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SEM Sputter Standard Operating Procedure

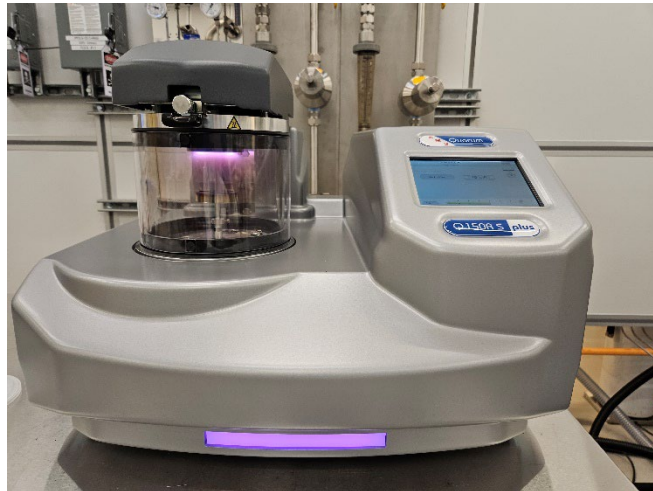
QUICK GUIDE

Before you start

- Login to NEMO
- Turn on Argon gas

Tool condition for the next user

- Vacuum Shutdown Procedure Completed (Chamber Pumped)
- Argon Manual Valve Closed



Tool Overview

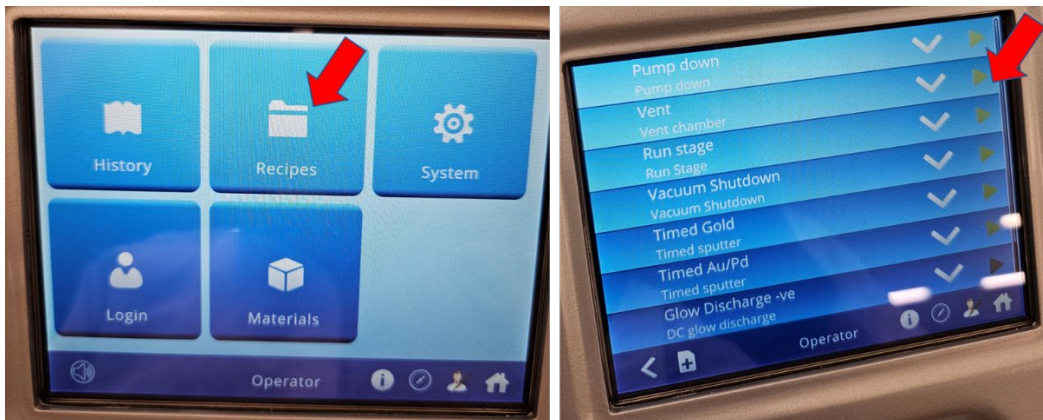
EMS150RS-Plus is applying an ultra-thin coating of electrically-conducting metal – gold/palladium (Au/Pd) onto a non-conducting or poorly conducting specimen. Within 15 sec deposition process the aim is to achieve a typical Au/Pd thickness of 5 nm (with a current of 40mA, and the vacuum of $\times 10^{-2}$ mBar, a deposition rate is 3-5A/sec).

Operating Instruction

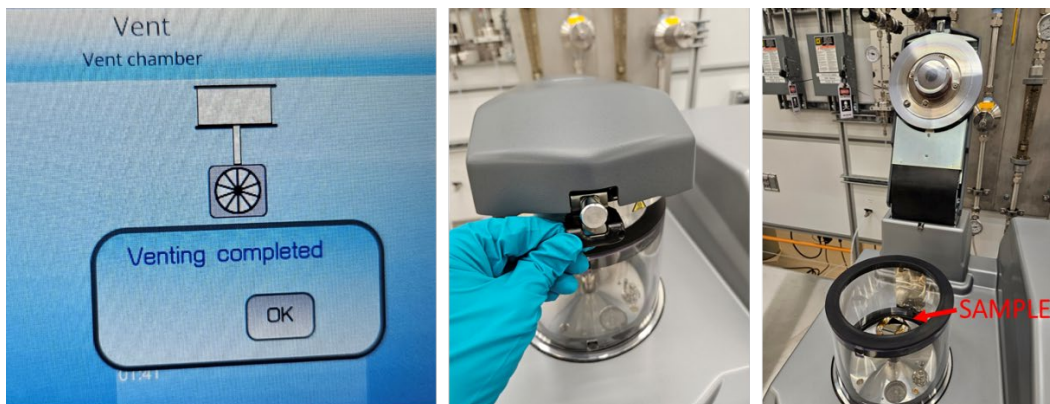
1. Login to NEMO.
2. Turn on Argon gas using a black handle on the wall, behind the tool. The valve is OPEN, when the handle on top is parallel to the valve.



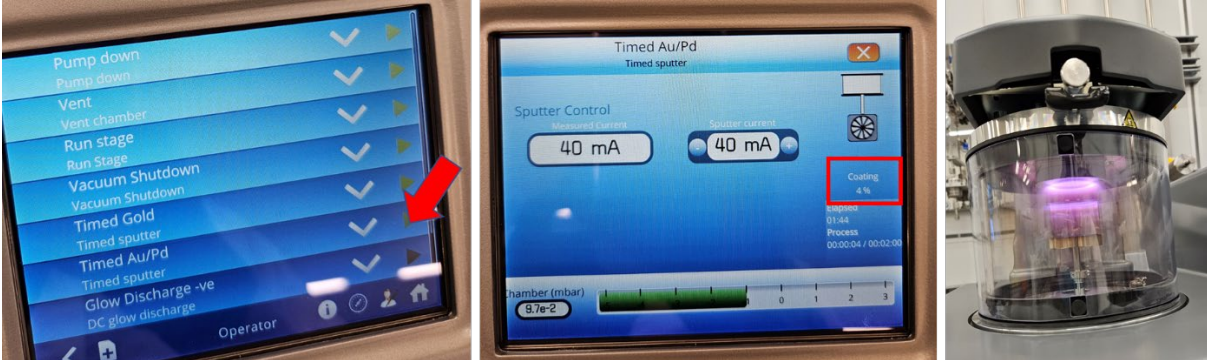
3. The EMS150RS-Plus screen should be on and the chamber should be under vacuum. To vent the chamber press **Recipes**, and select **Vent**.



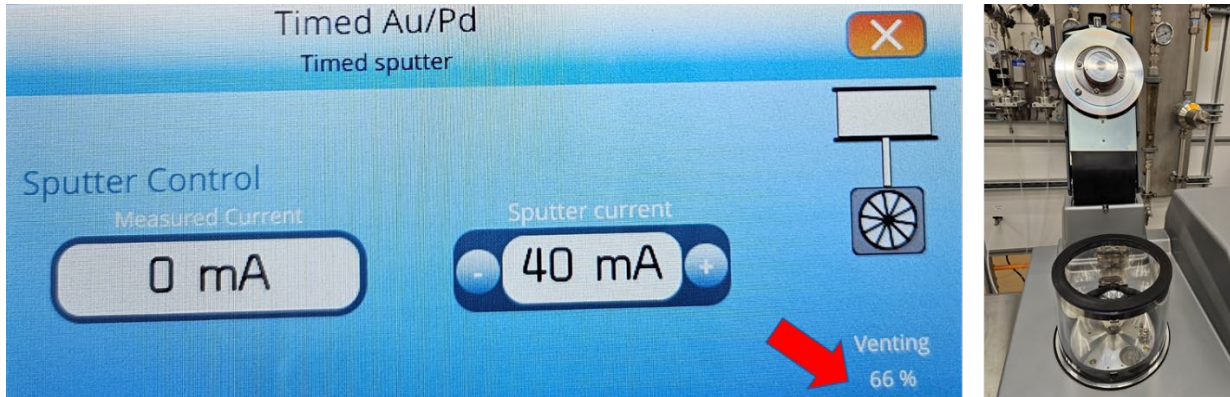
4. Once vented, lift the chamber lid, and load your sample on the rotating stage.



- Close the lid, and run **Timed Au/Pd** recipe. It is not recommended to skip the “Outgas Chamber” step, that is part of the recipe. The deposition process is set for 15 sec, that would deposit about 5 nm Au/Pd. After 15 sec, the plasma turns off, and the chamber starts venting.



- Wait until chamber is 100% vented, before opening the lid.



- Remove your sample, close the lid, and run **Vacuum Shutdown** recipe. Then, turn off Argon gas using a black handle on the wall, and log out from NEMO.

