



Figure: (a) GIXRD spectra showing Ar-plasma dependence with dominant (002) peak. (b) GIXRD spectra showing plasma duration dependence with Ar/N<sub>2</sub>/H<sub>2</sub>-plasma. (c) Growth Per Cycle behavior with respect to Plasma Power. (d) GIXRD spectra for plasma power dependence with N<sub>2</sub>/H<sub>2</sub>-plasma and No Ar. (e) GIXRD plots for temperature dependence of crystallinity of GaN with Ar/N<sub>2</sub>/H<sub>2</sub>-plasma. (f) AFM topography with area window 10 x 10 μm<sup>2</sup> of a GaN on Si.