

Tool ID: 202  
Tool Location: 107

Equipment Information Sheet

# Unaxis 770 Deep Silicon Etcher

**Manager:**  
**Backup:**

**Tom Pennell**  
**Jeremy Clark**

**607-254-4309**  
**607-254-6487**

Calls to staff phones will be automatically forwarded to their cell phones during accessible hours. At other times leave a message or send them an email.

**SAFETY**

**USAGE RESTRICTIONS**

- User must remain in the lab while tool is in operation

**SCHEDULING/SIGN-UP RESTRICTIONS**

*Minimum Tool Time: 15 minutes*

- Maximum 4 hour block reservations anytime.
- Maximum 12 hours reserved in advance at any time per person
- No consecutive research group reservations or monopolization of the schedule by research groups.

**MATERIALS COMPATIBILITY CATEGORY**

Tool Category 2: Silicon Based Substrates and Select Refractory Metals	
Allowed	Not Allowed
Tool category 1/1E materials	No Glass Substrates
Silicon Based Materials only	No CNF Class A or Class B metals and oxides/compounds of (exposed or buried) (ie Magnesium, Zinc, Barium, Calcium)
Si, SiC, SiO <sub>2</sub> substrates	
All Furnace grown or deposited films	
PECVD Films	No Gold, Silver or Copper (Exposed or buried)
ALD dielectric films	No High Vapor pressure materials
<b>CNF Refractory Metals (ie Al, Ti,Ta,W,Pt,Mo,Cr,Ni)</b>	No III/V Compound Semiconductors
Nitrides and Oxides of above metals	No Organic/Biology Molecules prepared-with or without Salt buffers
Cured organics and baked Photoresist	

**High Vapor Pressure Metals and Compounds**are materials that have a vapor pressure above 1e-6 Torr at 400 C.

**Additional Material Restrictions and Exceptions**

- Whole 4 silicon wafers and pieces mounted to sapphire wafer
- Thermal Oxide, Photoresist or Alumina (Al<sub>2</sub>O<sub>3</sub>) masks only
- Photoresist masks require edge bead removal (> 5mm around entire edge of wafer)
- No other polymers or adhesives
- No metals exposed to the plasma.

*Last Updated: 03/24/2021*