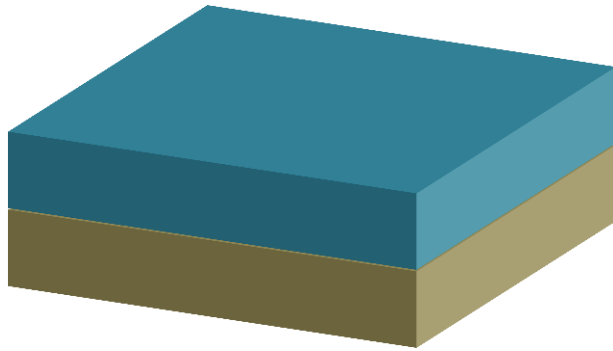


	Glass substrate		a-Si		Photoresist (PMMA-A4)		Aluminium
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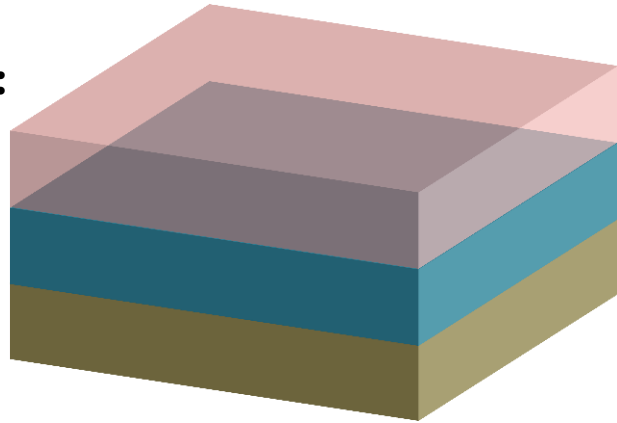
Step 1:



Sputtering

Target	: Silicon
Pressure	: 6.5E-3 mbar
Base pressure	: 6E-7 mbar
Time	: 1 hour
Power	: 40 Watt
Air Flow	: 70 Sccm

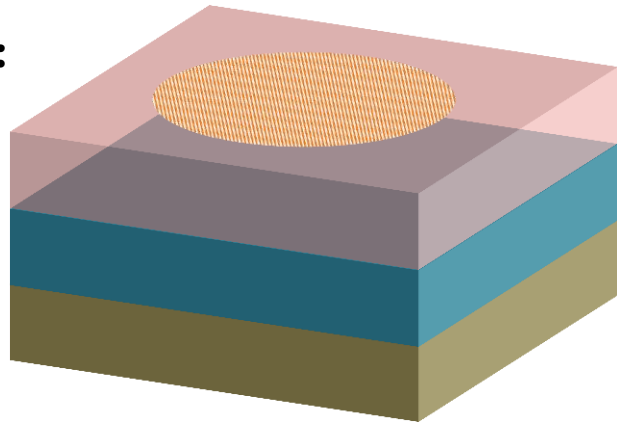
Step 2:



Spin Coating

Photoresist	: PMMA bilayer process
Spin	: 3000 rpm
Spin time	: 45s
Bake	: 180° C
Bake time	: 7 mins

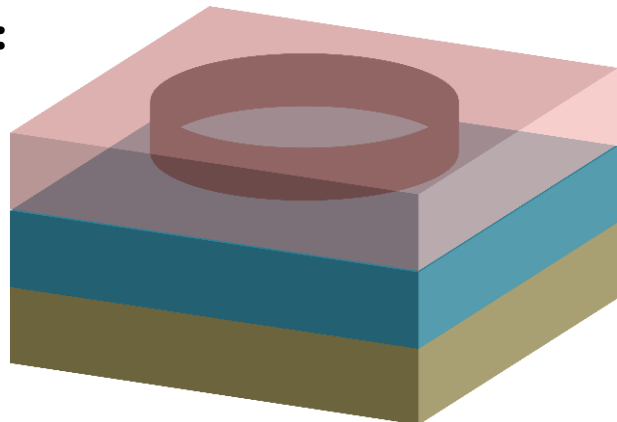
Step 3:



E-Beam lithography

Aperture size	: 10μm
Dose	: 80 μC
EHT	: 20KV
Beam Current	: 15pA

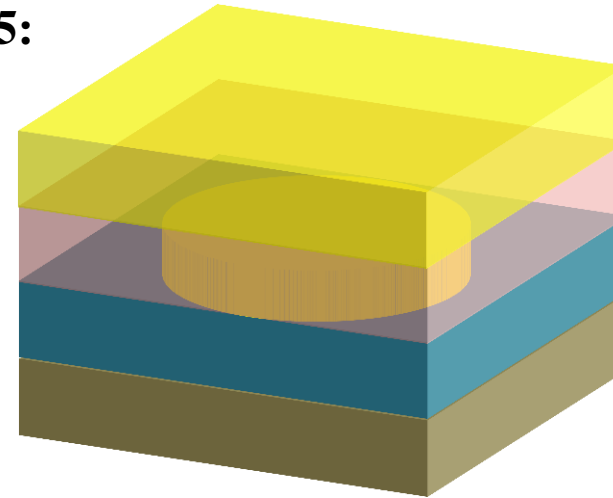
Step 4:



Development

Developer	: MIBK:IPA
Time	: 40 sec
Ratio	: 1:3
Stopper	: IPA 30 Sec

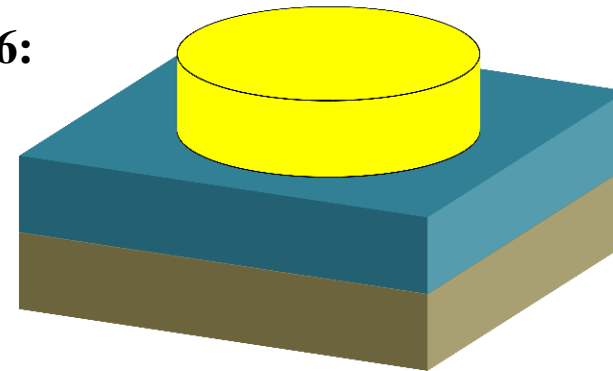
Step 5:



Thin Layer Metallisation

Metal	: Aluminium
Method	: Thermal evaporation
Pressure	: 1E-6 mbar
Thickness	: < 5nm
Current	: 8A (DC)

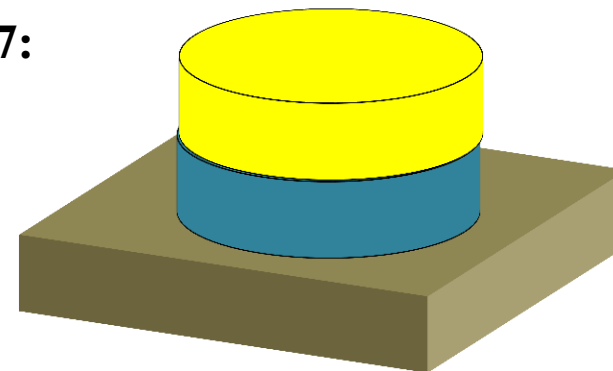
Step 6:



Lift off

Agent	: Acetone
Time	: 3 hours at 40°C

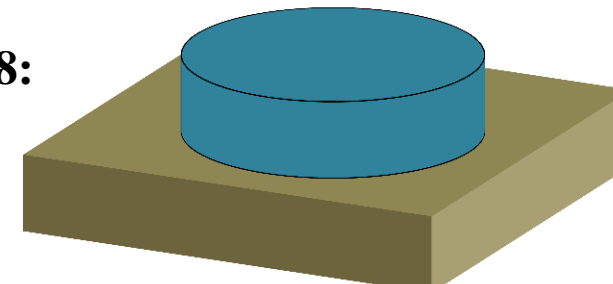
Step 7:



Reactive ion etching

SF ₆	: 50 SCCM
O ₂	: 12.5 SCCM
Power	: 60 Watt
Pressure	: 50 mtorr
Si Etch rate	: 1.5nm/Sec

Step 8:



Sacrificial Aluminium etching

H ₃ PO ₄ :HNO ₃ :H ₂ O Wet solution	
Temp	: RT
Al Etch rate	: 1A/min