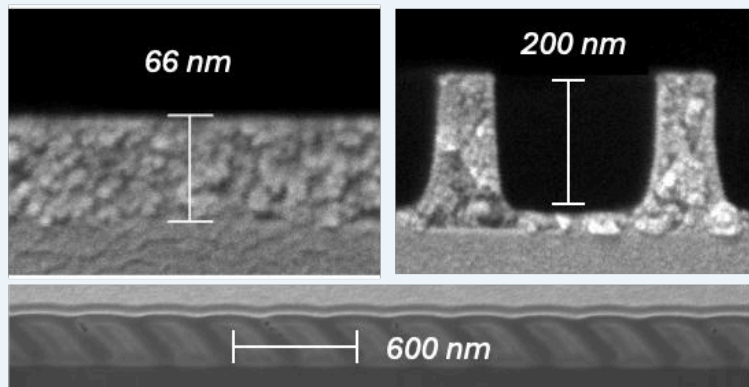
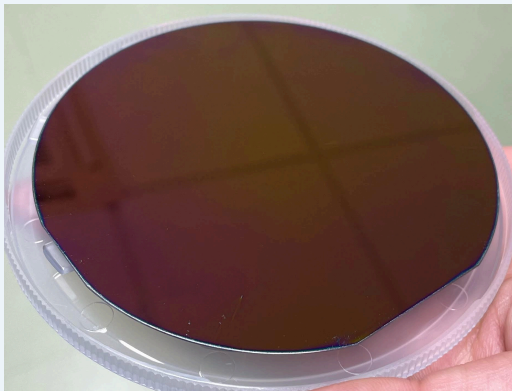


HIGH & ULTRA-HIGH INDEX MATERIALS FOR OPTICAL COATINGS AND METASURFACE IMPRINTING

CHARACTERISTICS:

Thickness	Up to 100 nm \pm 5%
RI@520nm	Up to 2.60 \pm 0.01
Haze (thickness 80-100nm)	< 0.2% for RI < 2.5 and < 0.3% for 2.5 < RI < 2.6
Absorption	< 0.1% (RGB)
Solution shelf life (6°C)	2 months
Curing	TB Adjusted (100 °C – 700 °C)
Young Modulus	~ 200 GPa
Water resistance	∞
Processability	SPIN / DIP / NIL / multilayer processing



HiRI-COAT 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 \pm 0.01 (RI index is adjusted with the thermal budget). Very low haze and absorption are retained, due to the sub-20 nm Anatase grains compacted into a dense (non-porous) composite. Thicker than 100 nm coatings can be prepared by successive multi depositions. The material can be imprinted by thermal soft-NIL.