

Supplementary Pages

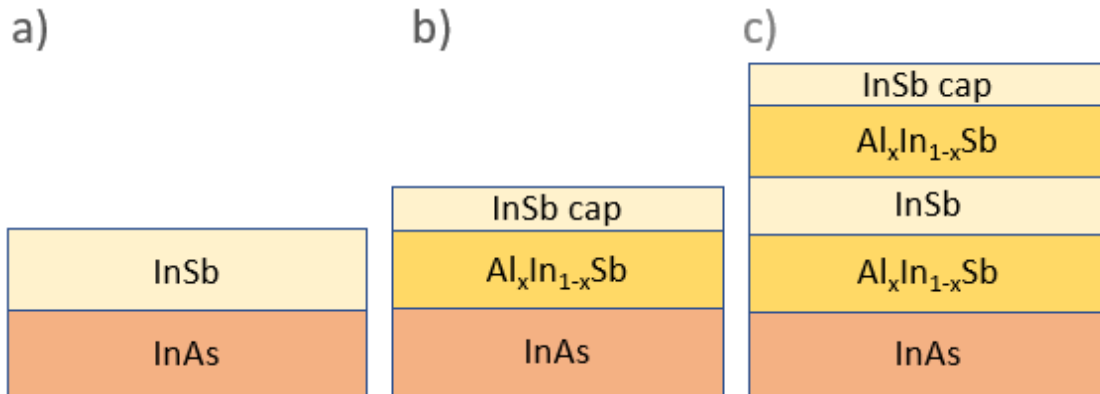


Figure 1: Schematic of different configurations of the IMF samples

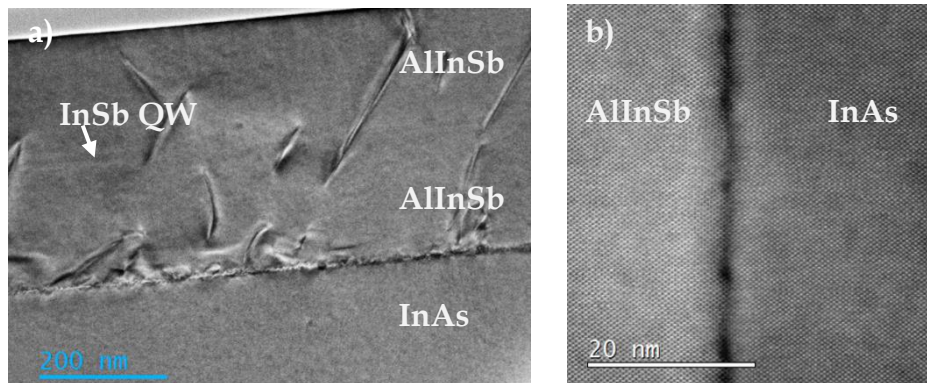


Figure 2: TEM image of InSb QW using AlInSb buffer shown (a). Interfacial misfit dislocations at the AlInSb/InAs interface

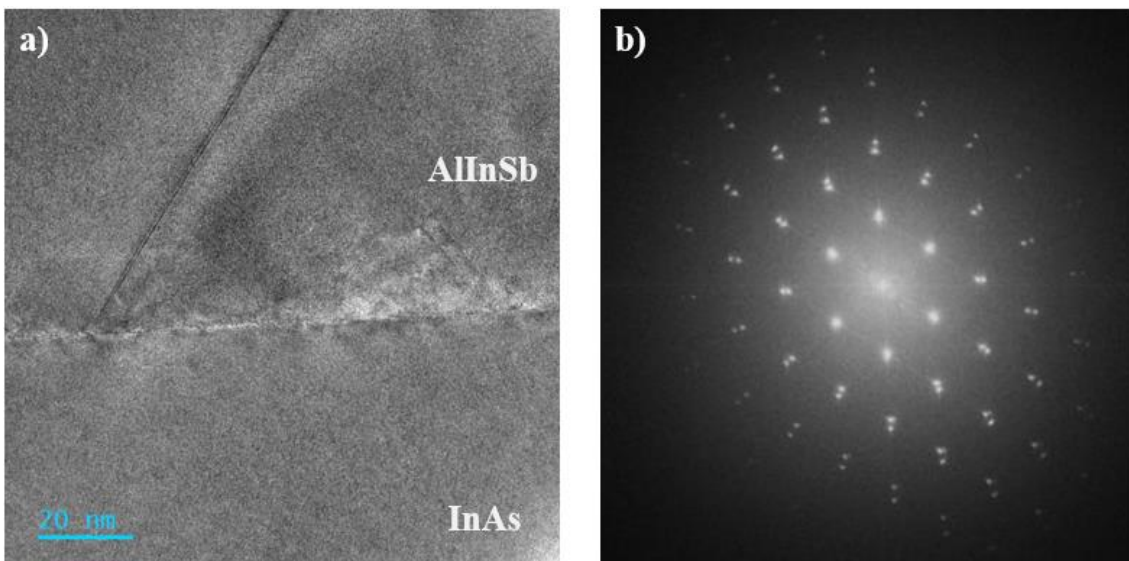


Figure 3: TEM of the Al_{0.2}In_{0.8}Sb/InAs buffer layer interface showing a stacking fault formation and FFT of the image shows two distinct lattice parameters Al_{0.2}In_{0.8}Sb and InAs

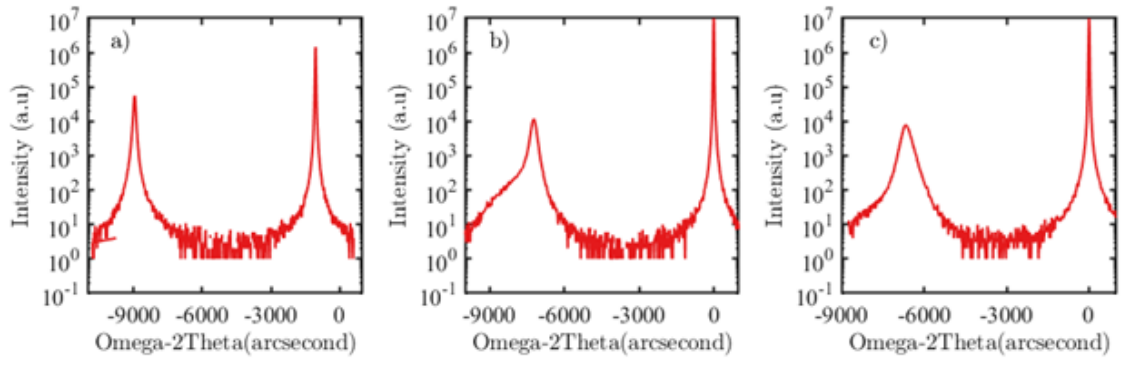


Figure 4 – HR-XRD ω - 2θ scans of a) InSb/InAs b) $\text{Al}_{0.1}\text{In}_{0.9}\text{Sb}$ and c) $\text{Al}_{0.2}\text{In}_{0.8}\text{Sb}$ buffer layers