OXFORD INSTRUMENTS

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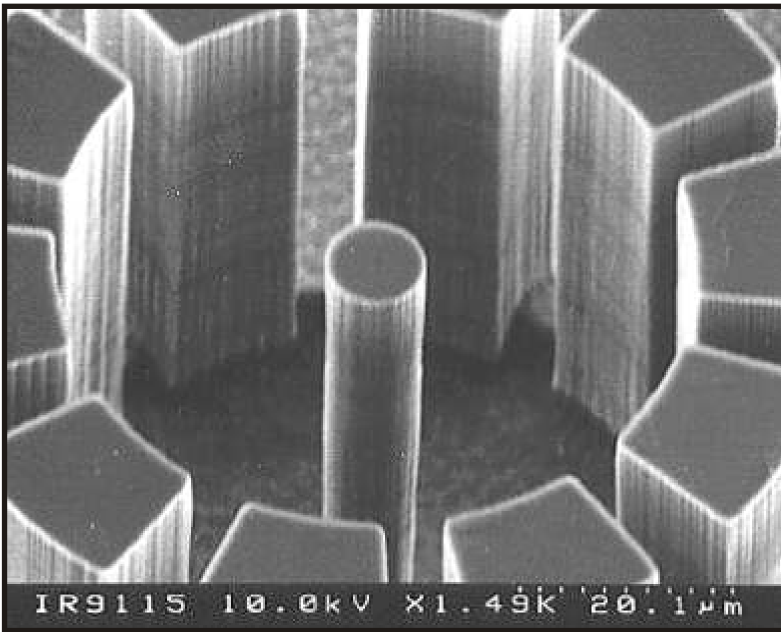
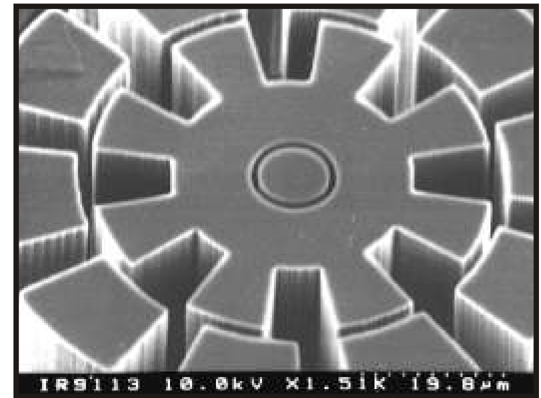
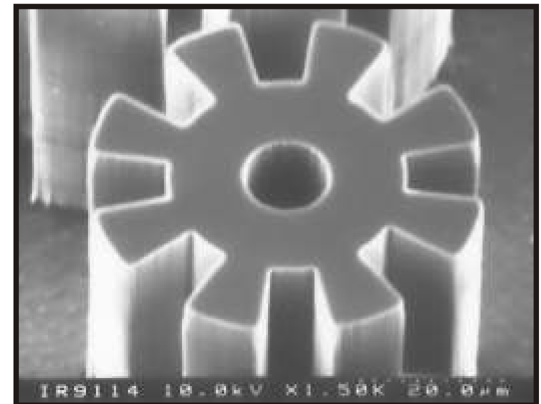
Plasmalab Data

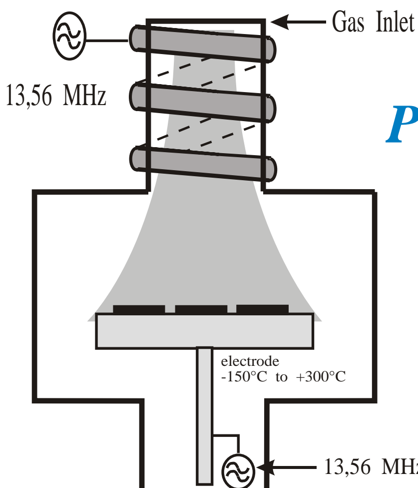
Deep Si ICP Etching



40 µm deep anisotropic etch
Courtesy of University of Kassel
Institute of Technical Physics
Dr I.R. Rangelow







Plasmalab System 100

Technology:

Reactive Ion Etching
with ICP Source (13 MHz)
Inductive Coupled Plasma
13.56 MHz Plasma Excitation
Chlorine based Process
RF driven substrate electrode

Results:

Rate : 2 - 3 µm/ min with the ICP180
Rates up to 10 µm/ min are possible
with the larger ICP 380 source.
Selectivity to Photoresist > 100 : 1
Selectivity to SiO2 > 200 : 1
uniformity over 4“ wafer: +/- 4 %
highly anisotropic profile