SOLITEC SPINNER

LOCATION: Optical Lithography

PRIMARY TRAINER: Stephanie Bozic (2-6724, sbozic@ualberta.ca)
SECONDARY TRAINER: Jolene Chorzempa (2-4823, jolenec@ualberta.ca)

1. OVERVIEW
The NanoFab has two Solitec spinners. The spinners are used to spin the photo resist that is used in the first step of optical lithography. They have a speed of 0-5000 RPM and two cycles.

2. SAFETY PRECAUTIONS
Photo resist is a solvent based chemical which has been known to cause problems in reproduction, especially in males. It is considered hazardous waste and should be collected in solvent waste either as a liquid or a solid. Commonly used in this process is isopropyl alcohol and acetone in which both are flammable and solvent based and should also be collected as solvent waste.

The high spin speed of the spinner is also hazardous and care should be taken to reduce the risk of contact with the substrate while spinning.
If you are bringing any new materials into the NanoFab for use in your process, it is necessary to fill out a chemical import form (available on our website, http://www.nanofab.ualberta.ca) and supply an MSDS data sheet to Stephanie Bozic.

3. OPERATING INSTRUCTIONS

3.1 Turn on the Solitec spinner using the power button.

3.2 Clean the chuck you wish to use using a clean room wipe and acetone. The ideal chuck is just a little bit smaller than your substrate. Ensure the grooves aren’t plugged so as to achieve maximum vacuum capability.

3.3 Place the chuck onto the spinner by lining up the step parallel to the bar on the spinner. It should feel as though you push on the chuck in two steps.

3.4 Spinning photo resist is generally done in two steps: Spin and Spread. Ensure these buttons are engaged.

3.5 Ensure the spread/spin parameters are correct for your photo resist. Consult appropriate recipe.

3.6 The actual speed is read from the digital speed read out in KRPM. Turn on the vacuum by pressing the vacuum button and press “Start” to check the speed.

   3.6.1.1 Spinner #1 needs to have a substrate on the chuck in order to start. Use the wafer sitting on the rear of the spinner to test speed.

   3.6.1.2 The vacuum is on when the light next to the Vacuum button goes out.

3.7 If the digital readings are incorrect for your process use the spread and spin adjustment knobs and turn counter clockwise or clockwise to either decrease or increase the reading.
4. **TROUBLESHOOTING**

If the spinner won’t spin:

a) double check the vacuum is turned on

b) remove the chuck and clean/dry. Ensure the chuck is replaced properly and is pushed all the way down on the post.

c) ensure the bottom of the wafer is clean and smooth

d) make sure spin/spread time/speed is not set to 0

If you encounter an unexpected error or require assistance please contact the primary or secondary trainer listed above. Should they not be available, please contact any staff member for assistance.

6. **APPROVAL**

**QUALIFIED TRAINER:** Jolene Chorzempa

**TRAINING COORDINATOR:** Stephanie Bozic