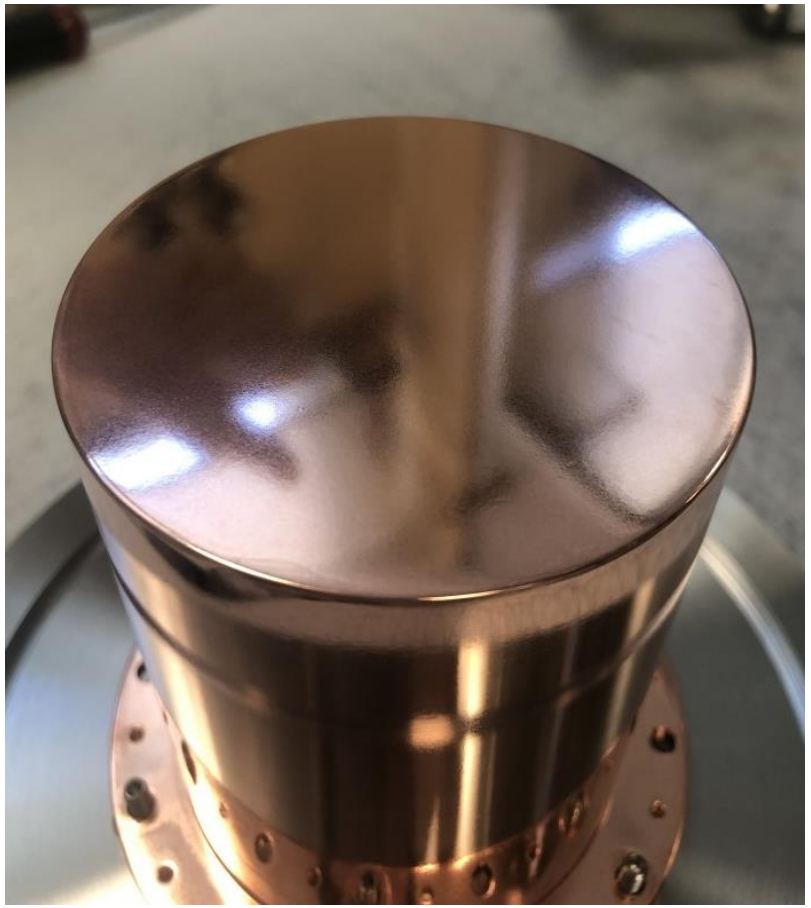
QPR Sputtering Process

Workflow:

- Nb thick film sputtering (50 µm)
- Testing
- Nb3Sn thin film sputtering (with optimized parameters)
- Testing



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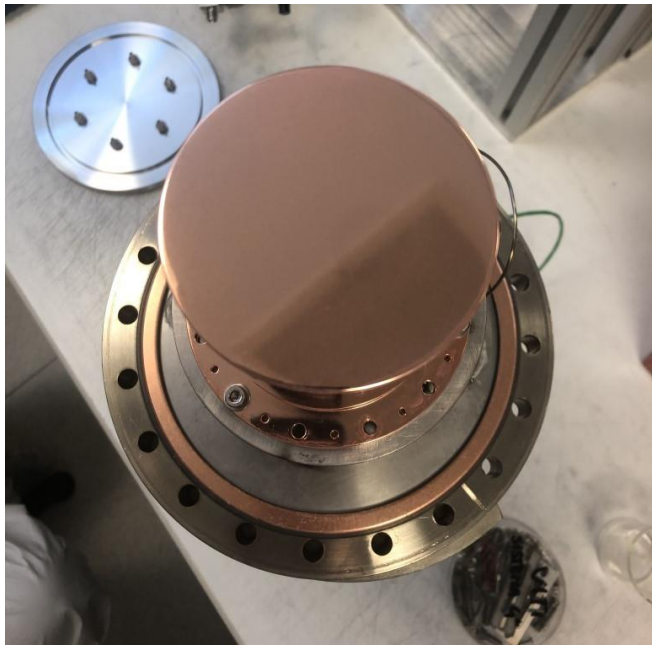
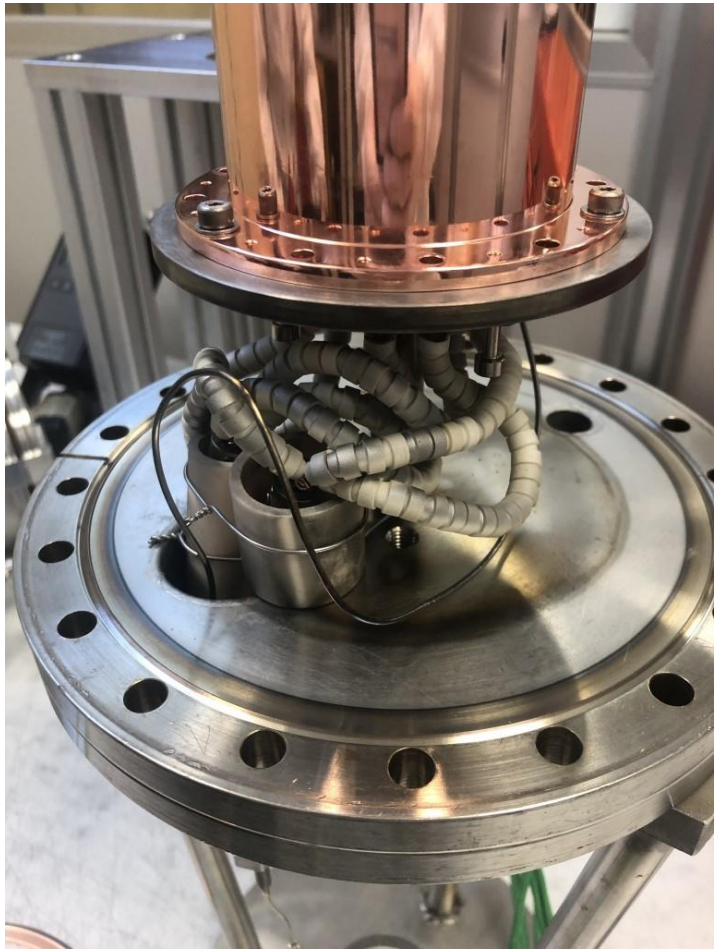
QPR Sputtering Process

Cleanroom assembly:

Termocouple mounted on the underside.

3 IR lamps for heating





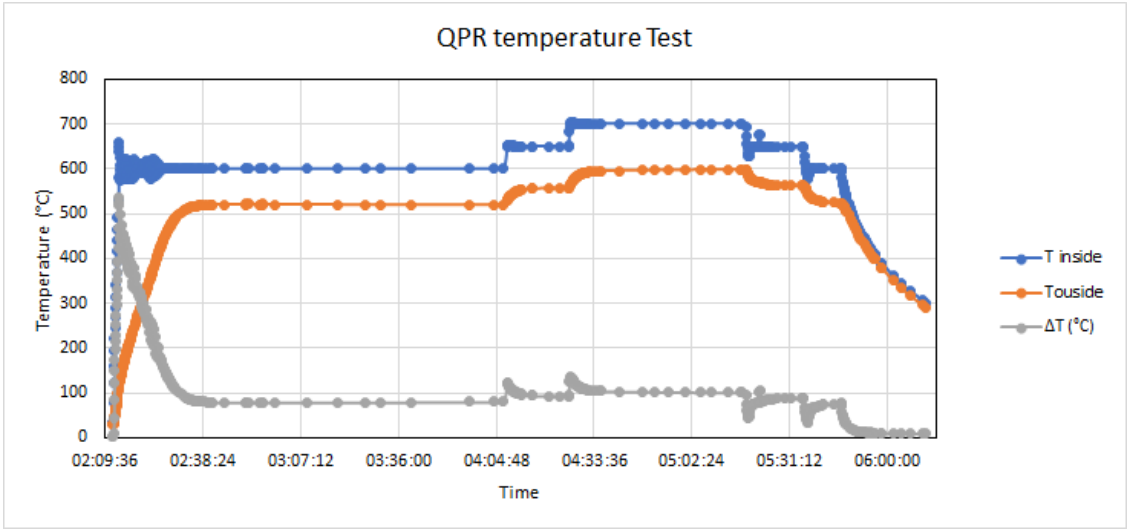
QPR Sputtering Process

Sputtering:

Baking at 710°C for 24h;

Sputtering process with multilayer program:
80 layers, 550 nm each.
Expected c.a. 44 µm

As shown by previous testings, temperature difference between top of QPR and underside (where the thermocouple is mounted) is 100°C; Process T set accordingly to 650°C (550°C on top surface).



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QPR Sputtering Process

Magnetron shorted during process!

Approx. after 2h 30min, magnetron shorted (c.a. 15 µm deposited).

Immediately after process, film surface looking very good.

After a week (stored in cleanroom), signs of bubbles on surface appeared, probably due to insufficient heating.