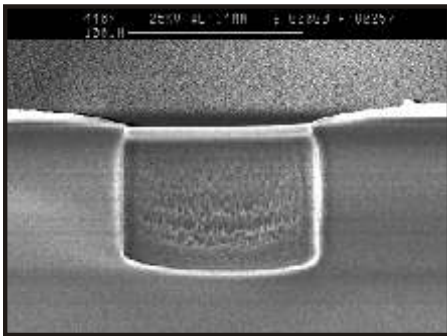
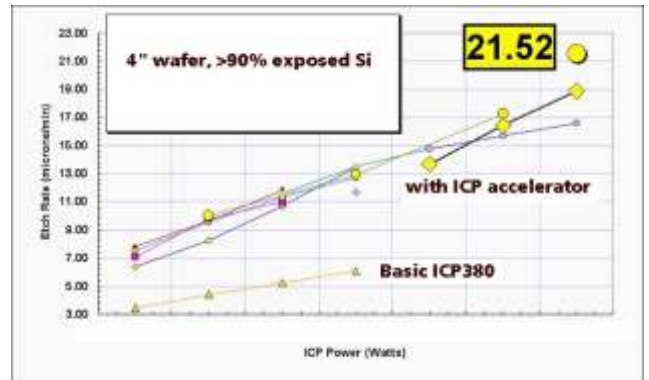


# Plasmalab Data

## High Rate Bosch Process by ICP Accelerator



100 µm deep etch at 17 µm/ min



etch rate vs ICP power

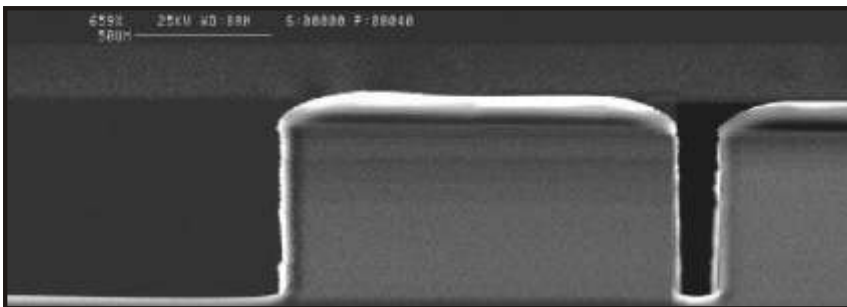
### Technology:

- Reactive Ion Etching
- Inductive Coupled Plasma Source ICP380
- ICP Accelerator Technology ©
- room temperature "Bosch" process
- He backside cooling

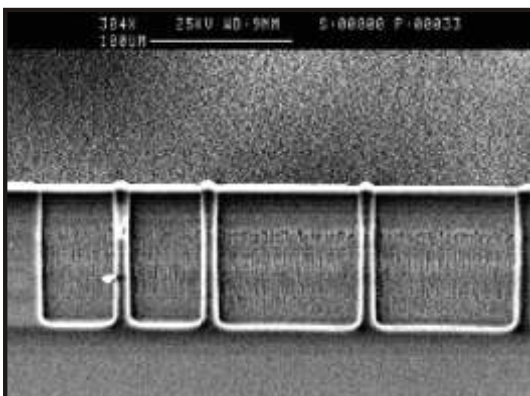
- Plasmalab 80 Plus
- Plasmalab System 100
- Plasmalab System 133

### Results

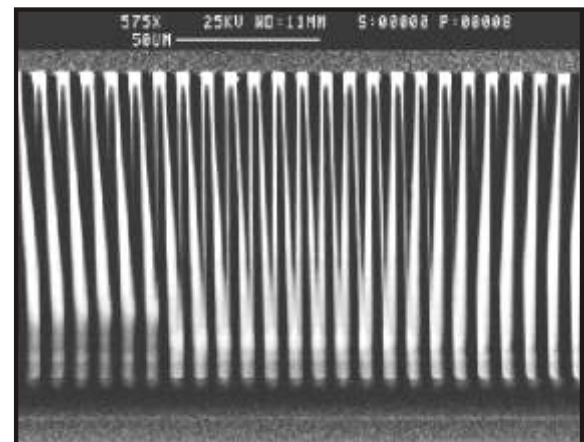
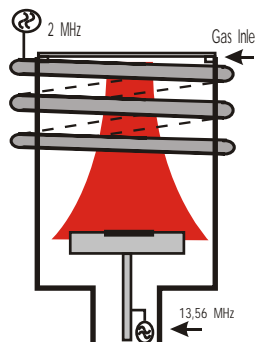
- rate : > 10 µm/min for most applications
- up to 20 µm/ min is possible
- selectivity to SiO<sub>2</sub> > 150 : 1
- up to 400 : 1 is possible
- selectivity to PR > 75 : 1
- anisotropic etch 90° ± 1°
- aspect ratio > 30 : 1
- controllable wall profile



70 µm deep "Si Bosch" etch with low ARDE effect  
 ARDE is "Aspect ratio dependent etch (rate)"  
 The etch rate lowers at high aspect ratios (> 5 : 1)  
 due to gas transport limitations.



110 µm deep Bosch Si etch without ARDE effect



100 µm high aspect ratio etch