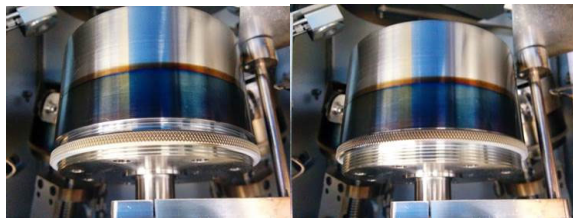


Sputter

1. Fill logbook.
2. Log into the system.
3. Press **Chamber Vent Sequence** button
4. Acknowledge the warning
5. Press **Start Selected Sequence** button.
6. After vent, open the chamber door.
7. Mount sample and load the deposition target. Put the rubber first and target and tighten the cap holding the target down and the outer cap and give a gap between two caps.



You should be able to move that metal tool all the way around, but it should not be loose



Finally, you can use the locking ring to hold the anode shield in place. And cover the protective cap

8. Close chamber door and press **Chamber Pump Down Sequence** button and press **Start Selected Sequence** button.
9. Set up your deposition parameters, during the system pump down to base deposition pressure set-points (It will take 90-120 minutes).
10. If you turn on substrate heater, turn on heater in **Source Detail and Shutter Control** window and set the temperature at **Watlow temperature controller** on the front panel of the system.

11. In Gas Recipe window, choose gas recipes you want or you can choose gas and flow rate.

12. **MFC 1 is for Oxygen** and **MFC 2 for Argon** gas.

13. In Inficom Index Values, make sure put the right index numbers. Refer below table.

Source	Index	Sensor	Output
1	1	1	1
2	2	1	1
3	3	2	2

Set-up of deposition parameters

14. Open SQS-242 software. ID is super and no PW. Just click the OK button.

15. Click **Edit/Films** to open the Film Edit window. Choose the film for the source location you will use

16. If you want to make a new recipe, click **Copy** button and give a new name of the file.

17. Click Deposit Button

- Set P, I, and D Value
- Rate Sampling
 - ✓ Set at continuous
- Shutter Delay
 - ✓ Accuracy 10-15%
 - ✓ Wait 60-100
 - ✓ Hold

18. Click **Condition** Button

At precondition, use Ramp 2, not Ramp 1

- ✓ Ramp 2 pw 10-20%
- ✓ Ramp 2 time 60 s
- ✓ Soak 30 s

19. Click **Source/Sensors** button

- At source choose deposit material
- Set max pw not to high (Start from 30-40%)

- Slew rate 3-5
- **Sensor Tooling:** Measure the real deposit thickness and the put the ratio of real thickness and setting thickness for each material

20. Click **Errors** button

- At Crystal Fail, choose enabled

21. Close Edit file window

22. Open Edit Process window.

Find the process file or make new file. To make new file, click copy button and type the new name.

23. Click **Layer** button.

- Choose right Film, Output, and Input
- Set deposition rate and the final thickness

24. Click **Rate Ramp** button

- To set ramp, click Insert button and put start thickness, ramp time, and Setpt (deposit rate)

25. After check **Deposit, Condition, Source/Sensors**, and Errors, close process edit window.

26. When the deposition pressure is achieved, perform the deposition.

27. Click Start Process Green button. It will be red during the deposition.

After finish the deposition, it will change to green again.

28. After deposition is over, wait for 10 minutes to cool down.

29. Select **Chamber Vent Sequence** button and press **Start Selected Sequence** button.

30. After vent, open the chamber and remove your sample and deposition materials.

31. Close chamber door and select **Chamber Pump Down sequence** button and press **Start Selected Sequence** button.

32. Complete logbook.