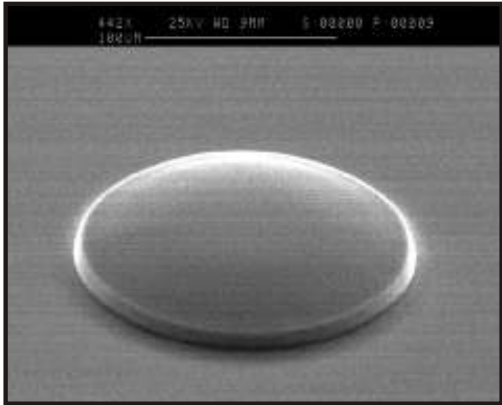
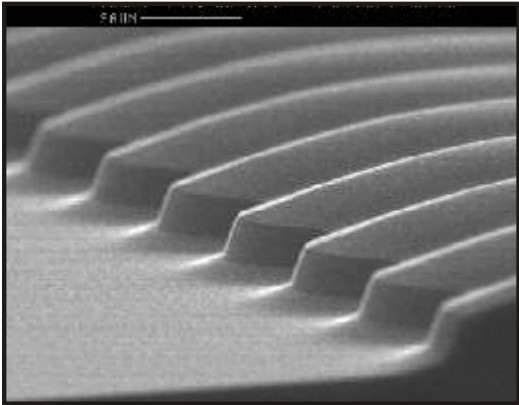




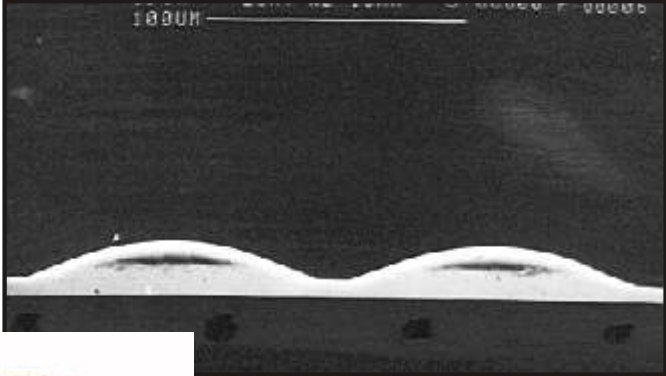
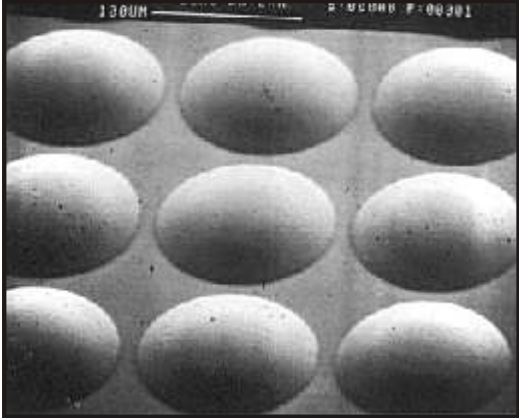
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October 2001
email: plasma@oxford.de

Plasmalab Data

ICP-RIE of Lenses in Si

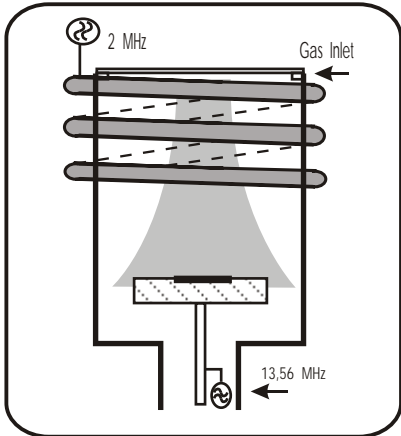


OPT Application lab, UK:
Si lenses etched by ICP
(lower 2 SEMs by ECR
in 1993)



Plasmalab 80 Plus Plasmalab System 100/ 133

- Results:**
- Rate : > 200 nm /min
 - Selectivity to PR: 2:1 (adjustable)
 - uniformity $\pm 3\%$ (6")
 - Lenses: smooth, no residues
 - Fluorine based process



The photoresist profile is reproduced in silicon. Lens profile may be produced in photoresist either by reflowing or by grey-scale exposure. This process can be adjusted to give the desired selectivity silicon to resist around 2:1. This adjustment can be made during the process, to create changing radius lenses. Laser endpoint detection can be used on large areas of resist, to identify when all the resist has been removed.