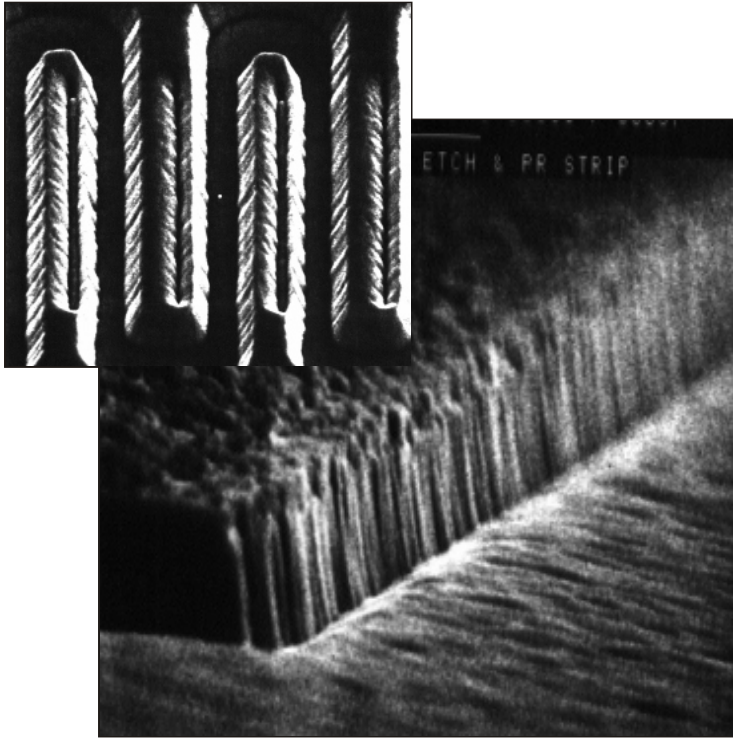


# Plasmalab Data

## Ar Sputter Etching in RIE/ ICP reactors: Au, Pt, Ni



*Plasmalab 80 Plus*  
*Plasmalab 800 Plus*  
*Plasmalab System 100*  
*Plasmalab System 133*



### Technology:

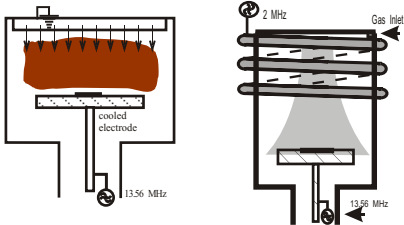
Parallel Plate Reactor  
 13.56 MHz - Plasma Excitation  
 Argon Etch Process

### Results:

Pt: > 10 nm/ min ("RIE") or > 50 nm/ min (ICP)  
 Ni: > 8 nm/ min ("RIE")  
 Au > 40 nm/ min ("RIE") or > 120 nm/ min (ICP)  
 uniformity in "RIE" (12 wafer batch) < +/- 7 %  
 uniformity in "RIE" or "ICP"  
 (single wafer 4"/ 6") < +/- 4/5 %  
 mask: Photoresist  
 selectivity: ca. 1 : 1 (RIE)

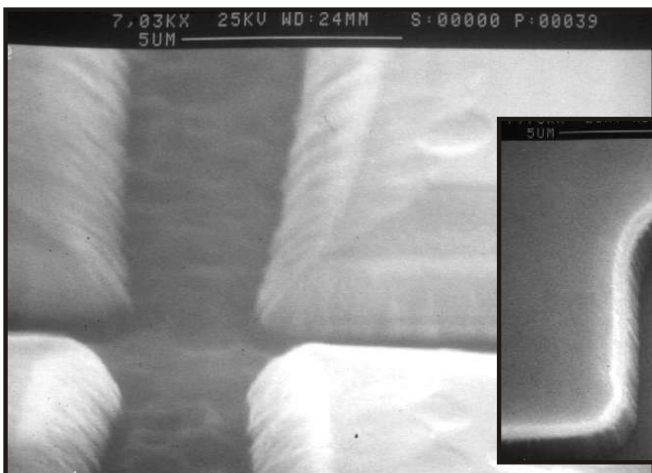
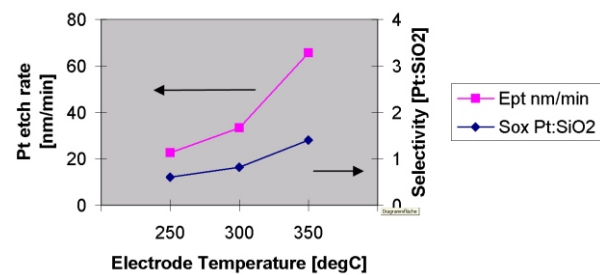


0,5 µm deep, anisotropic Au-Etch  
 (Photoresist mask removed)

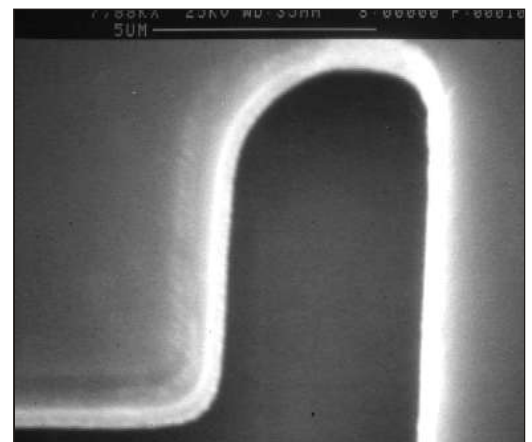


An enhanced rate by reactive gases can be achieved at elevated temperatures:  
 Ar/ Cl2 ICP etch

Pt Etch Rate and Selectivity over SiO2 mask



0.1 µm Al/ 1.4 µmNi/ 0.1 µm Al  
 sputter etched (photoresist mask intact)



0.4 µm PZT/ 0.12 µm Pt/Ti  
 etched by "RIE" and ICP (photoresist mask intact)