

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

January 26, 2026

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

NFK reopened January 5th after a restful break, but the annual maintenance and lab startup was anything but smooth. Without going into too much detail, I will report the current state of things below while humbly asking for patience and forgiveness for all of it!

Environmental controls

We are working with the building managers to investigate and resolve separate issues with our humidifier and reheat coils. Until fixed, the humidifier is down and the humidity in the cleanroom is very low. Temperature control is also not at full capacity, and the lab temperatures are lower than target by 1-2°C. Just for good measure, we are also dealing with a roof leak in the entrance room.

Evaporator

I have completed the disassembly and reassembly of the evaporator to remove the old hoist and install the new one. The system has been tested and is working remarkably well, considering. The new hoist is not quite ready, however, as I now need to fabricate an adapter to fit the bell jar holder to the new hoist. Until fully installed, the bell jar will need to be lifted manually as it has been since the hoist failed in the Fall.

Raith EBL and SEM

The new laser interferometer has been installed, and the system should be working normally again. After a brief scare with the computer not booting, that also appears to be resolved and the system tested well. Still, keep an eye out for strange occurrences when using the system.

Maskless photolithography

Annual maintenance week is usually a time when the maskless stage is calibrated to reduce stitching effects. However, this calibration is not effective if the temperature and humidity are out of control, so until this happens, you can anticipate some stitching error if trying to reach high resolution patterning at lower exposure times.

Sputtering system

With everything else going on, the sputtering system has not had its vacuum pump serviced. This is expected to go smoothly, and the system should be operational sometime this week.

New pricing in effect

A full review was undertaken in the Fall to re-align NFK's pricing with the Canadian market. The new pricing took effect January 1st and is posted on our website [here](#). Most academic pricing did not change, but there were some notable changes overall, summarized here:

- For academic users, pricing increased for the contact mask aligner and RIE
- For industrial users, there were increases to many of our offerings as we try to account for inflation and keep up with competitor pricing
- For anyone trying to keep up with the news, you will have noticed that the price of gold and other precious metals has skyrocketed recently. We have thus increased precious metal evaporation by \$0.05 per Ångstrom for both academic and industrial users
- We have implemented a soft cap for Queen's PIs. Starting this year, we will apply a 50% discount to all lab usage fees (excluding consumables) beyond \$10,000 per PI per fiscal year

See you at the lab!

Graham Gibson

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