

Nitride etching experiment.

This is my recollection of the etching experiment that may allow you to estimate the nitride stress.

A substrate wafer was nitride coated (85nm). Wafer thickness is 625um and diameter 125mm.

The wafer flatness was measured on the WYKO interferometer at lowest magnification. This images a diameter of ~100mm.

The wafer was then waxed to a support wafer so that the nitride was only removed from one side. The nitride was etched off in HF.

After etching the wafer was removed from the support wafer and the flatness measured again. Using the WYKO software the original surface profile was subtracted from the profile after nitride removal. The difference appeared as a uniform curvature.

Note that the surface on which the nitride remained may have been textured, which I suppose could have influenced the result. I have a few more wafers on which this could be tried.

