Thin Film Measurement solution
Software, sensors, custom development
and integration

IN-SITU MEASUREMENT OF OXIDE DURING CMP

The measurement was done using MProbe Vis system. The system was mounted on the CMP equipment to measure oxide thickness through the slurry, during polishing process. Intensity variation and surface roughness corrections were applied to achieve accurate results and a good fit to the measured data

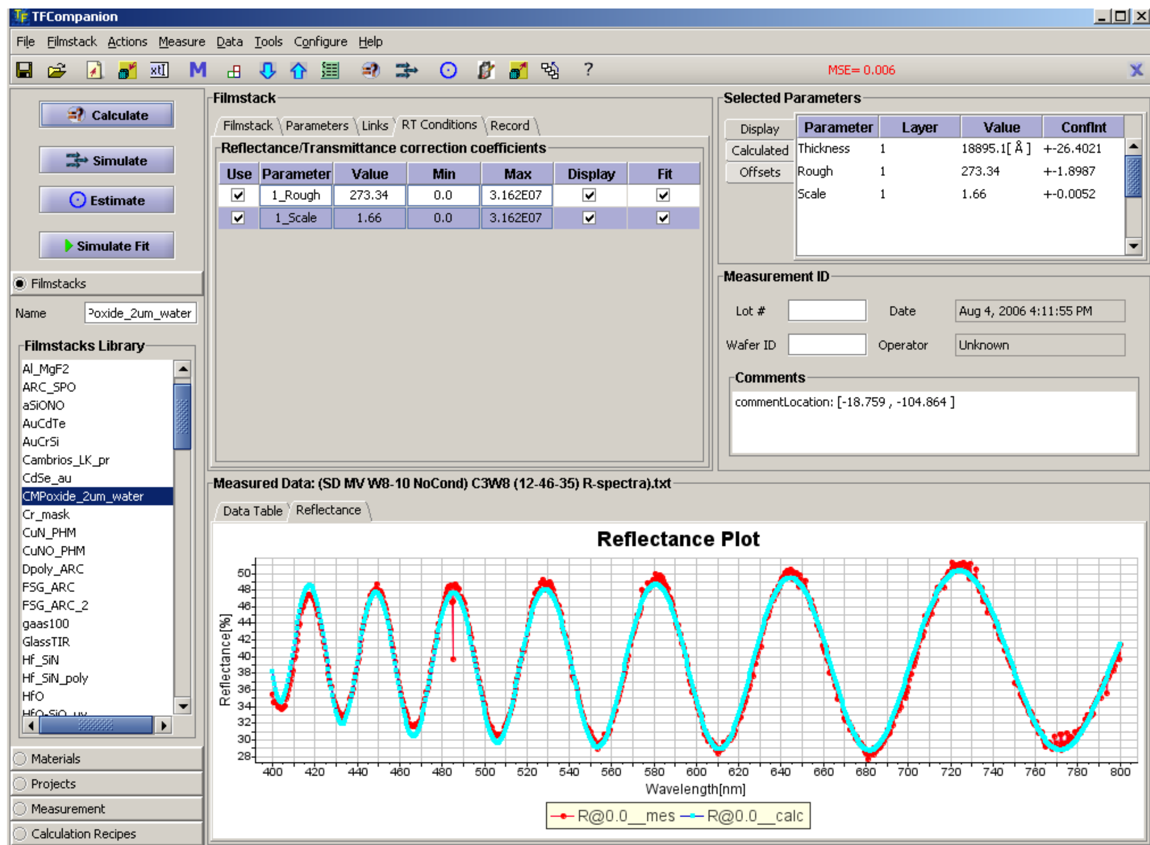

Fig. 1 Oxide thickness calculation 1.89 um (surface roughness, scale factor and oxide spectral dispersion are adjusted sequentially).

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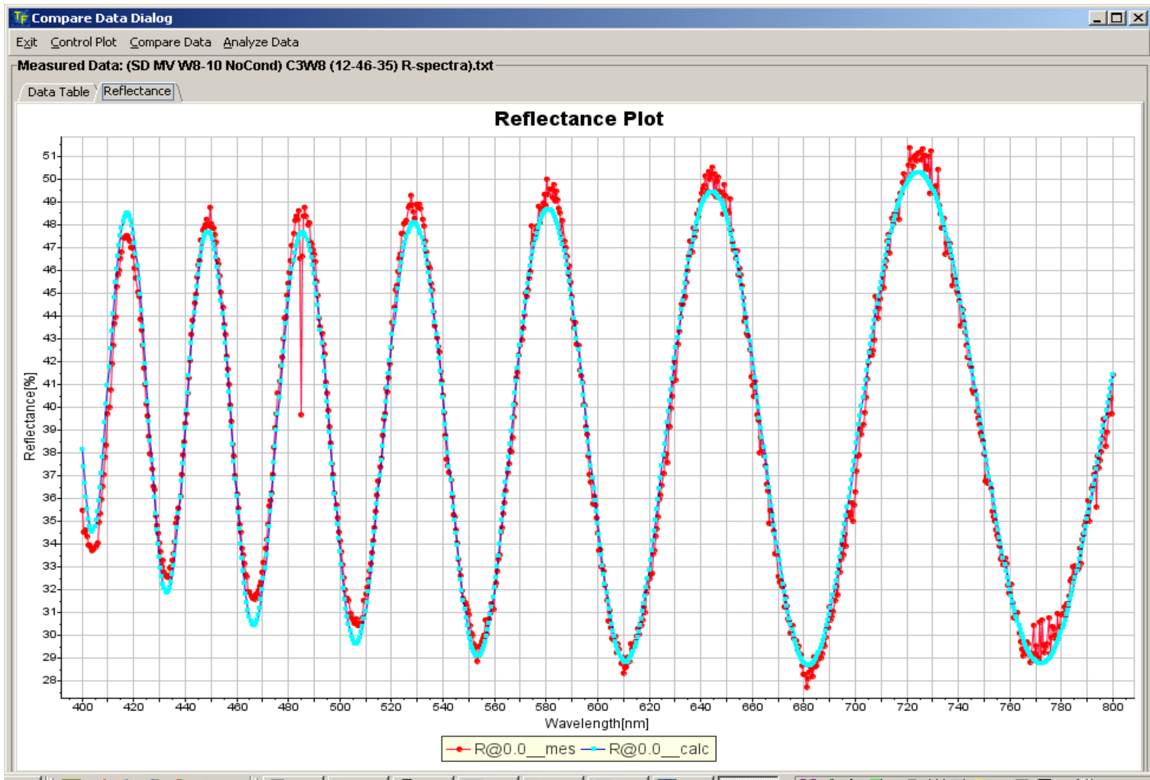

Fig.2 Fit of the Measured vs. Calculated data.

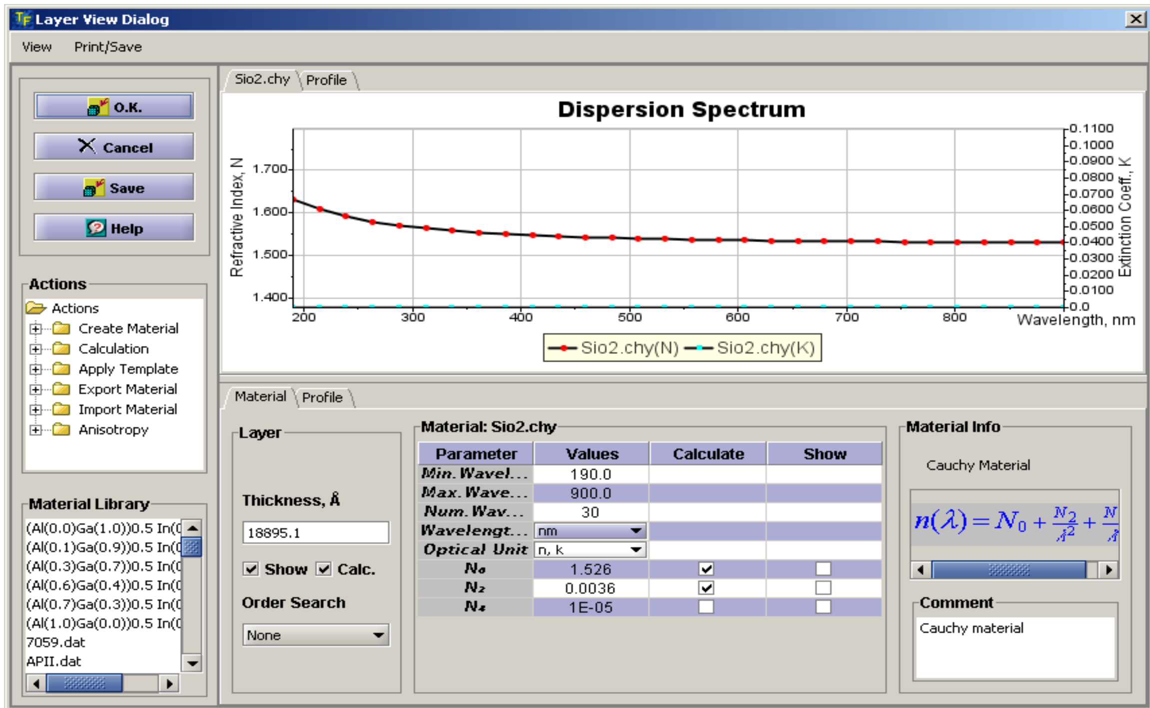

Fig. 3. Dispersion of the oxide (TEOS)

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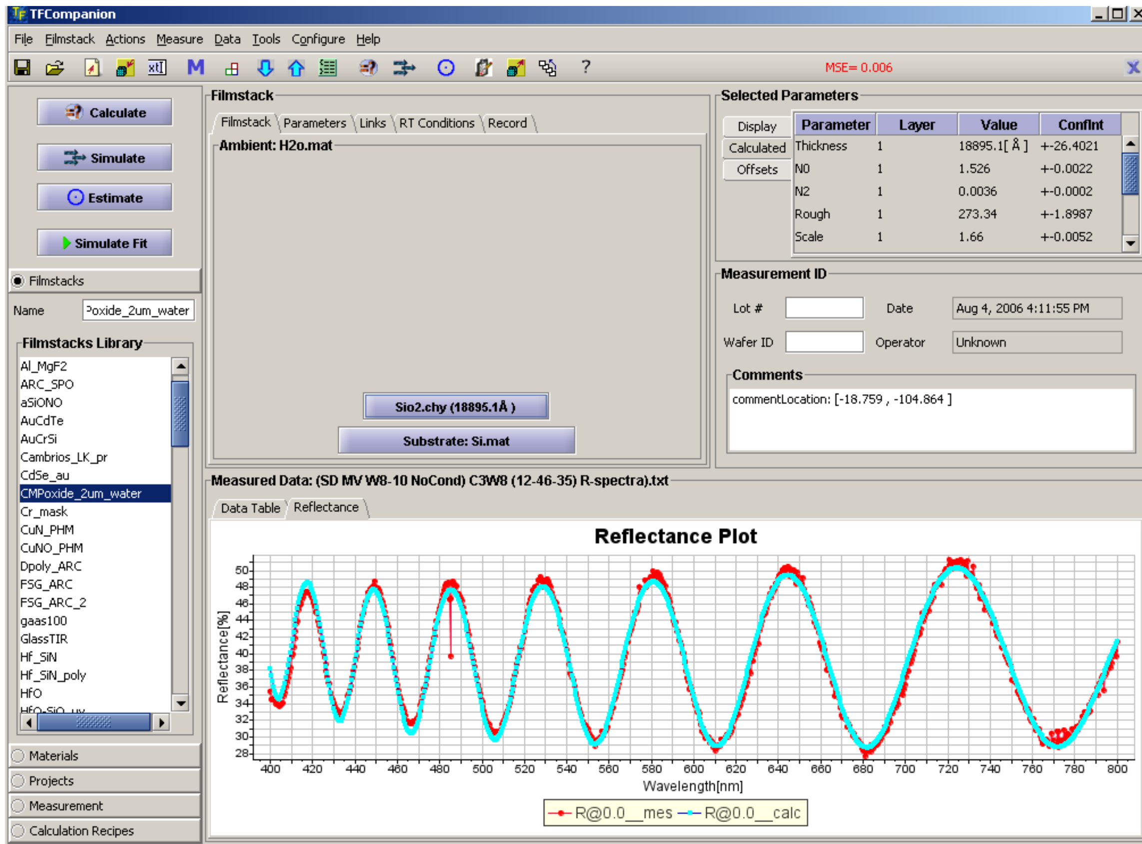

Fig. 4. Calculation parameters: thickness, surface roughness, scale coefficient, oxide (TEOS) dispersion (Cauchy coefficients) . Note. TEOS dispersion was measured only at the first point, after it was kept at the determined value.

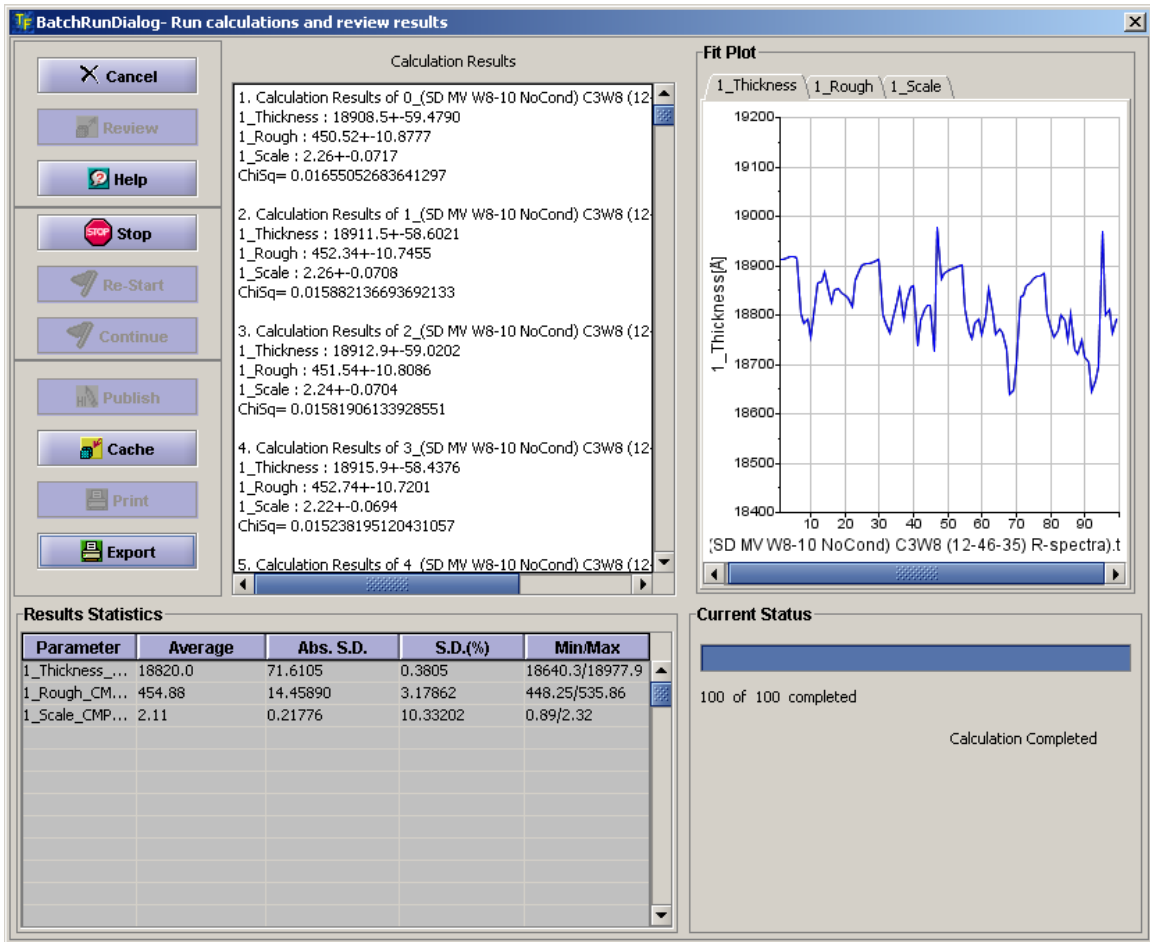

Fig. 5 Batch processing of first 100 measurement pts.

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