**Center for Nanophotonics, TTU**

**SOP for PECVD**

To initialize:

1. Turn ON computer, turn ON chilling water. Set temperature to 300 (from 30) and 250 (from 25) respectively. (select working mode to administrator)

2. For Nitrogen gas, first turn on the valve for PECVD in the other room (2 red, 1 black valve, (check valve states and label)). Then open the valve that spliting N from ICP machine. Turn on the pump behind PECVD machine, when stablized open valve.

3. Turn on the large pump in the other room

4. Wait for temperature to rise.

To operate:

1. Power panel: turn on the generator RF1 & Pump3

2. Open gas valve of SiH4 and NO on both electric control box

2. Switch working mode to administrator, active mode.

3. Vent and load sample. (if can not vent, switch mode to inactive and then back to active)

4. Select process and run process.

5. Wait for 18 minutes then comeback and check if the process ended successfully.

6. Click unload, wait 1 minute and pick out your sample

7. Vacuum the chamber, this is done through: press load, and after 10 seconds, press abort.