



December 2, 2022

Hello Nanofab Users: Here are the December 2nd, 2022 Nanofab Updates:

## AJA Evaporator and Sputter Tools

- An updated material list is now available online: AJA Sources and Targets available for the week will be posted online at the following Google link [ASRC Deposition Materials](#). Materials in all tools will be changed 1x per week and can be requested by filling out a request in the following Google Sheet: [ASRC Deposition Material Request Sheet](#). Note the Material Request Sheet has three tabs, each corresponding to the three tools: (1) AJA Metal Evaporator; (2) AJA Sputter Deposition; (3) AJA Organic Evaporator. Please fill out all fields requested for the specific tool. Even if the material is currently listed in the tool, you should still request it to be certain it is not removed. Note: Please request materials 1 week before you need them.
- The AJA Orion 8 Sputter deposition tool is being rebuilt for better performance, with a full gun and chimney cleaning, installation of an ion gauge, adjustment of the load arm, and repair of the gate seal. The tool will be back up for use by Thursday, December 8th.

## Oxford ICP-CI, ICP-FI, RIE-80 and PECVD

1. New cleaning procedure for all Oxford plasma etch and deposition tools:
  - Users of any of the plasma etch or deposition tools must now remain logged into the tool in badger while the OPT clean is being run at the end of every use and users must remain present inside the cleanroom whenever a plasma is running. You must reserve enough time for both your etch/deposition process as well as the clean process and the tool must remain enabled as long as any recipe is running. This policy will help ensure that users coming to the machine will find the chamber in clean and usable condition.
  - Please speak with the tool manager to make certain you are cleaning for a length of time that corresponds to the amount of material that you have etched or deposited. In general, one needs 10 minutes of cleaning for every micron of material removed or

deposited, or clean for the length of time you etched, whichever is more.

2. Reminder: **All Oxford tool recipes** will be DELETED December 6th, unless you contact us with the recipe that you want to save. This is for ALL Oxford tools (ICP-CI, ICP-FI, RIE80 and PECVD). To have a recipe saved please send a screenshot of the recipe name and all process parameters to Sam at: sroberts@gc.cuny.edu.
3. The ICP-FI Etcher is designated for BOSCH mode from Monday at 12PM through Tuesday at 3PM each week. Please notify staff if you want to use the Bosch mode so they can ensure that it is switched over.

## Elionix 50keV and 100keV Reservation Efficiency

The reservation efficiency of the Elionix tools is extremely low and this is affecting all users' ability to reserve the tool and do their work in a timely manner. Reservation efficiency is the percentage of the ratio of time the tool is actually used vs the amount of time the tool is reserved. Evaluating the efficiency over the last three months shows there is a 38.25% efficiency for the Elionix 100keV, and a 47.04% efficiency for the Elionix 50keV. This is a situation that will no longer be tolerated, and Nanofab staff will be closely monitoring all Elionix usage. Written warnings will be going out to users and PI's in the next few days for users with an efficiency below 70%. If the behavior is not corrected within the next 30 days there will then be stricter penalties which may include loss of access to reserve the tool for a time period and/or being charged for the entire reservation time.

Additionally, please be mindful of the following reservation policies:

- Prime time limit for a single reservation is 240 minutes.
- Weekly prime-time limit for a single user is 600 minutes.
- You may not reserve the tool for other users of your group.
- The person who has the reservation must be the one to enable and operate the tool.

We are seeking to engender a user community where we all respect the time and efforts of others. Please only reserve the time you need. (Note: The write time of all patterns written on the Elionix can be calculated beforehand without charge on the Elionix station in the computer room.)

## SEM Annual Preventative Maintenance

The annual preventative maintenance has been rescheduled to start on Wednesday, December 14 - 15 and then resume again on December 21 - 23, depending on how much work is needed. Expect the SEM to be unavailable on these dates.

## DI Water Maintenance

The DI water system is scheduled to undergo sanitization on December 20th and 21st. DI water will be unavailable in the cleanroom while the system is being sanitized. Please plan any chemical hood usage accordingly.

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This concludes the ASRC Nanofab updates for this week. Have a wonderful weekend!

Nanofab Staff