# The Expanding World of Nanofabrication

An update from NanoFabrication Kingston – November, 2016

Good day,

You are receiving this important update as a user of KNFL or a supervisor of a user.

## **Holiday break**

Innovation Park and KNFL will be closed from **Dec. 23** at noon until **Jan. 3, 2016**. We are planning to shut down the tools over this time. If you are planning to use KNFL over this period, please let me know before the 20<sup>th</sup>. KNFL after-hours policies will apply.

## **New equipment**

KNFL has several new tools that could make a huge difference to your research. They are:

Sputter coater: a Lesker PVD 75 can deposit materials from a target by magnetron sputtering. Get mirror-like films of materials such as aluminum, chromium, nickel, and titanium with just the push of a button.

*Mask aligner*: a NxQ 4006 semi-automatic mask aligner uses standard 5" optical masks to transfer a pattern to photoresist on your substrate. This replaces the old Oriel model.

*Inkjet microplotter*: a SonoPlot ultrasonic microplotter prints liquid materials onto flat substrates with ~5 micrometre resolution.

*Critical point dryer*: a Spi-Dry critical point dryer uses supercritical carbon dioxide to dry samples after wet processing to prevent damage to fragile surface structures.

These tools are now installed and working, and we've begun the commissioning period. During this time you can use them for no additional charge. Contact me to see how you can use this exciting new equipment!

#### **Evaporator status**

The e-beam evaporator has a new thickness monitor. Be sure to find out how it is different before trying it on your own. The evaporator was recently cleaned and is running very well.

#### **New staff**

KNFL welcomes Rob Dumont and Jianzeng Xu as lab support staff. Feel free to introduce yourself when you are at the lab, they may be able to help you!

## **Fabricating? Get financial assistance from CMC Microsystems**

CMC Microsystems helps Canadian researchers with their <u>micro/nano technology (MNT) fabrication</u> <u>needs</u>. As part of this, CMC offers financial assistance to ease the cost of fabrication, which you can use to access KNFL. Learn more about eligibility and how to apply at: <a href="http://www.cmc.ca/en/WhatWeOffer/Make/MNTPortal/FinancialHelp.aspx">http://www.cmc.ca/en/WhatWeOffer/Make/MNTPortal/FinancialHelp.aspx</a>.

## Congratulations!

Queen's Chemical Engineering student and KNFL user, Reza Nosrati, has won the Colton Medal for Research Excellence from CMC Microsystems. See the article in the Queen's Gazette: <a href="http://www.queensu.ca/gazette/stories/research-motion?utm\_source=e-queens-gazette\_staff">http://www.queensu.ca/gazette/stories/research-motion?utm\_source=e-queens-gazette\_staff</a>. Congratulations Reza!

## We want to hear from you

KNFL is always interested in hearing about your research. Has your work at KNFL led to a publication or conference presentation? If so, please let us know. We also welcome feedback about our tools and services. Feel free to forward your questions, concerns, complaints, or praise to <a href="mailto:me">me</a>, and we will do our best to respond.

See you at the lab!

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