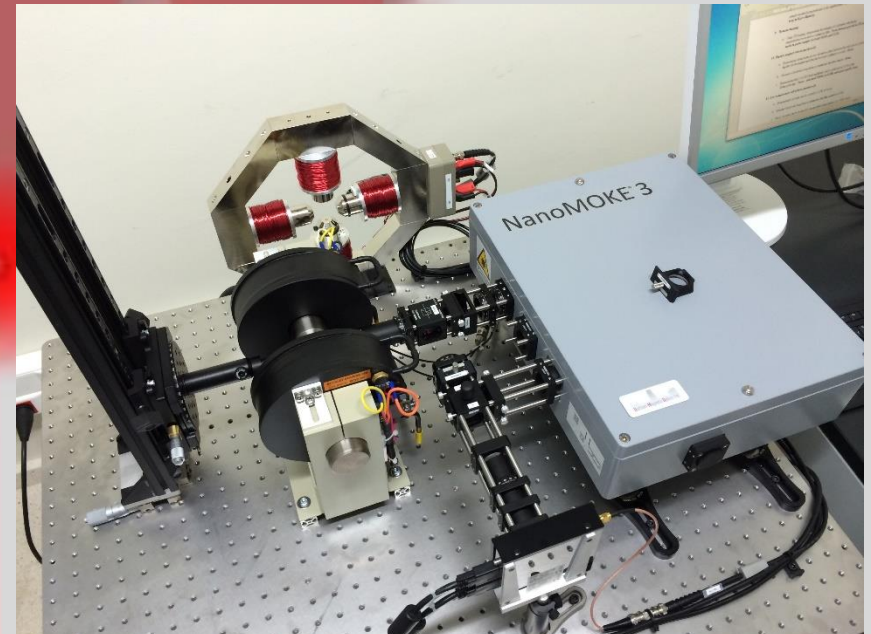
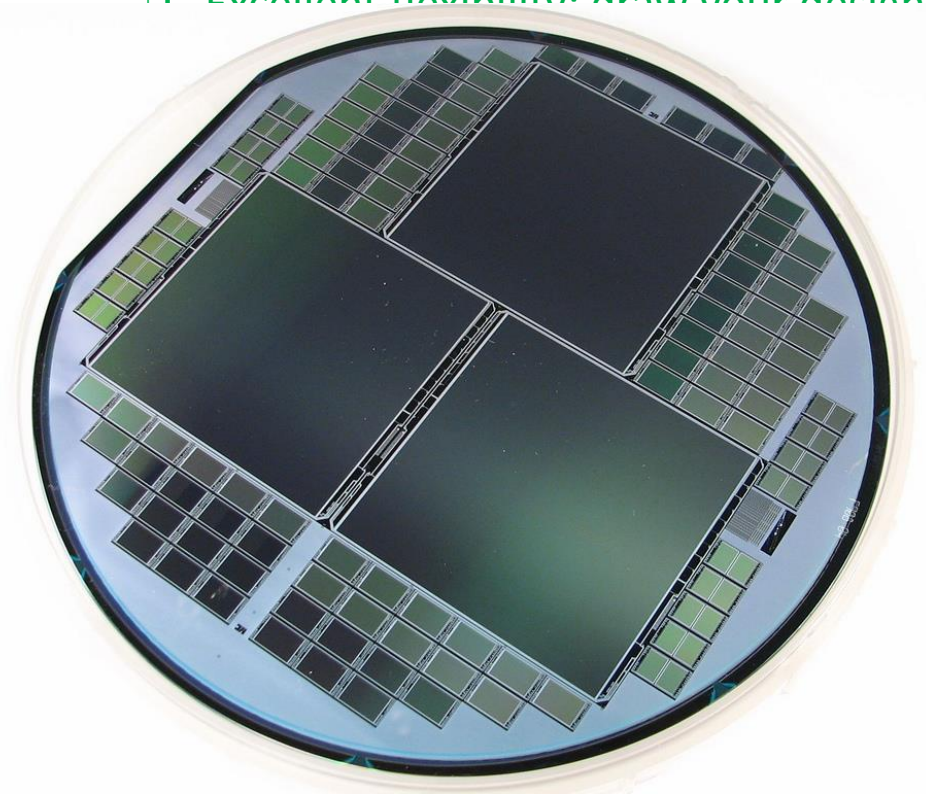


# Direct-write optical lithography: a fast and flexible way to make microstructures



Dr Anthony Beguivin, Durham Magneto Optics Ltd

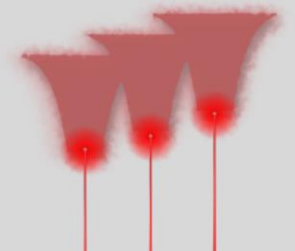
- ❑ Poor flexibility: need to manufacture a new mask for each design
- ❑ Not easy to perform greyscale exposures: most masks are either “on” or “off”
- ❑ Wafer size: typically up to 4”-8”
- ❑ Low end machines aren’t fully automated and require manual adjustment
- ❑ High throughput: good choice for high volume manufacturing

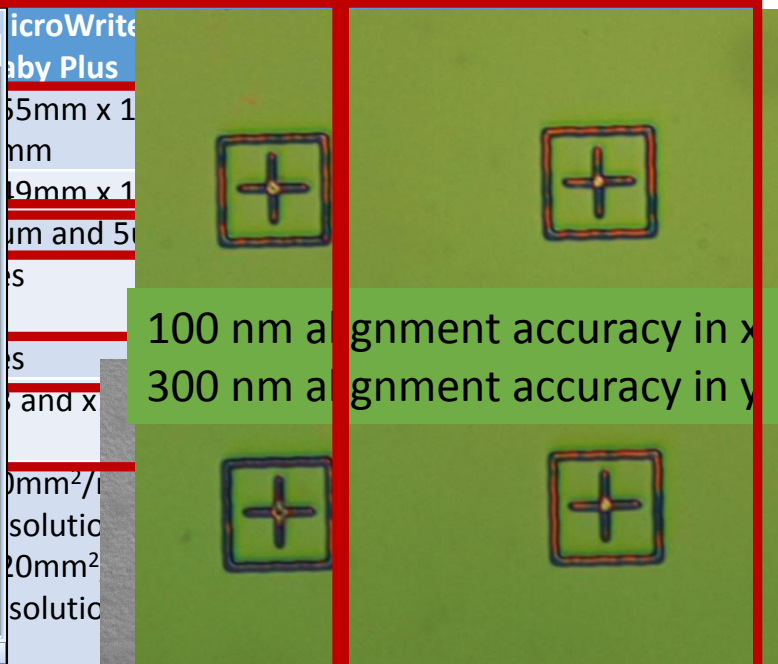
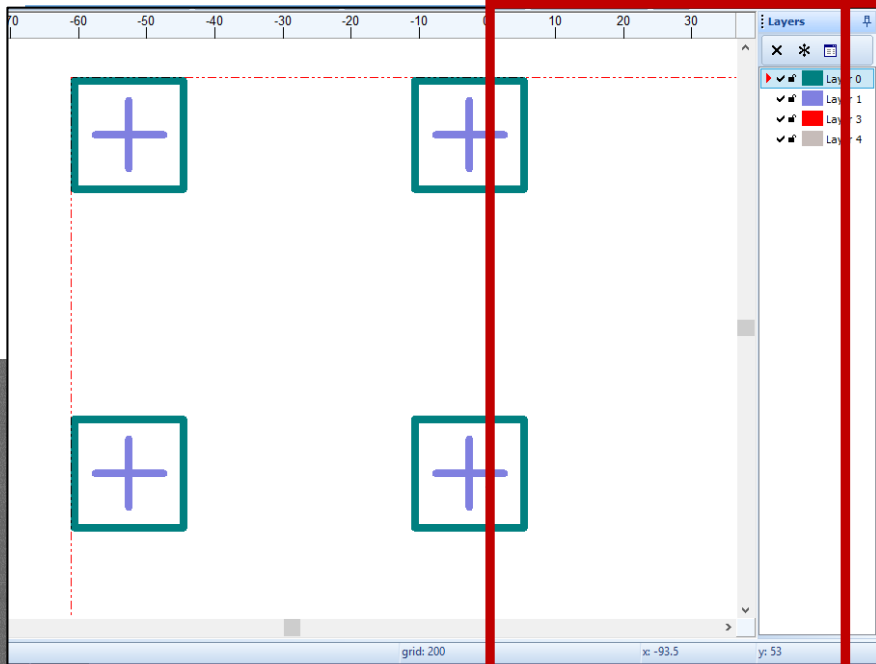


- ❑ Excellent flexibility: draw your design

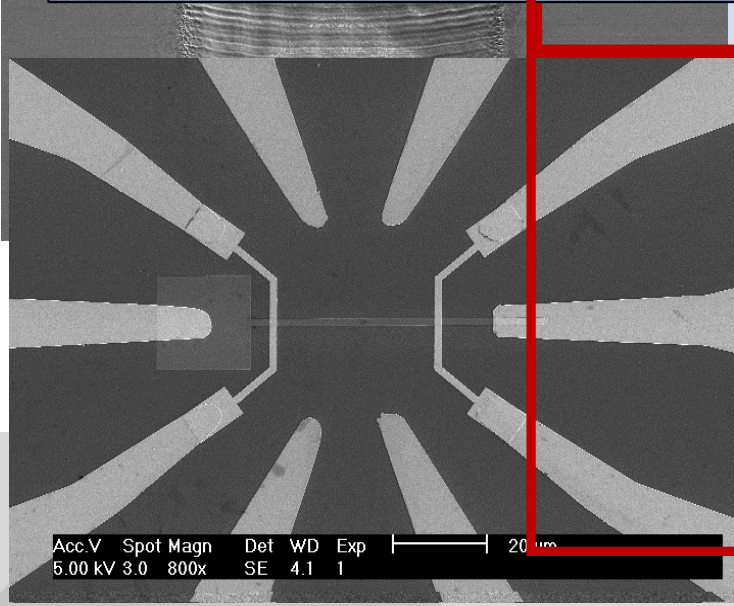
Optical lithography using a mask aligner

Optical lithography using MicroWriter ML<sup>®</sup>3

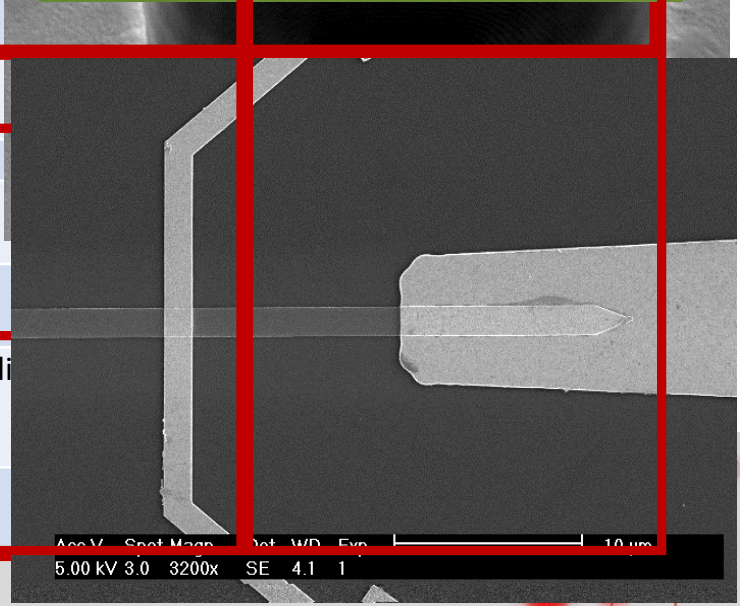




100 nm alignment accuracy in x  
 300 nm alignment accuracy in y

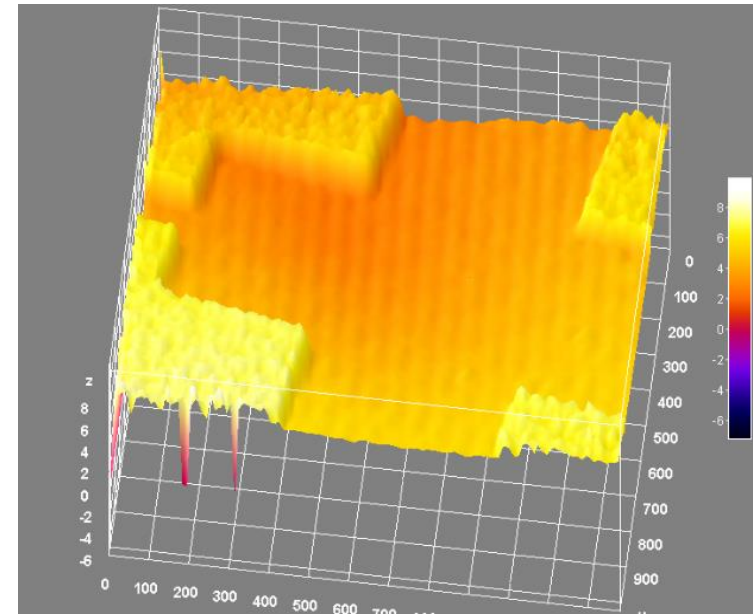
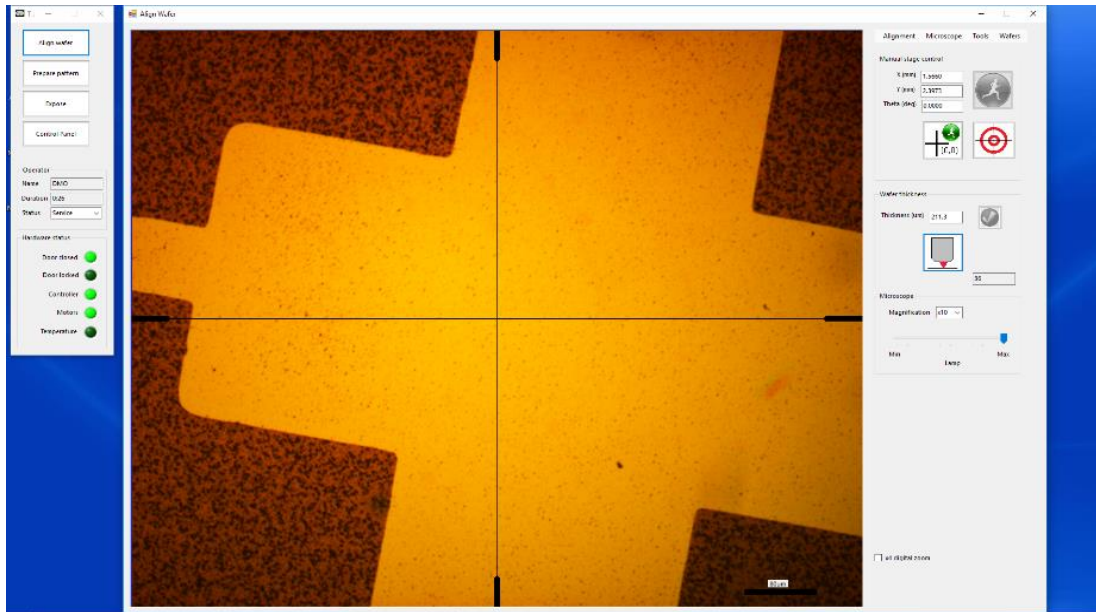


±1um
200nm
100nm
300nm
Not appli
Yes

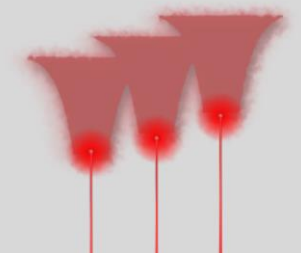


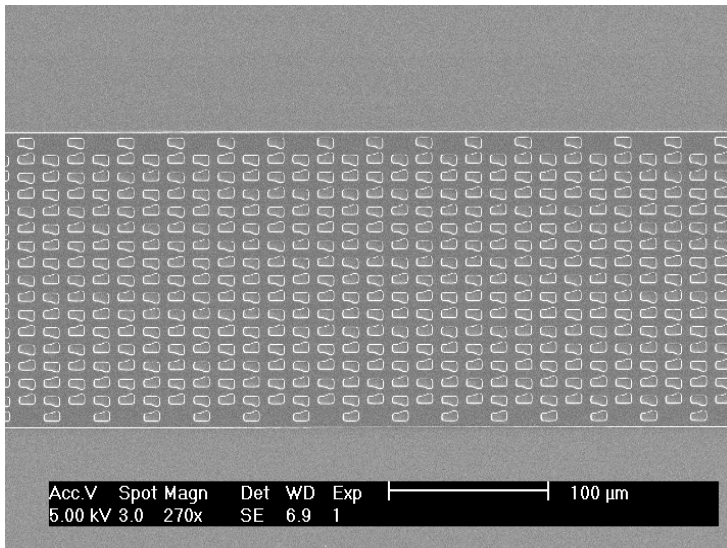


# MicroWriter ML<sup>®</sup>3: Photolithography system and optical surface profiler

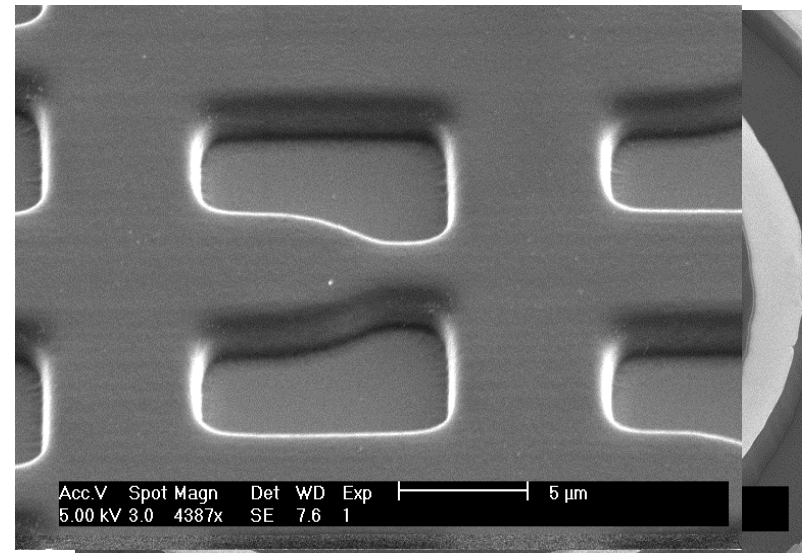


	MicroWriter ML <sup>®</sup> 3 Baby	MicroWriter ML <sup>®</sup> 3 Baby Plus	MicroWriter ML <sup>®</sup> 3
Optical surface profiler Z resolution	Not applicable	300nm	100nm



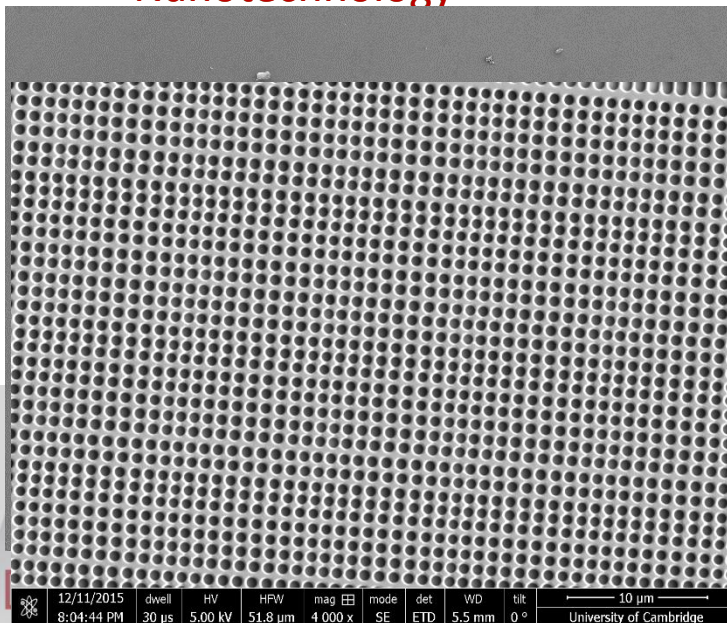


ductors

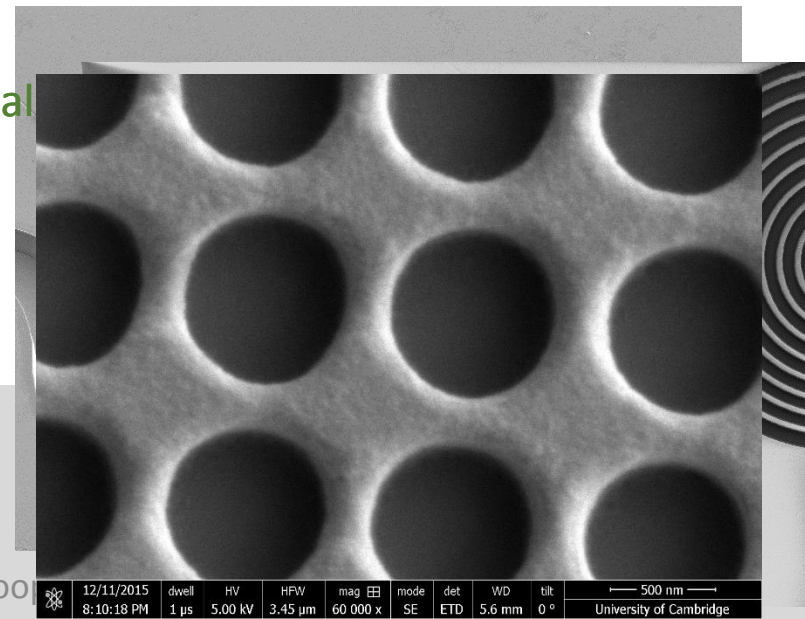


MEMS / NEMS

- Sensors
- Microfluidics and lab-on-a-chip
- Nanotechnology



2-dimensional



urhammagneto

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Or come talk to me!



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**Q u a n t u m D e s i g n**

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