Quick Start Guide: RIE 80

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 the top-left of screen, then click *User Log In*
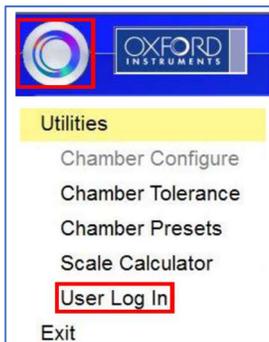
3. Click *Pumping* on the top-left of the screen. Click *stop* and then click *vent*
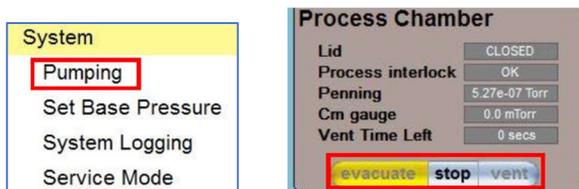
4. Switch lid control to OPEN, then press and hold both green start buttons

5. Remove metal cleaning plate. Place graphite processing plate in chamber with sample(s)

   If your sample slides around, you may attach clean glass slides with Kapton tape to secure it
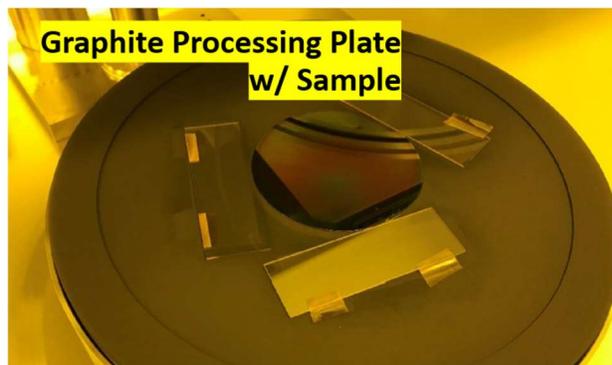
STOP! *Does your sample satisfy these conditions?*

Do not deep etch polymers	Will metal be exposed to plasma?
Photoresist polymers are allowed in the tool as soft masks, but do not use the RIE 80 to etch several μm of polymers (ie. Polyimide, Parylene, etc.)	Do not etch metal nor use metal masks with this tool. If there is any metal on your sample, ensure that it is completely covered by your masking material.
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.	**Why?** Metal may get sputtered by plasma and then redeposited onto other parts of the tool. This may cause unwanted tool contamination or short-circuiting.

6. Switch lid control to CLOSE, then press and hold both the green start buttons

7. On the pumping tab, click *stop* and then click *evacuate*

8. Run your desired recipe by going to *Recipes* on top left of screen

9. After your recipe is finished, vent, then open the chamber as you did in step 3 & 4

10. Remove graphite processing plate, then load metal cleaning plate onto chamber

    - Graphite processing plate is for any process

    - Metal cleaning plate is for chamber cleaning only

11. Close the chamber and evacuate it as you did in step 6 & 7

12. Run the "OPT - Chamber Clean" recipe

13. Log your run in the logbook (date, your name, sample substrate, recipe, and process time)

    If you used an edited recipe, please write all gases, flow rates, pressure, and power

14. Log off the RIE 80 software and NEMO. It is OK to log off while Chamber Clean recipe is running