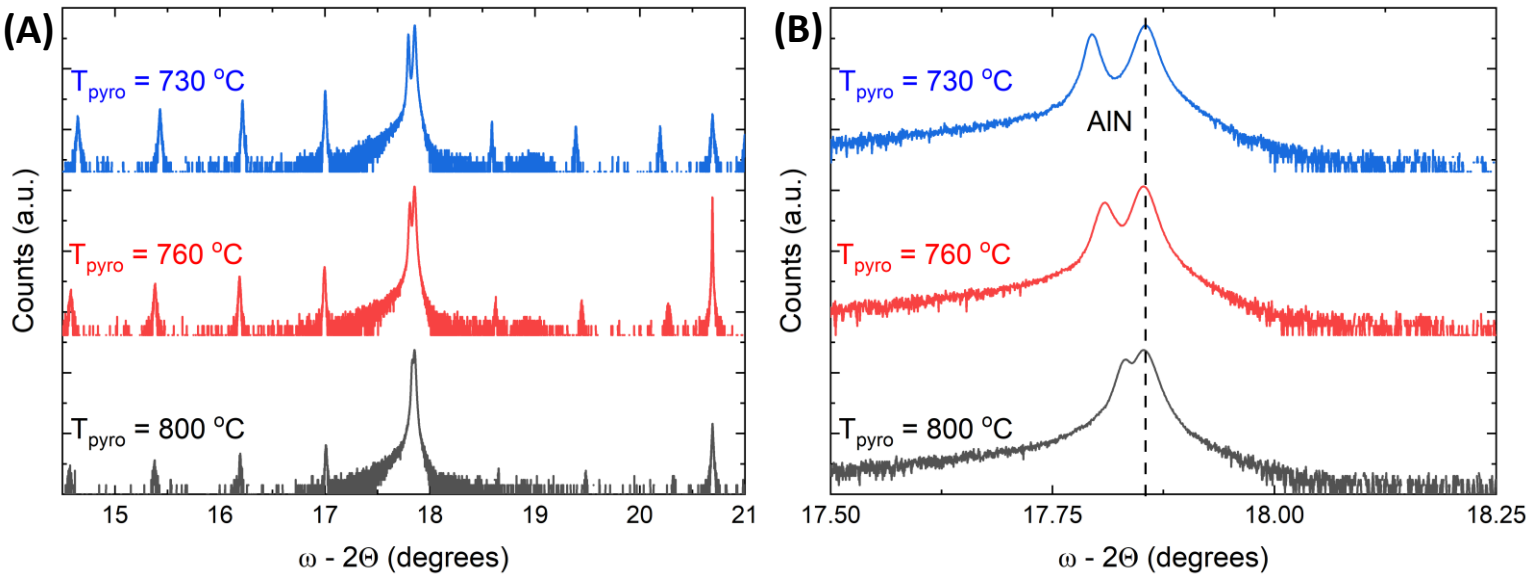
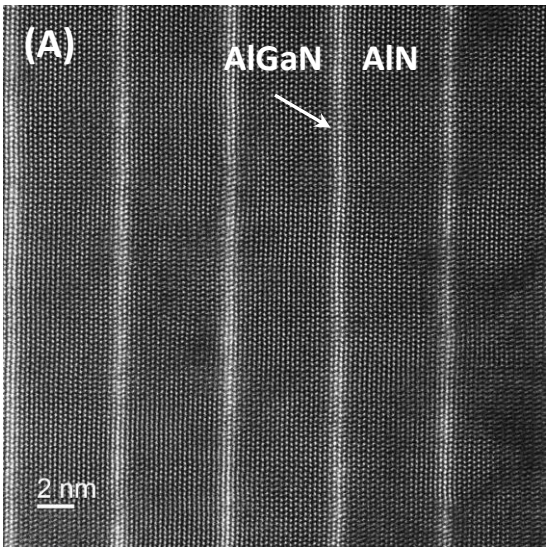
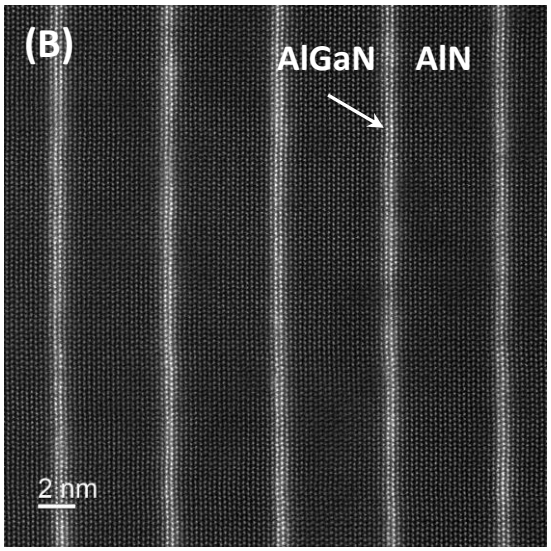


Figure 1: XRD coupled scans of the samples grown at 800 °C, 760 °C, and 730 °C. (A) Plot showing the full range of ω-2Θ scanned. Despite the change in substrate temperature, the position of the higher order peaks remains unchanged indicating a constant SPSL period. (B) Zoom in coupled scan around the AlN peak. The reduction in growth temperature leads to a left shift in the 0th order SPSL peak indicates an increase in the total Ga composition of the AlGaN layer. This theory is reinforced by the lack of change in the higher order peak positions.





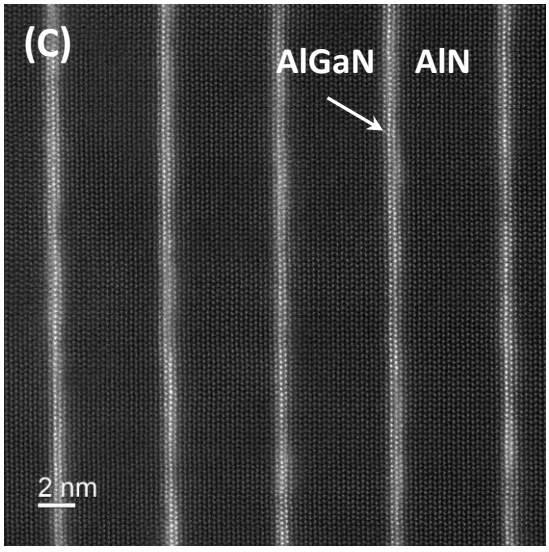


Figure 2: STEM images of the samples studied. (A) Sample grown at a substrate temperature of 800 °C. (B) Sample grown at a substrate temperature of 760 °C. (C) Sample grown at a substrate temperature of 730 °C. For all three samples, the individual layer thicknesses are ~ 5nm for AlN and ~ 3 ML for AlGaN.