

Figure 1. Grazing-Incidence X-Ray Diffraction study showing the crystallinity of aluminum nitride thin films as a function of substrate bias and ion bombardment gas. The full width at half max of the AIN (002) peaks and crystallite size calculated by the Scherrer Equation are shown for each sample. The crystalline quality improves with increasing momentum (down a column).

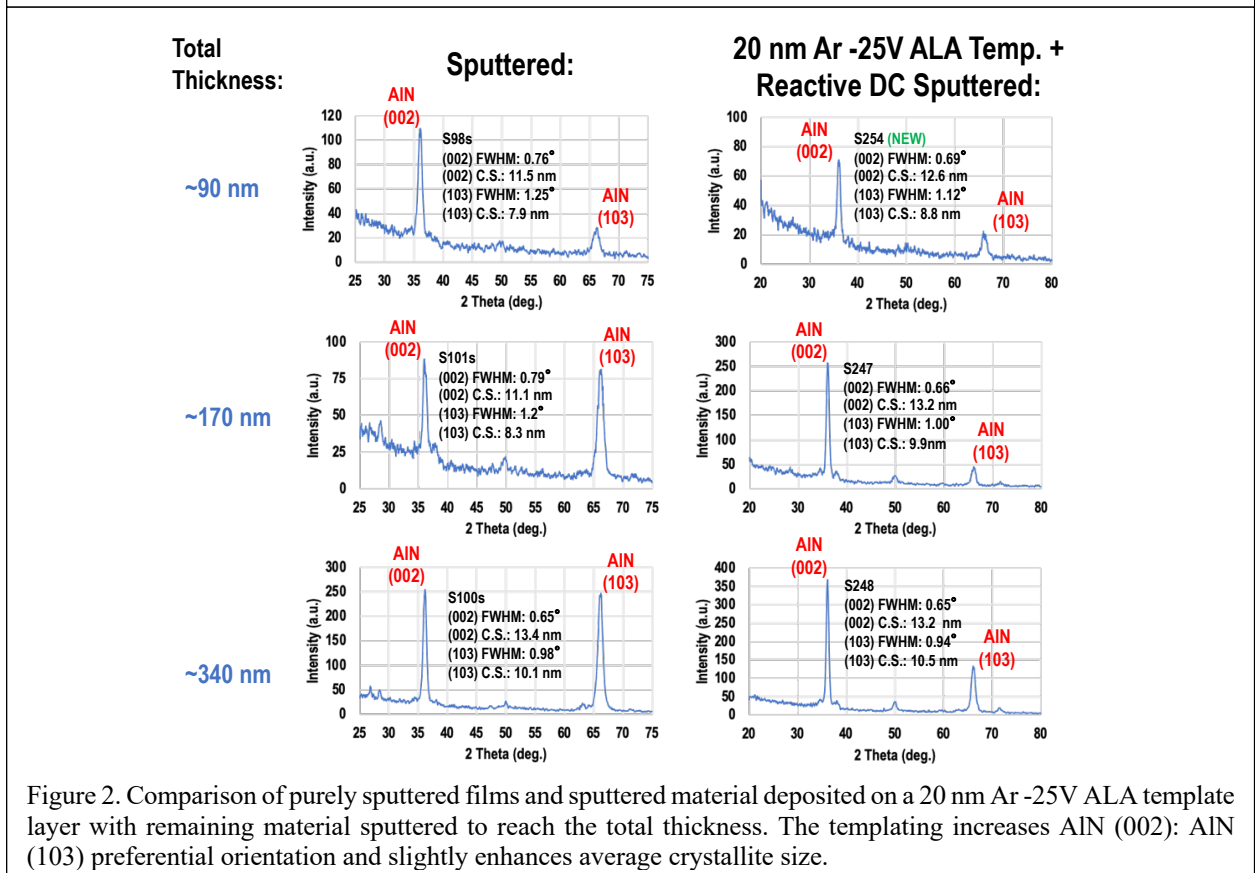


Figure 2. Comparison of purely sputtered films and sputtered material deposited on a 20 nm Ar -25V ALA template layer with remaining material sputtered to reach the total thickness. The templating increases AIN (002); AIN (103) preferential orientation and slightly enhances average crystallite size.