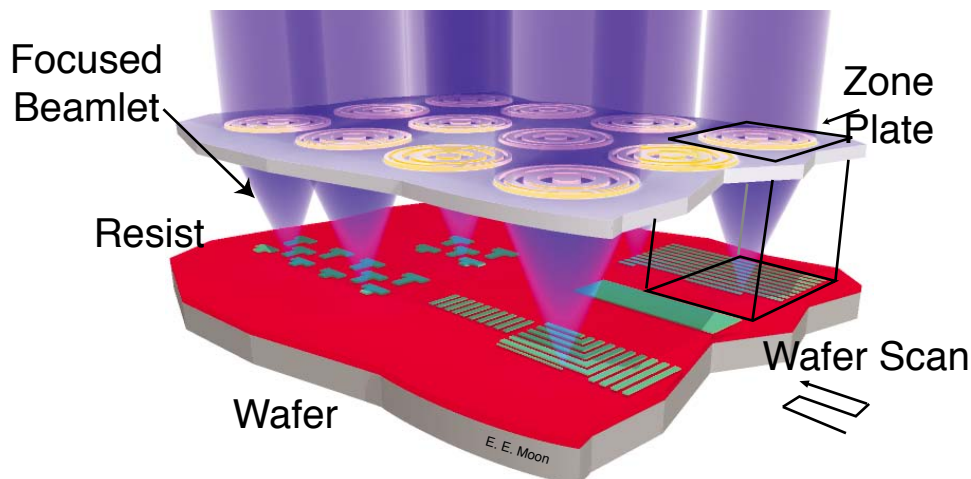


LumArray Model ZP150A Specifications

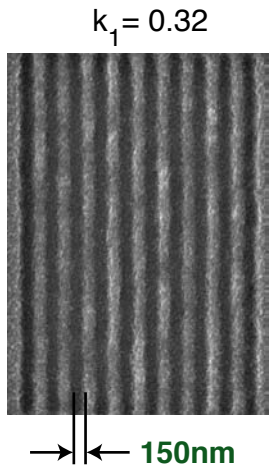
High Resolution Optical Direct-write & Mask-write Tool

- Address unit: As small as **2.3nm**
- Minimum feature size: **150nm** (dense)
- Writing speed: over **1.5 mm²/s**
- Overlay accuracy: As small as 20nm
- Placement accuracy: As small as 15nm
- Geometries: Flexible (non-manhattan possible)
- Laser source: 400nm
- Number of parallel beams: 1000
- Substrates: Silicon, glass or any flat surface up to 6" diameter
- Exposure: photoresist (I and G line)
- Field Size: flexible
- Scan method: serpentine
- Proximity-Effect Correction: Custom software provided
- Layout file format: GDS II compatible



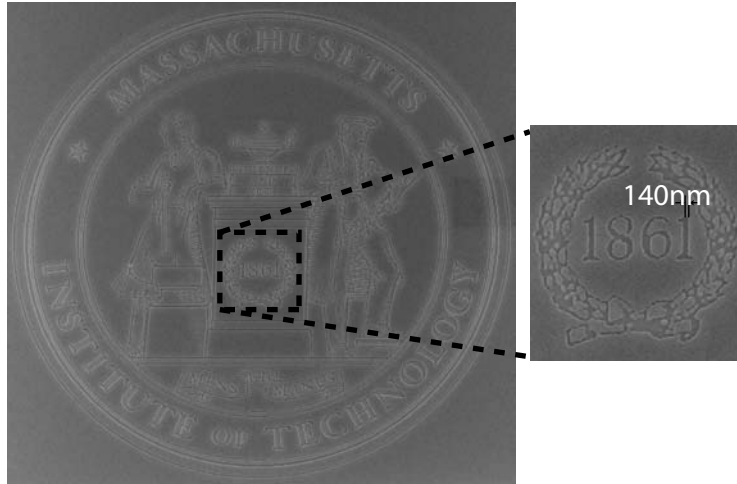
Examples of Patterns

High Resolution

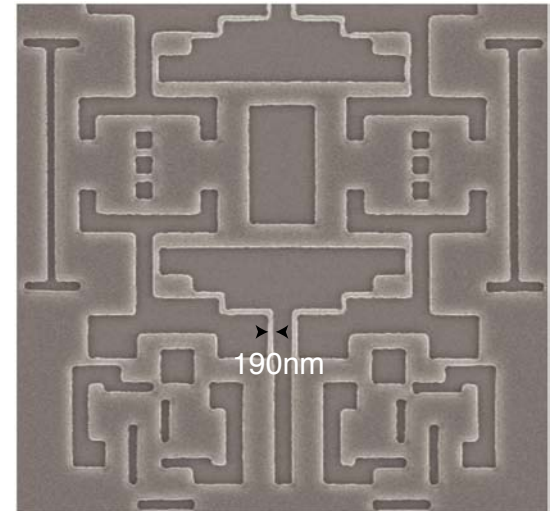


$\lambda = 400\text{nm}$
NA = 0.85

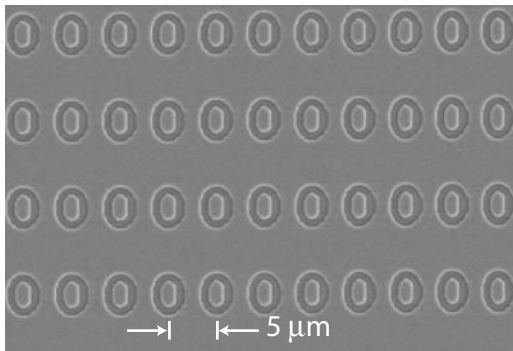
Seal of MIT



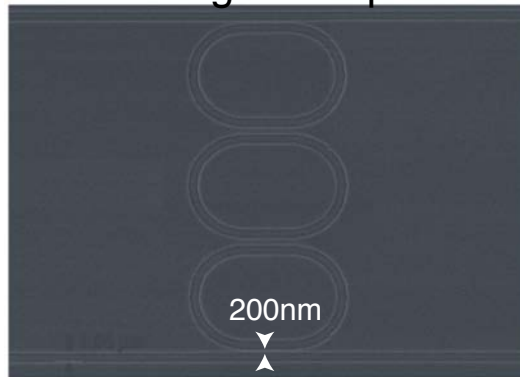
Pattern after PEC



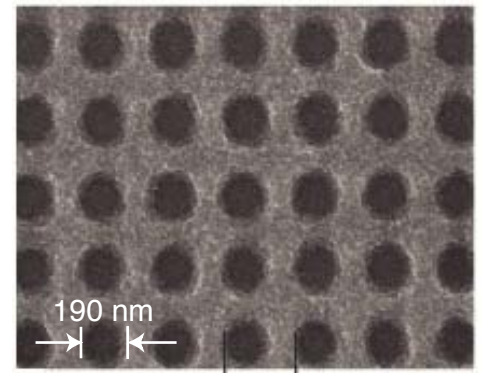
Micromagnetics



Integrated optics



Photonic Device



Applications

- Patterning NanoImprint templates
- Prototyping custom electronics
- Patterning masks
- Nanofluidics & Microfluidics
- Integrated optics
- Diffractive & Binary optics
- Nanophotonics & Microphotonics
- MEMs and NEMs
- Nanomagnetism & Micromagnetics
- Patterning bio-chips