

PECVD1 SIOxNy ~3300A Recipe			PECVD1 SION 3000A Typical Film Properties
<b>1. Chamber Clean ( wet clean)</b> <b>WET CLEAN</b> Wipe clean upper chamber walls with DI Wipe off upper chamber walls with IPA	<b>2. Chamber (clean+coat)</b> <b>STAMB_17</b> step1: Initial t=10", p=2x10-2 T=250C step2: N2 purge t=30" p=300mT step3: evacuate, base pressure=2x10-2, t=10" step4:loop step5:gass stabilization, t=30" step6:etch chamber, t=30' step7:evacuate, t=10" step8:N2 purge step9:evacuate step10:loop step11:SION gass stabilization t~81.37sec→ step12:SION deposition( 200A coat) , t=1"53.6" step13:evacuate step14:N2purge, t=30" step15:end	<b>3.LS SION Deposition</b> <b>STAMB_18</b> step1: Initial t=10" step2: N2 purge t=30" step3: evacuate, t=10" step4:loop step5: SION gass stabilization, t=30" <b>step6:SION deposition</b> Time=22' Temperature=250°C Pressure=900mT <b>Gass Flow:</b> SiH4=150sccm N2O= 17sccm N2=125sccm NH3=1.53 <b>Power:</b> RF1=22W step7:evacuate, t=10" step8:N2 purge t=30" step9:evacuate t=10" step10:loop	Calibrated every 2-4 weeks Check for the latest update on UCSB Nanofab WIKI  <b>SION-3000A Typical Film properties</b> Deposition rate~14.7nm/min Refractive index@632.8nm=1.718 Stress=135MPa HF etch rate=420nm/min Particle count ( min=70, max=740) Mostly small size particles (0.160-0.213)um Uniformity within the wafer (98.0-99.3)%

