USC UNIVERSITY OF SOUTHERN CALIFORNIA

QUICK START GUIDE FOR III-V ETCHER

USC University of Southern California

In case of emergency, call DPS: 213-740-4321

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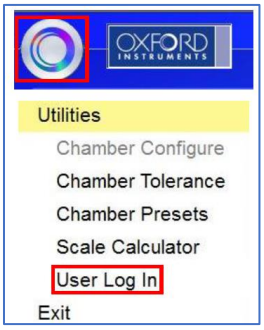
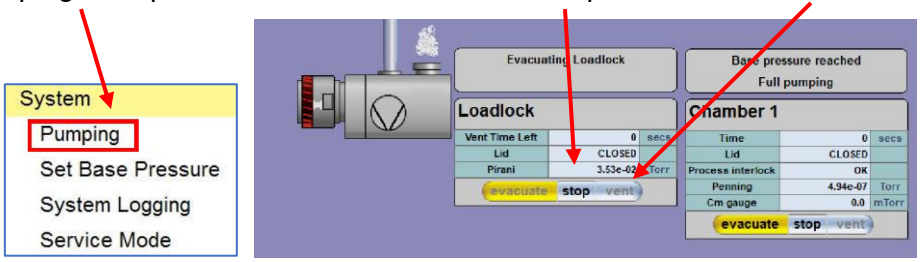
Quick Start Guide: III-V Etcher

This short document is for helping users remember how to operate the tool. It does not replace the SOP nor training.

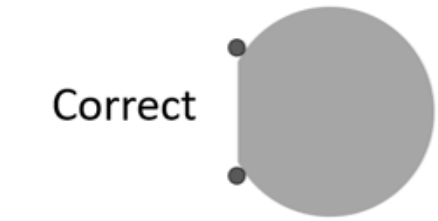
1. Activate the tool on NEMO
2. Log in by clicking round button on top-left of screen, then click *User Log In*

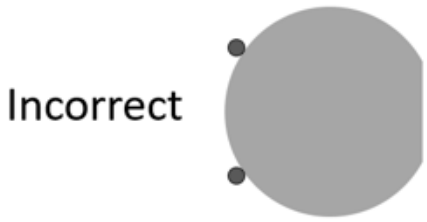


3. Click *Pumping* on top-left of the screen. Then click *stop* and then click *vent* for the load lock



4. Open the load lock and place your sample inside, with the flat facing the pins





Note: This tool accepts 3” wafers

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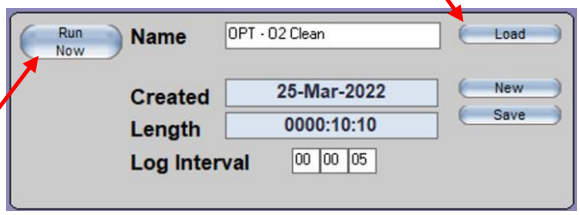
STOP!

Does your sample satisfy these conditions?

Is wafer edge clean?	Is wafer backside clean?	Will not deep etch polymers?
Wafers with a photoresist soft mask must have edge bead removal (EBR). 2 mm is OK.	Inspect backside by eye. If there are smudges, carefully wipe backside with a texwipe wetted with acetone then IPA.	Photoresist polymers are allowed in the tool as soft masks, but do not use this tool to etch several µm of polymers (ie. Polyimide, Parylene, etc.)
Why? If dirty, the edge can get stuck to the wafer clamp. Then, the wafer may get shattered during arm loading or unloading.	**Why?** If the backside is dirty, then the wafer might stick to the bottom of the process chamber. This may cause the wafer to get shattered during arm loading or unloading.	**Why?** Excessive carbon contamination can cause buildup in the tool or also affect other users' process results. Instead, ICP DRIE may be used for deep etching polymers.

5. Close the load lock. Then on the pumping tab, click *stop* and then *evacuate* for the load lock
6. Go to *Recipes* on top left of screen and then click *Load.* Select your desired recipe.



7. Click *Run Now* and wait until your recipe is complete
8. After your recipe is finished, vent, then open the chamber as you did in step 3 & 4
9. Remove your sample.Load the Si cleaning wafer, with the flat facing the pins
10. Close the load lock and evacuate it as you did in step 5
11. Run the "OPT – O2 Clean" recipe or other appropriate cleaning recipes
12. Log your runs in the chrome book
13. Log out of the PC4500 software and NEMO. It is OK to log out while cleaning recipe is running

Contributors	Revised Date
Eugene Yoon	August 2023