

# Etch residue formation and growth on patterned porous dielectrics: Angle-resolved XPS and Infrared characterization

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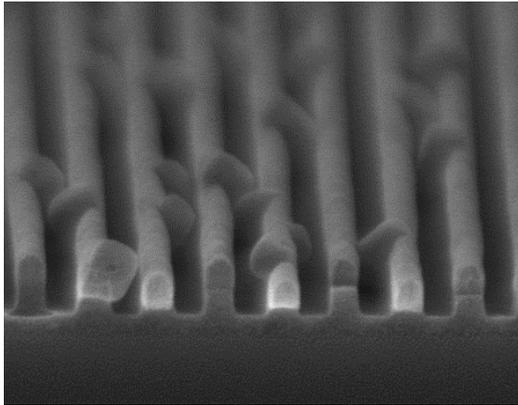


Figure 1: 45 nm  $\frac{1}{2}$  pitch test structure showing the presence of residues upon aging.

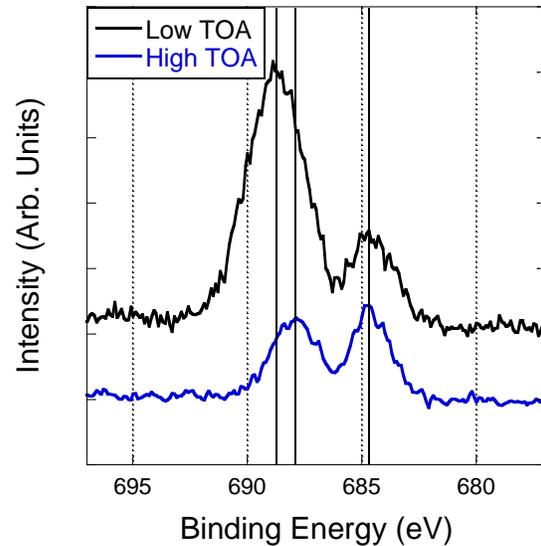


Figure 2: XPS F1s core-level spectra recorded at two different TOA's after the OSG etch showing the presence of Ti-containing residues (at low BE) and with high concentration of CF<sub>x</sub> (at higher BE).