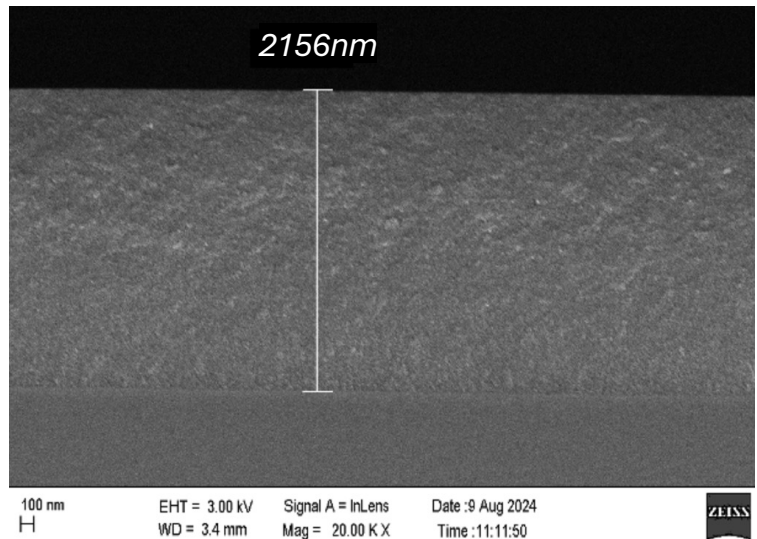
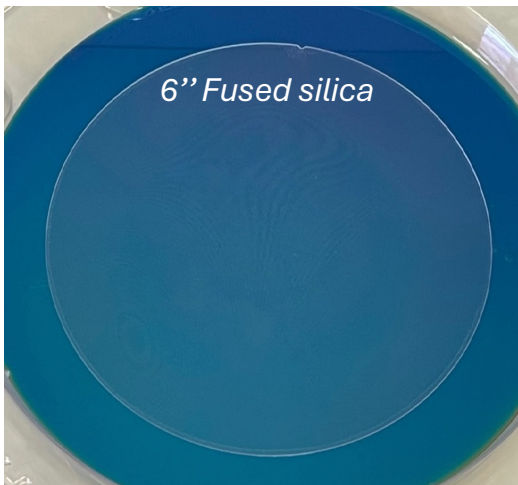


LOW & ULTRA-LOW INDEX MATERIALS FOR OPTICAL COATINGS AND METASURFACE ENCAPSULATION

CHARACTERISTICS

Thickness	Up to 2500nm ± 5%
RI@520nm	Down to 1.120 ± 0.005
Haze	< 0.05%
Absorption	< 0.05% (RGB)
Solution shelves life	2 months (6°C)
Curing	2min (450°C) or 30 min (300°C)
Young Modulus	~ 2GPa
Water repellence	$\Delta n = 0.001RIU$ (0 - 100% RH)
Processability	SPIN / DIP / NIL / multilayer



SN-MSB-1XX materials can be processed as thin coatings with thickness up to 2000 nm by spin or dip deposition. A thermal budget ranging from 30 min at 300°C to 2min at 450°C creates a highly homogeneous, robust, water-resistant polymer-free silica (SiO₂) network, exhibiting Refractive Index (RI) down to 1.120@520nm ± 0.005 (RI index can be adjusted between 1.45 and 1.12 ± 0.01). The material can be used for high index metasurfaces encapsulation and has a qualified resistance to

- THERMAL CHOCK : 100 cycles -30°C / 60°C
- HUMIDITY : 72h in high temperature (85°C) and high humidity (85%)
- UV : 1h 306 W:cm² @ 365 nm
- ADHESION : tape peeling resistance