

SPRAY COATING SERVICE

More and more three dimensional microstructures of MEMS applications require lithographic patterns in, on and over deep trenches, V-grooves or holes. We offer a flexible spray coating and projection alignment service which is ideal for your three dimensional application.



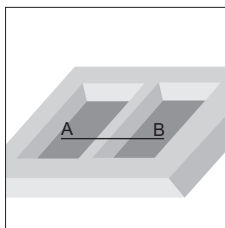
Spray coating system:
OPTicoat St22i



Projection Aligner:
Cannon, MPA500b

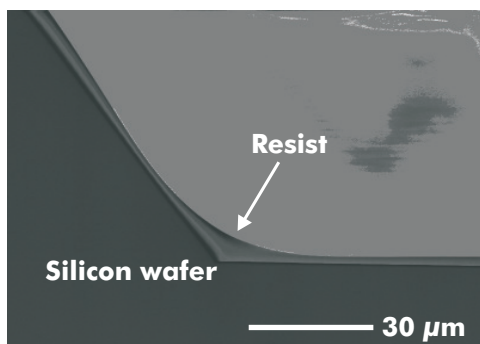
Advantages of using our spray coating method:

- individual coatings on almost every topography
- coatings of high uniformity (even on sidewalls)
- processing of different protective medias or resists
- coating thicknesses from 500 nm to 10 μm
- coating of samples with different sizes up to 6"
- preparation of structures in deep grooves (depth 400 μm)
- realization of structures with a resolution down to 3 μm

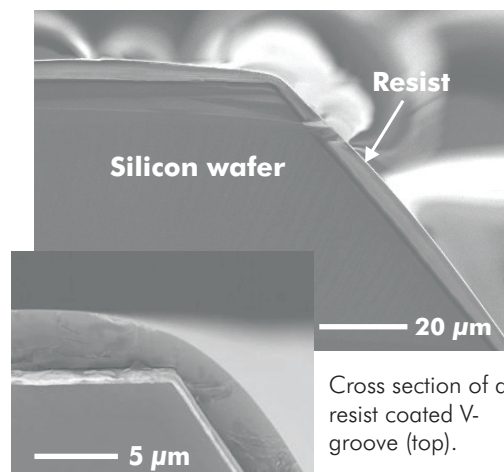


Extremely smooth and homogeneous resist coatings on samples with high topography can be achieved using our spray coating process.

Application example: Coating of a micromechanical structure (V-groove) by spray coating method



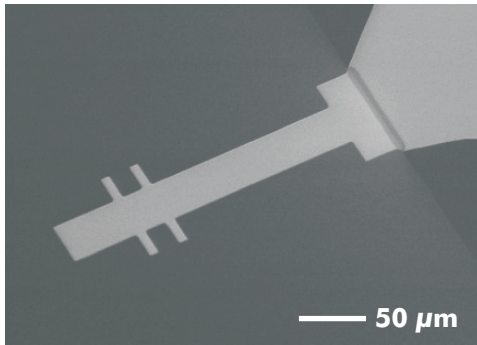
Cross section of a resist coated V-groove (bottom).



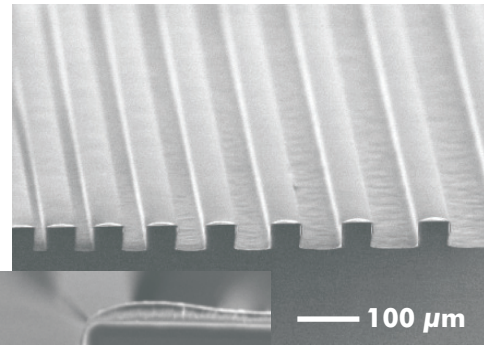
Cross section of a resist coated V-groove (top).

In combination with the projection alignment method structures at the bottom of deep grooves with a resolution down to $3\ \mu\text{m}$ can be realized.

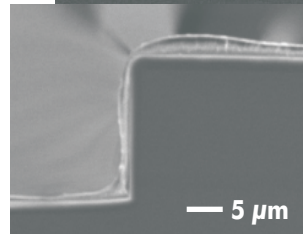
Several protective coatings of side walls with an angle up to 90° have been demonstrated by implementing the spray coating method.



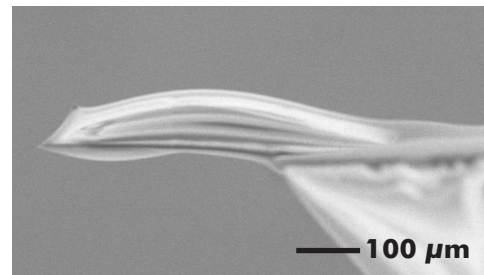
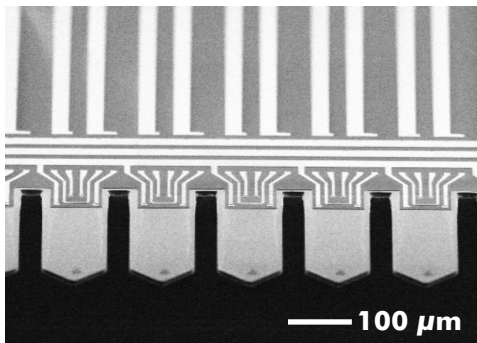
Resist pattern at the bottom of a V-groove (depth $\sim 280\ \mu\text{m}$).



Cross section of a resist coated deep trench side wall.



In addition, the spray coating method allows the all-over coating of micromechanical free standing structures with resist.



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