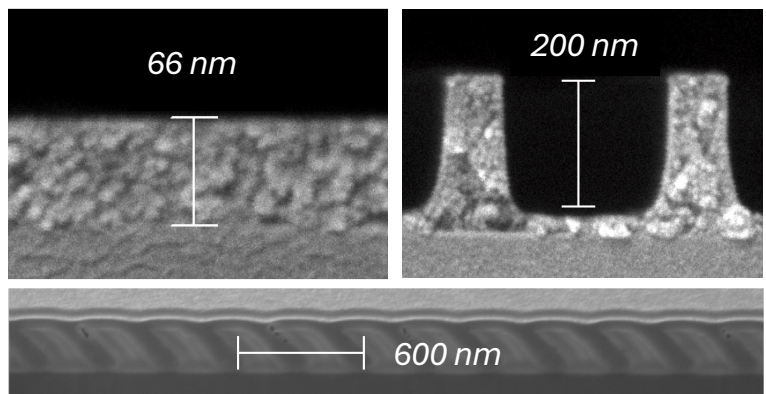
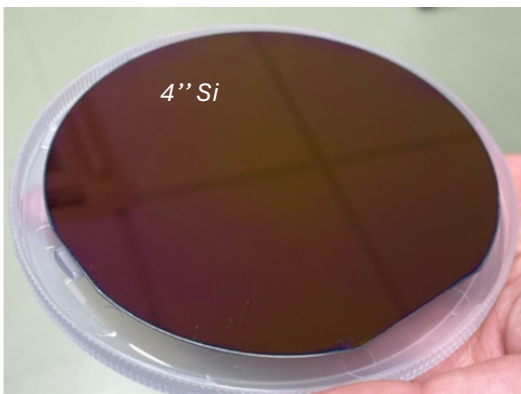
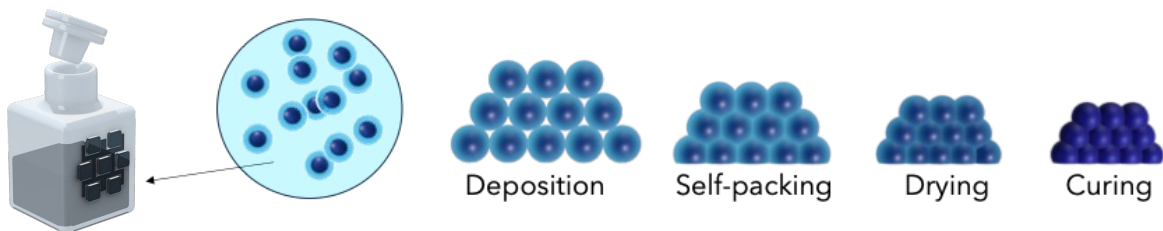


HIGH & ULTRA-HIGH INDEX MATERIALS FOR OPTICAL COATINGS AND METASURFACE IMPRINTING

CHARACTERISTICS

Thickness	Up to 100nm ± 5%
RI@520nm	Up to 2.60 ± 0.01
Haze	< 0.2% for RI < 2.5 and < 0.5% for 2.5 < RI < 2.6
Absorption	< 0.1% (RGB)
Solution shelves life	2 months (6°C)
Curing	TB Adjusted (100°C - 800 °C)
Young Modulus	~ 200 GPa
Water resistance	∞
Processability	SPIN / DIP / NIL / multilayer



SN-Ti-OX materials can be processed as thin coatings with thicknesses up to 100 nm by spin or dip deposition. After curing, high density homogeneous Titania (TiO₂) coatings are obtained, exhibiting Refractive Index (RI) up to 2.60@520nm ± 0.01 (RI index is adjusted with the thermal budget). Very low haze and absorption are retained, even for high index materials, due to the sub-20nm Anatase grains compacted into a dense (non-porous) composite. Thicker than 100nm coatings can be prepared by multi successive depositions. The material can be imprinted by thermal soft-NIL.