



January 13, 2023

Hello Nanofab Users:

Happy Friday the 13th! Here are the ASRC Nanofab lab updates:

## **Monday is a Holiday - After Hours Access is Needed**

Staff will not be in Monday January 16th as Martin Luther King day is an observed holiday. After hours access is required to access the Nanofab lab on this day. Please use the facilities on this day with all the usual precautions.

## **Oxford ICP–Chlorine Etcher PM Completed**

The annual preventative maintenance (PM) has been completed on the ICP-Cl machine. As always, after a PM the etch rates and DC Bias values are apt to change from the conditions before the PM. Please use a test piece to characterize your etch process before running it to be certain about the rate and selectivity.

## **Oxford ICP–Fluorine Etcher: BOSCH Etching Schedule**

This semester, the tool will be switched to DRIE-BOSCH mode Tuesday at 9:00AM and switched back into ICP mode by Wednesday by 5:00PM. As the switchover (cleaning and chamber conditioning) takes several hours, the tool is available for use in BOSCH mode from 12PM on Tuesday till 1PM on Wednesdays. Please use the “DRIE\_FL\_SYS100” tab of badger to make your reservations for these hours.

## **Recap of the User Policy for AJA Deposition Tools**

For the AJA metal evaporator, the AJA sputter, and the AJA organic evaporator, please remember the following:

1. Users need to request materials 1 week prior to when they are needed. Please use the [following Google Sheets](#) to make your requests. There is a tab/sheet for each tool inside this document.
2. Note: Only staff is authorized to change materials in these tools. This includes the sputter targets. [Here is a Google sheet](#) with a list of materials that are currently in the tools.

## AJA Organic and Metal Evaporators

1. Next to the E-Beam evaporators there is now a log book to help keep a history of the tool performance. Please take the time to fill out an entry each time you use the tool. The important parameters are the material, the “Threshold power”, which is the power needed to begin to see a rate on the crystal monitor, and the “Deposition Power” and rate that you used for your deposition process. This information is important for us to understand how the tool is used, and how these parameters vary.
2. Some users have been having issues using the E-beam evaporators. Some of these issues include using the incorrect beam power, setting the process recipe to something other than what you are evaporating, (which will give an incorrect rate and thickness) and steering the beam to incorrect positions in the crucible. These are tools that require the use of several controllers and some people have been taught in different ways. Because of this, we are opening up training on the evaporator tools to users that currently have access. If you would like to get retrained on the best procedure for doing your process, please contact Samantha Roberts by email to get added to the next available training.
3. We changed the tooling factor for germanium in the organic evaporator so that the crystal monitor more accurately reflects the amount of Ge material deposited. The correction factor is now 150% from 100%. This means that your Ge recipes will appear to have 50% less material deposited for the same power and duration. Please make a note of this if using evaporated germanium in your process.

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This concludes the ASRC Nanofab updates for this week. Enjoy the long weekend!

Nanofab Staff