Oxford PlasmaPro 100 ICP-CVD

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Process Summary

ICP chemical vapor deposition tool for depositing SiO2 and SiNx films between 50-1000 nm in thickness. Process conditions are generally run at either 250 °C or 70 °C with temperatures in between possible, and a base pressure of ~$3e10^{-7}$ Torr. Processes at 250 °C characterize thickness non-uniformity < 3 %, SiN refractive index 2.01 and SiO2 refractive index 1.47. Films deposited at low temperature (70 °C) are not perfectly homogeneous.

Process Preparation

Users must wear clean gloves before handling anything that will be exposed to plasma.
Users should make sure chamber was cleaned by previous user.

Only these Materials are Allowed	Restricted Materials (Staff permission req'd for each use)	Known Forbidden Materials
Silicon SiO_2 SiN_x III/V materials	➒ Metals (case-by-case) ➒ Nb, Au, Pt ➒ Organics/resists (case-by-case) SiN@70 deg on ➒ Kepton film ➒ Encapsulated CsPbBr3 perovskite	⃠ Metallic In, Pb, Cu, Ga, Zn, Sn, Cu, Se, Te (even unexposed) ⃠ Alkali & Alkali Earth Metals (even unexposed)

For any material not listed or if uncertain,

ASK <u>the Tool Owner!</u>