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Clockwise: Close Counter-clockwise: Open

Gold Sputter Coater - Quickstart Guide - Layout

- 1. **Sign in** on Equipment user sheet.
- 2. Turn on the Argon gas tank and arrow valve up (near entrance of sample preparation room.

-Timer

- 3. Open the sample chamber and input your sample.
- 4. Place the plug with o-ring to onto the hole on the top of the sample chamber (needs to be place to maintain vacuum)
- 5. Turn from OFF to PUMP (swtich on the right side) and make sure the Argon Leak Valve is completely closed and the chamber is sealed.
- 6. Wait for a good Vacuum (about 0.07 torr or where the red mark is on the vacuum gauge).
- 7. Open the Argon Leak Valve and let the Argon leak into the chamber for 30 to 60 seconds.
- 8. Close the Argon Leak Valve and let the vacuum recover back to 0.07 torr (it should recover at lot faster than before).

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- 9. Open the Argon Leak Valve slight (while maintaining a good vacuum).
- 10. Switch from PUMP to Set HT.
- **11. Adjust the Argon Leak Valve for the proper mA reading for coating** (your sample while coat while this is on, so practice beforehand to know the proper leakage to get your mA correct, usually a 10-20 mA is okay if you just want to coat).
- 12. Switch to Timer.
- **13. Set the Timer to the desired time for coating (**Usually 40s or check thickness formula below).
- 14. Press the Timed Burst Button to coat your sample.
- 15. Repeat the bursts as needed for coating.
- 16. When done, which from Timer or Set HT to OFF.
- 17. Close the Argon Gas tank and close the arrow valve.
- 18. Take out the plug with o-ring and place it on the metal holder.
- 19. Remove your sample.
- 20. Sign off on the login sheet (include number of runs).

Thickness Formula

d = (mA)*(kV)*t*K d = thickness mA = current in mA. (use 10 mA) kV = Voltage in kV (use 1.4 kV) t = time (minutes) K = constant (K= 5 for Argon Gas)

d = 70*t Angstroms (when using suggested parameters, mA = 10 mA, kV = 1.4 kV, K = 5)