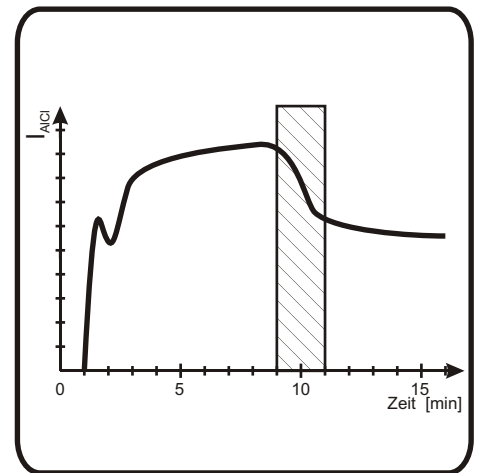
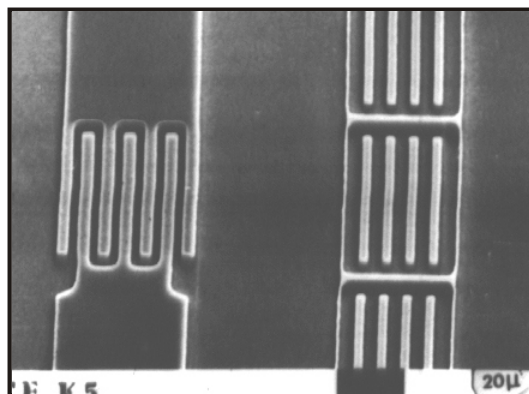
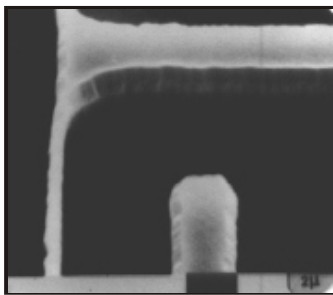


Plasmalab Data

Anisotropic Al RIE with minimal line width loss: 0.5 μm lines



Optical emission spectroscopy
For end point detection: intensity vs etch time

Equipment:

- Plasmalab 80+
- Plasmalab 800+
- Plasmalab System 100 (Cluster)
- Plasmalab System 133 (Cluster)

The SEM shows 0.2 and 0.5 μm wide Al lines
(photoresist not removed)

Results:

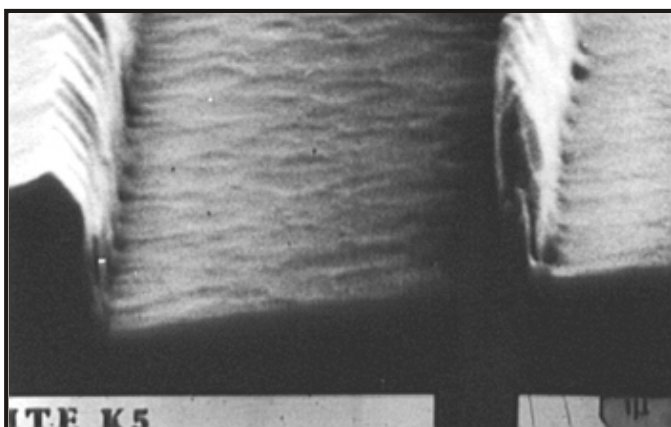
- Rate: 0.1 $\mu\text{m}/\text{min}$
- Selectivity to the Photoresist Mask: 3 : 1
- Selectivity to underlying SiO_2 : 12 : 1
- Uniformity $< \pm 5 \%$

Technology:

Parallel Plate Configuration
RIE-Mode (13.56 MHz)

3 Step Cl-Process:

- High Bias Al_2O_3 Breakthrough
- Anisotropic Bulk Etch
- High Selectivity Overetch



0.2 μm Al lines



OPT application lab: 1.5 μm deep Al/Si etch (PR mask in place)