# UNAXIS 790 PECVD

## SYSTEM STARUP (NOT FOR DAILY OPS)

- Verify system disconnect box on the wall is in the ON position
- On the electrical enclosure panel (lower right):
  - Flip **ON** the **CORE INTERFACE** Circuit Breaker
  - Activate the **MACHINE** power by pushing the **ON** button
  - Flip **ON** the **Mech Pump/Blower** Circuit Breaker.
  - Flip **ON** the **HEAT EXCHANGER 1** circuit breaker
  - Flip **ON** the **AC OUTLET** circuit breaker
  - The PC should boot. If not, verify the power switch on the PC is **ON**.
  - Lift the safety flap on the RF generator and turn it **ON**
  - Flip **ON** the **TEMPERATURE CONTROLLER** circuit breaker

## PREPARE SYSTEM FOR OPERATION

*On the Neslab Heat Exchanger (in Service Room):*
- Open chilled water line
- Push **START** on the Heat Exchanger keypad
- The Heat Exchanger should start and sound like a refrigerator compressor

*Process Gases (in Service Room)*
- Verify LN2 tank is open. All other process gases are usually left open

*In the Lab*
- Turn on the chilled water line valves on the wall behind the machine
- On the electrical enclosure panel (lower right):
  - Start the **Mech Pump** by pushing the **ON** button.
  - Wait for about 10 seconds
  - Start the **Blower** by pushing the **ON** button

*Logging In*
- On the Win98 desktop double click on **Sysmon**.
- Login user id and password are **3333**.
- Alarm may sound if any conditions are not met (ex: N2, chilled water, chiller etc..). Press the **Silence** key and investigate the problem. Press **Hold** key to continue.
- Press the **STANDBY** button. This will start the substrate heater.
- Go under **Utilities→Set Standby Temp.** Set Substrate to 350C and Heat Exchanger to 20C.

*Pump Down Sequence*
- Wipe door seal
- Select **Utilities→Chamber (LoVac),** and <u>press down hard</u> on the chamber lid to engage the vacuum. The chamber will turn red on the screen when vacuum is engaged.
- Pressure must drop below 2T for the gauge to become active. Wait for chamber pressure to reach the desired base pressure (typically below 10mT).

## DEPOSITION

- Select **Process→Edit**
- Selected desired process. Only edit the deposition time; do not edit anything else.

## VENT SEQUENCE

- If the software is restarted for any reason, **Gas Suspected in Chamber** will be displayed on the information panel. The chamber cannot be vented until it is pumped down to **LoVac**.
- Select **Utilities→Vent.** Wait for chamber to reach atmospheric pressure.
- If the vent does not stop by itself, click on **ON**
- **The chamber interior will be very hot.** Do not touch the interior, or use plastic tweezers.

## RETURN SYSTEM TO IDLE

- Activate **ON.** This will close the throttle valve, and turn off the substrate heater.
- Select **Utilities→Exit**
- On the electrical enclosure panel (lower right):
  - Push the red buttons to turn Blower **OFF** followed by Mech Pump **OFF**
- On the electrical enclosure panel (lower left):
  - Verify that the Set Point Temperature on the controller is approx 25C (actual temperature may be higher)
- Wait for the temperature to drop <100C and then turn off the chilled water valves

*On the Neslab Heat Exchanger (in Service Room):*
- Push **STOP** on the keypad (leave chilled water system on until the chiller stops)
- The display will flash "STOP", and the refrigeration compressor will stop after a few seconds

## COMPLETE SHUTDOWN

- **Shutdown** Windows 98.
- On the electrical enclosure panel (lower right):
  - Flip **OFF** the **AC outlets** circuit breaker
  - Lift the safety flap on the RF generator and turn it **OFF**
  - Flip **OFF** the **Heat Exchanger** circuit breaker
  - Push the red button to turn Machine **OFF**
  - Flip **OFF** the **CORE INTERFACE** circuit breaker