

Sputter Coater Operating Procedure

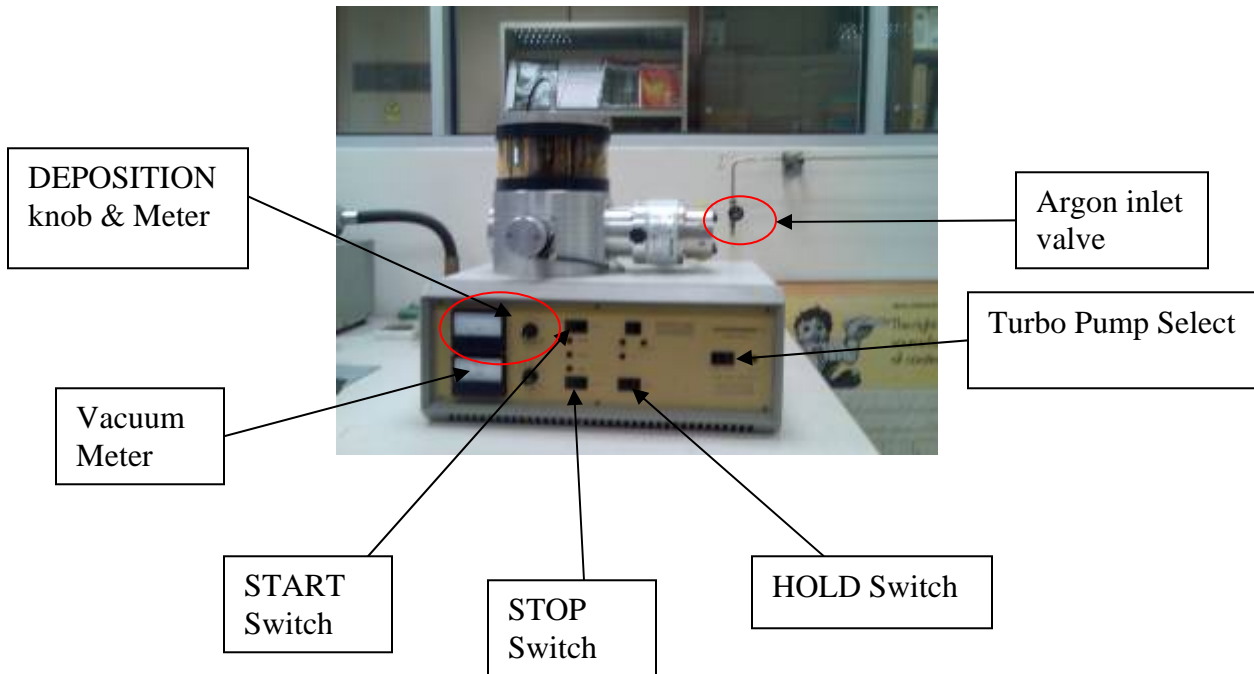
Safety Precautions

1. This equipment can produce high voltages and high vacuums in its operation. User must be trained before operating.
2. Please familiarize yourself with the possible risks associated with the process gas by reading through the MSDS.
3. Wear appropriate PPE.

Operating Procedures

1. Check Argon gas on manifold panel.
2. Open gas flow valve to instrument near coater. NEEDLE VALVE at close position (fully anti-clockwise).
3. Switch on main power (rocker switch behind instrument).
4. Open chamber lid. If chamber is unable to open, turn on NEEDLE VALVE, press STOP switch on front panel to purge in Argon.
5. Open Chamber lid, press START once to move away shutter then load sample.
6. Close chamber lid – ensure proper seating.
7. For gold sputtering process, select NOBLE on front panel.
8. Press START (once will open shutter, press twice to start vacuum pump).
9. Look at Vacuum Meter, when needle rises to 1 division, switch on TURBO, and select HOLD.
10. Set TIMER to required coating time; DEPOSITION remains at zero.
11. Wait until TURBO SPEED reaches 70% (with 7 LEDs lighted), de-select HOLD.
12. BLEED comes on, shutter moves away, COAT light on.
13. Adjust needle valve to introduce Argon gas into chamber, stop gas adjustment when reading of vacuum rises to within the marked region;
14. Increase DEPOSITION knob slowly until a purplish plasma glow is observed.
15. If the coating process becomes unstable, fine tune the amount of Argon gas together with the deposition current, so as to maintain its plasma state.

16. Allow process to auto time-out and vent: COAT goes off and shutter closes.
17. PURGE comes on to fill chamber.
18. Open chamber lid, remove sample. Close chamber lid, ensure proper seating.
19. POWER off. Needle valve off. Gas valve off.
20. Record usage on log book



Vacuum Chamber Lid



Turbo Pump



Gas Manifold