

The Expanding World of Nanofabrication – *an update from NanoFabrication Kingston*

January, 2022

Good day,

You are receiving this important update as a user of NFK, as a supervisor of a user, or as someone who requested to receive these updates.

Annual maintenance and technical issues

NFK equipment underwent annual maintenance activities over the first week back after the holiday. This went according to plan for many of the instruments, but some things... not so much. As a result, some maintenance work will continue over the next few weeks. Here is a list of equipment currently affected by technical issues:

Evaporator/sputter:

The chiller that normally services the sputter tool is out for repair. As a temporary measure, the sputter tool is now connected to the same chiller as the evaporator. Unfortunately, both instruments cannot be running at the same time. If you need to use either the evaporator or sputter system before the chiller is returned, we will show you how to switch the chiller between them.

Maskless photolithography system:

A lens was replaced to remove the artifact spots and defects that have been appearing in the exposure window. The mirror was also adjusted to improve the exposure window uniformity. While both of these issues are much better now, the exposure time required to expose your photoresist has changed. Ask NFK staff for details before you attempt to use the system.

Laser micromachining system:

The interlock pin that holds the door closed when the shutter is open has been coming down on its own occasionally after the door is opened. While this issue is being investigated, the temporary solution is to push the “shutter closed” button to release the interlock pin again so you can close the door.

Raith EBL/SEM:

As is typical for this tool, the electron gun is slowly stabilizing after being off during the holiday. It can already be used for SEM imaging, but if you want to begin EBL work, check the beam stability before scheduling time on the instrument.

COVID-19

In accordance with new [guidance](#) from Queen’s regarding research spaces in response to the Omicron variant, especially around heightened face mask requirements, NFK has posted revised [guidelines](#) on the Chemistry Department website. Please read these before coming to NFK.

See you at the lab!

Graham Gibson

Lab Operations Manager, NanoFabrication Kingston
Queen's University
945 Princess St.
Kingston, ON
K7L 0E9
gibsong@queensu.ca

If you want to opt out of receiving messages containing optional content, please contact gibsong@queensu.ca. You will continue to receive messages with required content until you complete the NFK Check-Out procedure. Contact gibsong@queensu.ca for more details.