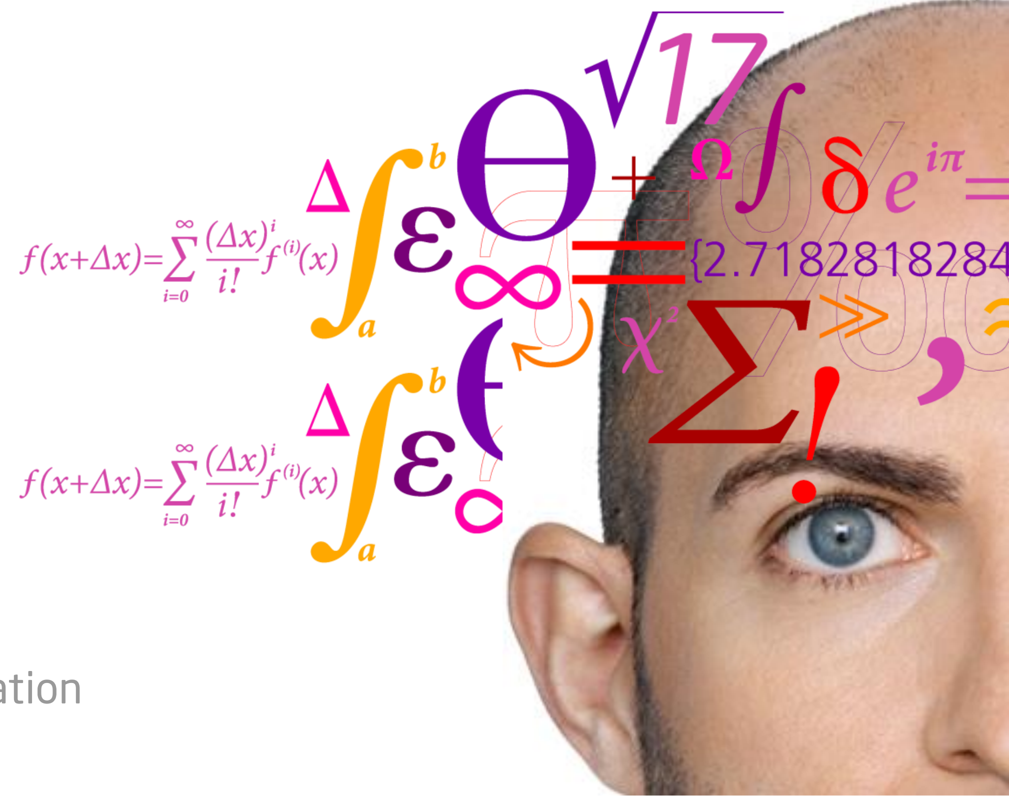
DTU

Lithography Tool Package

Inspection



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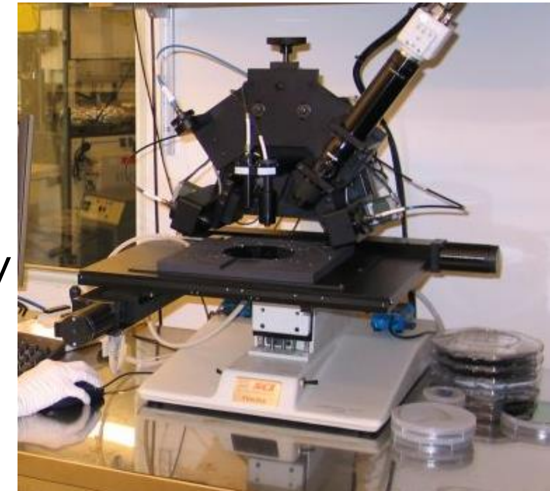
National Center for Micro- and Nanofabrication

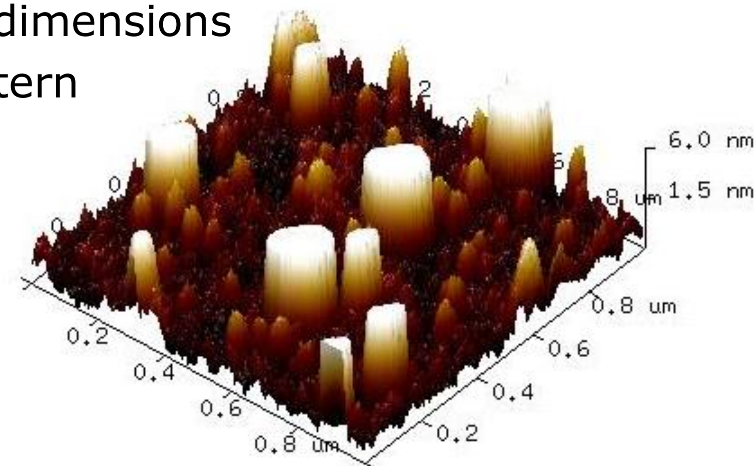
Inspection: characterization methods

- Ellipsometry
  - Measures film thickness and complex index using spectral reflectance and/or polarization
  - Complicated theory and modelling
  - For characterizing coating thickness and uniformity



- Profilometry
  - Stylus (mechanical) or Optical (confocal microscope)
  - Measuring film thickness and/or pattern dimensions
  - For checking and documenting resist pattern

- Atomic Force Microscopy
  - Measuring pattern dimensions
  - Measuring surface roughness
  - For documenting resist pattern



Courtesy of Sonny Massahi

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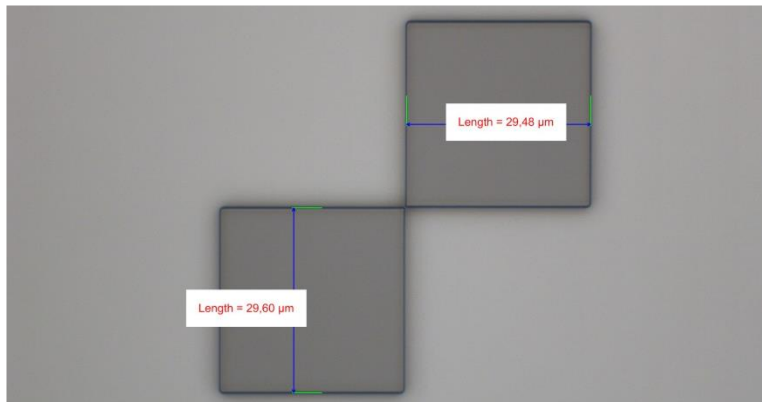
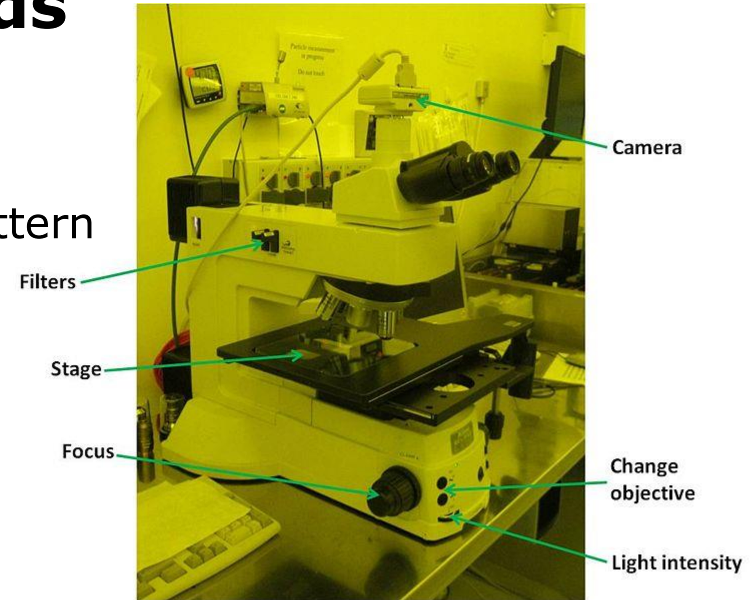
Inspection: imaging methods

- Optical microscopy
  - Measuring pattern dimensions
  - For checking and documenting resist pattern





- Scanning Electron Microscopy
  - Measuring pattern dimensions
  - Imaging resist profiles
  - For checking and documenting resist pattern