

Figure 1: XRD of ZrN deposited on (0001) GaN/sapphire templates at various substrate temperatures. Figure 2: Resistivity as a function of temperature of ZrN deposited at various temperatures normalized by the resistivity at (a) 250K and (b) 11K. Critical temperatures marked in (b) Figure 3: As a function of substrate temperature during deposition (a) the deconvoluted peak positions of the  $Zr_xN_y$  (222) peak, (b) the resistivity at 250K and 11K, (c) residual resistivity ratio, and (d) critical temperatures from the kinks, or 0-resistivity in Figure 2b.