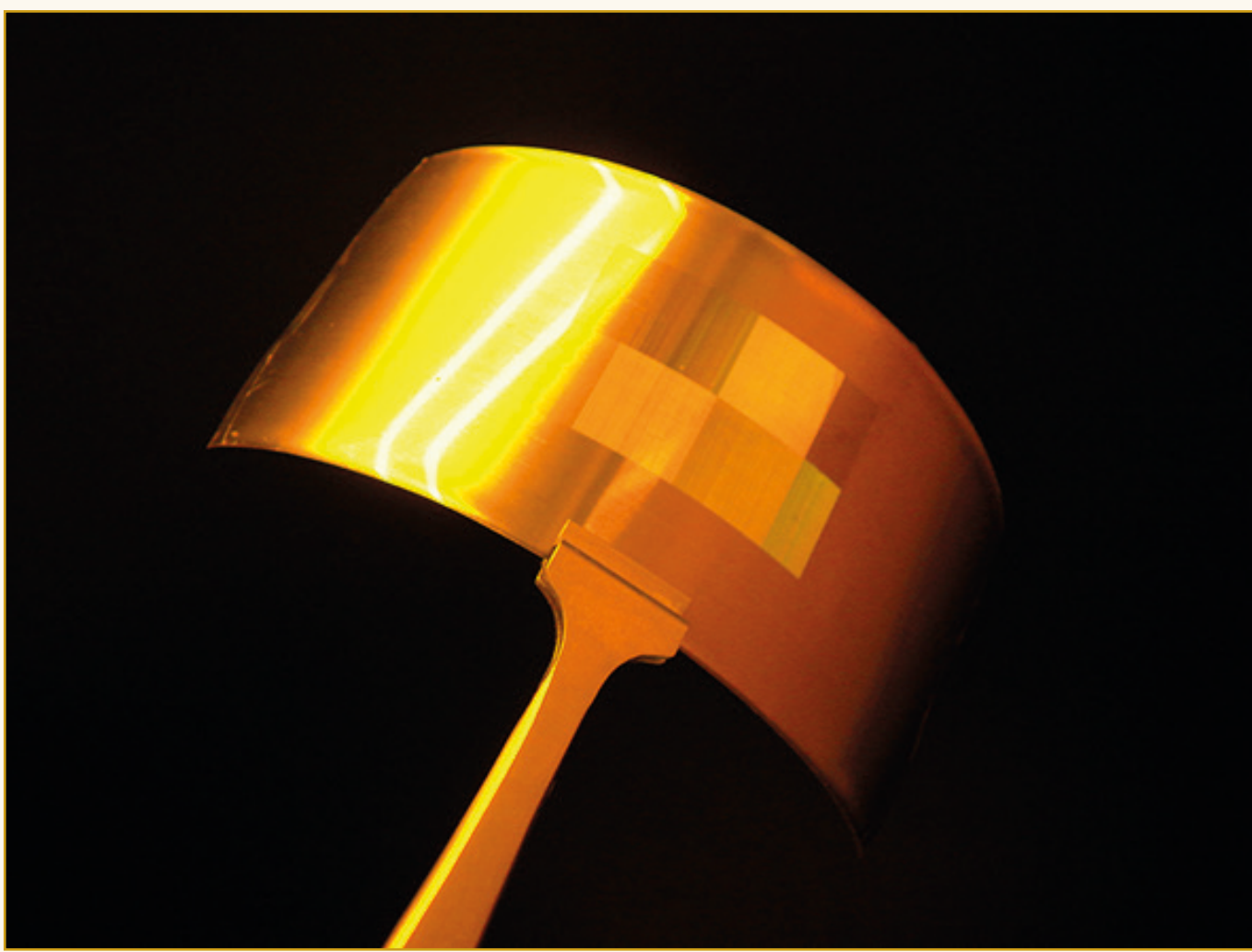


# OrmoStamp® for Polymer Working Stamps

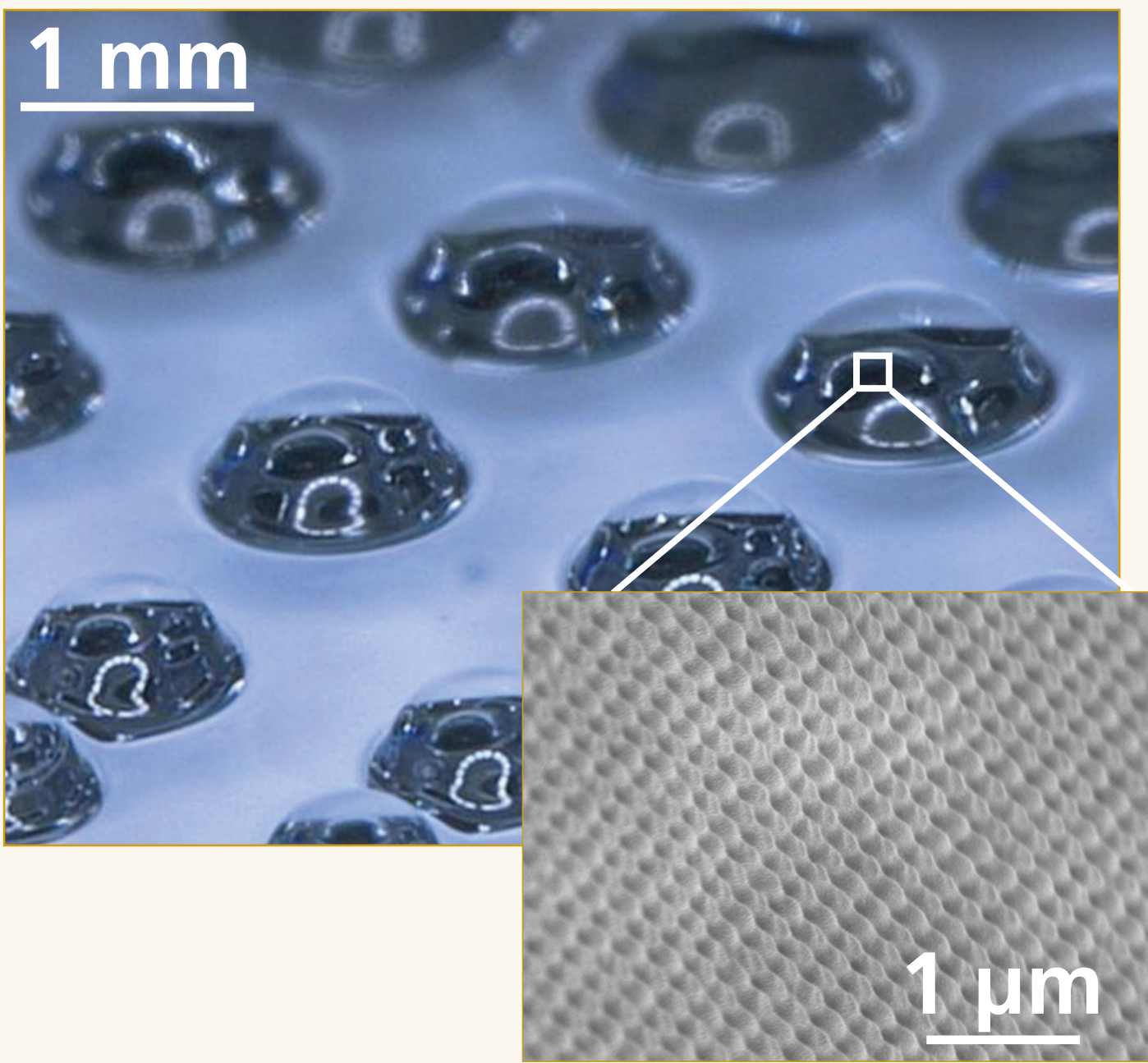
## Transparent working stamps for NIL and related techniques



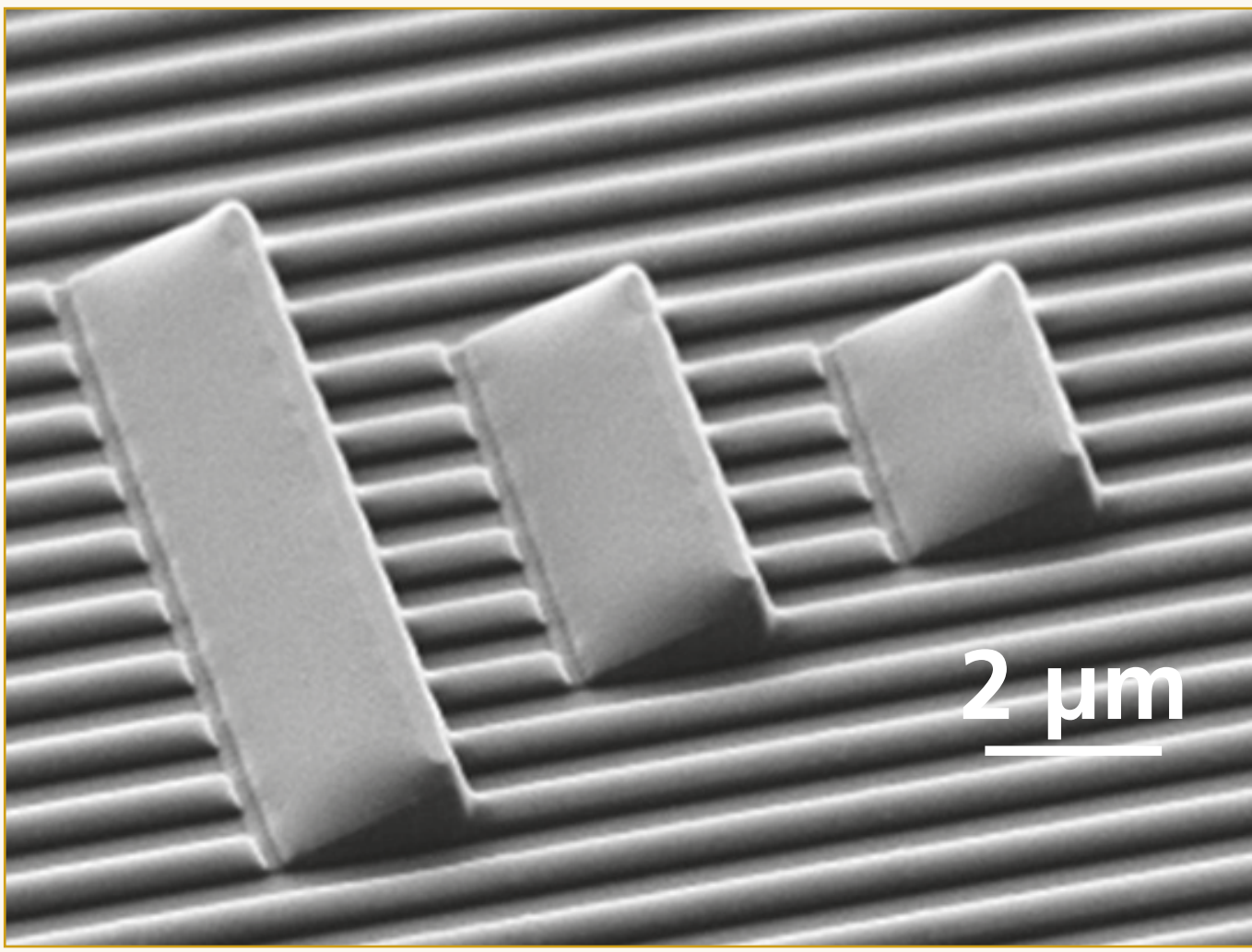
OrmoStamp® mold with high aspect ratio  
(Courtesy of TU Dresden, Germany)



Flexible OrmoStamp® on Nickel backplate  
(Courtesy of PSI, Switzerland)

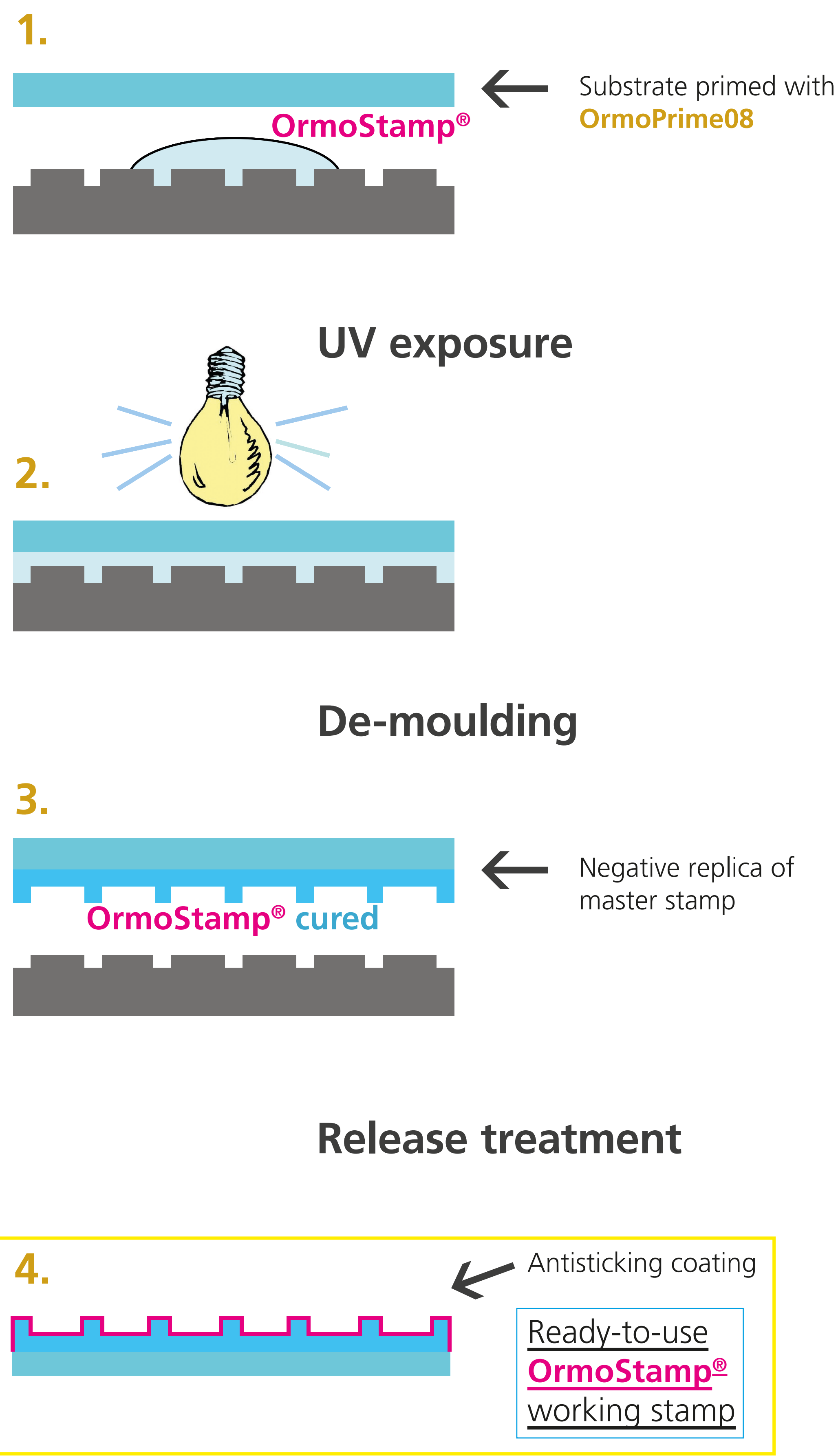


OrmoStamp® replication at different length scales  
(Courtesy of HZB, Germany)



3D structures copied into OrmoStamp®  
(Courtesy of PSI, Switzerland)

### Process flow

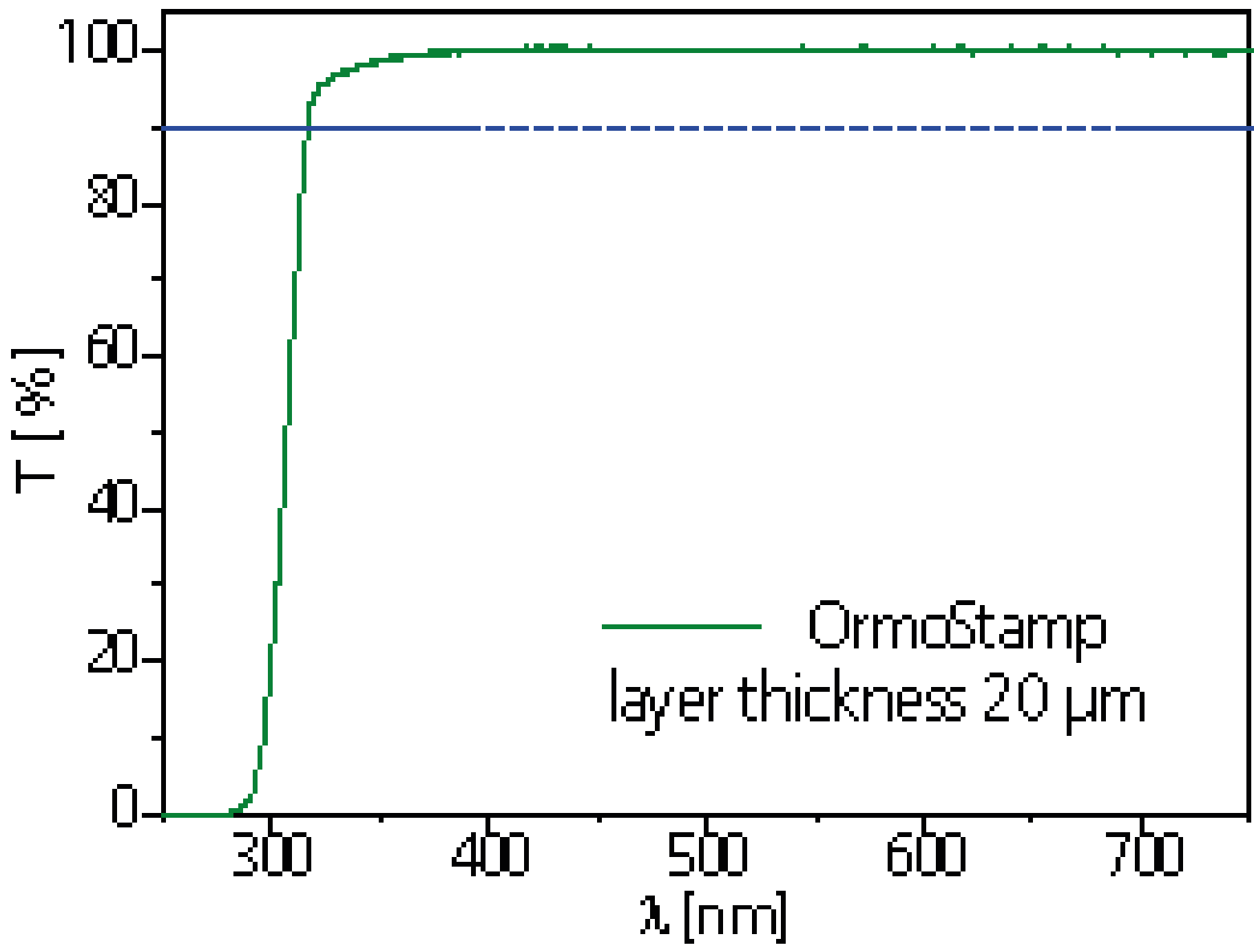


Next steps:

**IMPRINT**  
UV-based or/and thermal

### Unique features

- Mechanically and thermally stable
- Excellent pattern replication
- Processing with standard lithography equipment
- Enhanced anti-adhesive properties for low release forces
- Highly transparent for UV and visible light

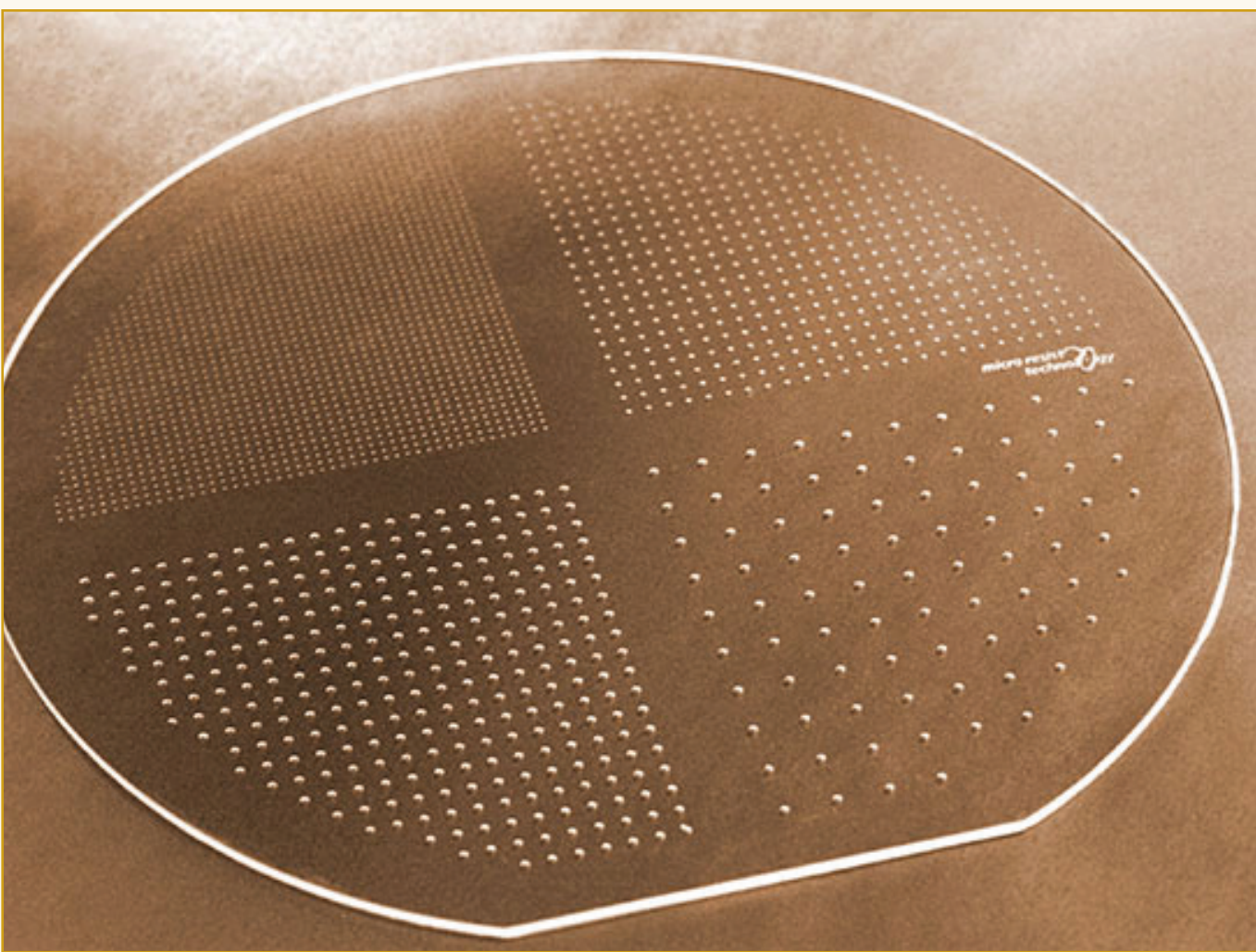


### Applications

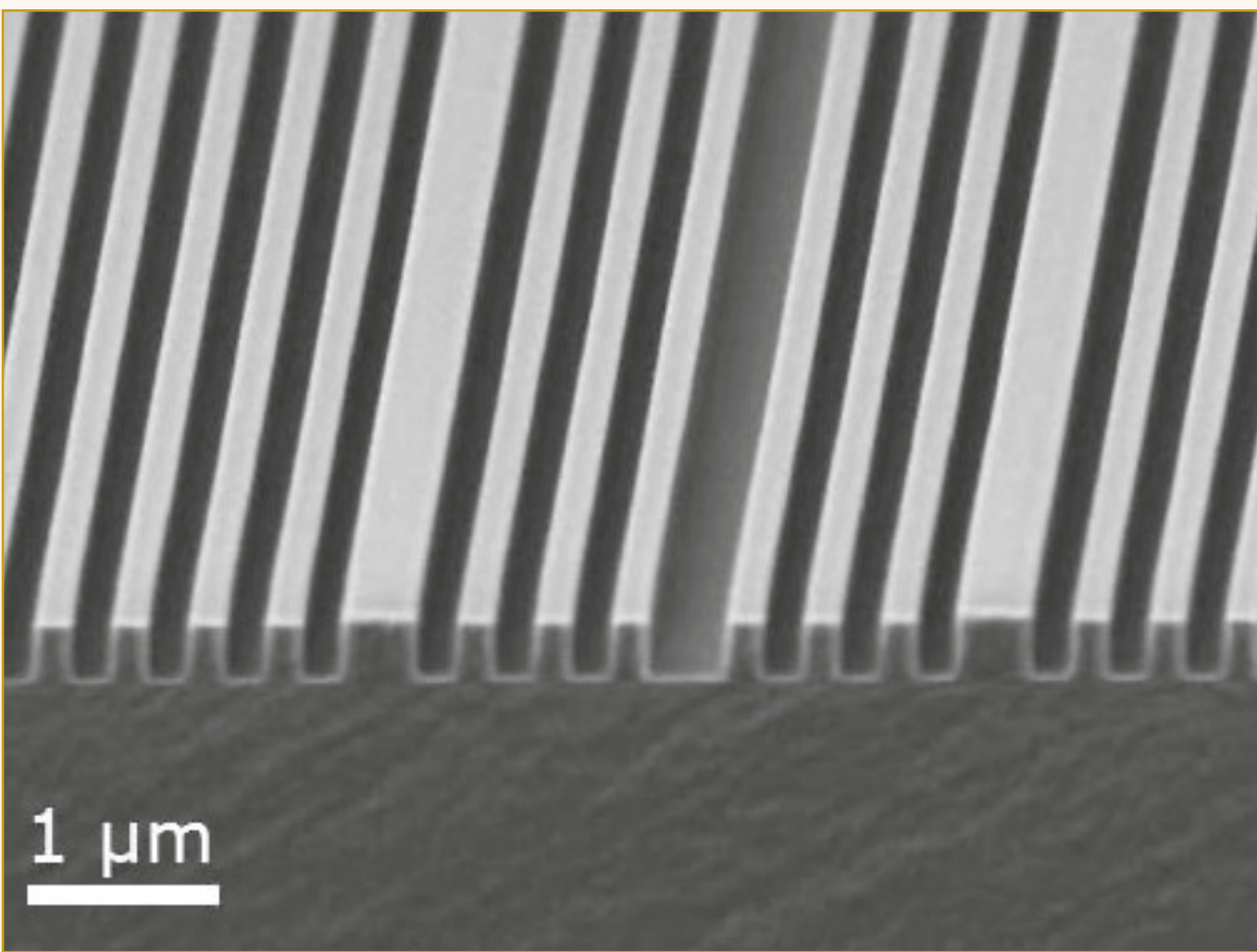
- Working stamp fabrication
- Cost efficient alternative to quartz stamps
- For UV-based and thermal imprinting

### Technical data

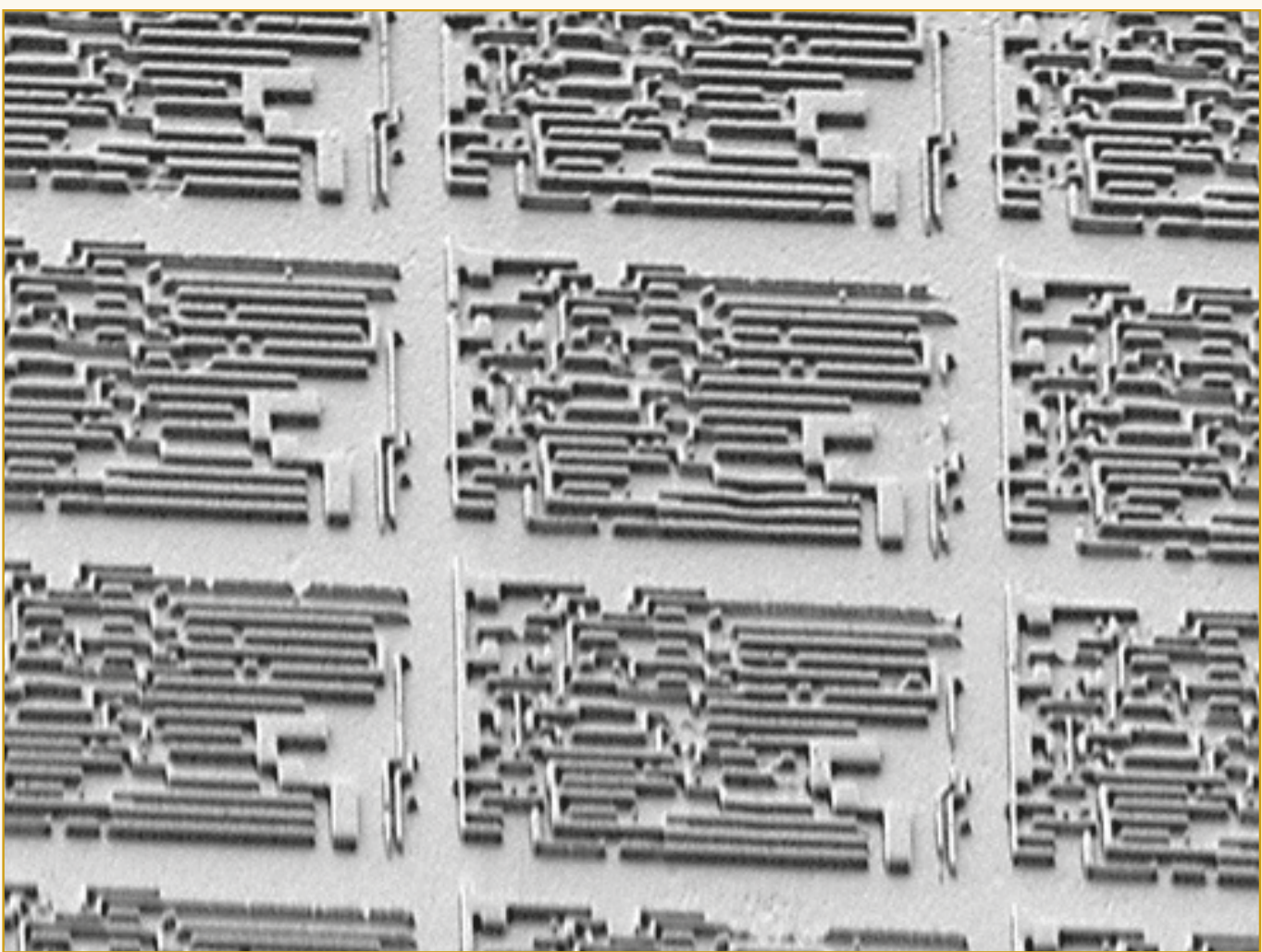
Thermal stability	up to 270 °C (short term)
CTE (20 – 150 °C)	140 ppm K <sup>-1</sup>
Hardness (nanoindentation)	36 ± 1 MPa
Shrinkage (during curing)	~ 6%
Young's modulus	650 MPa



Large area replication of OrmoStamp® using 6 inch glass substrate



Aperiodic gratings copied into OrmoStamp®  
(Courtesy of PSI Switzerland)



OrmoStamp® stamp for SFIL,  
(Courtesy of University of Cardiff, UK)