

Figure S1 – Examples of neck regions and the associated defects in B-type InP NWs. Scale bar in b) is 0.5  $\mu m$ 

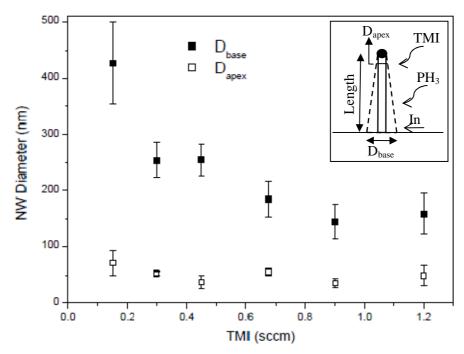


Figure S2— NW base and apex diameters as a function of TMI flow for A-type NWs. The inset schematically shows these parameters. These measurements provide an indication of lateral growth which is enhanced under low TMI flow conditions.

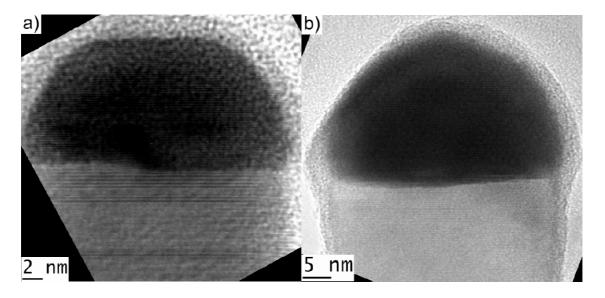


Figure S3 – TEM images of A-type NP/NW interfaces for samples grown under larger TMI flows showing the presence of steps or curvature. (a) large (25nm) NP as discussed in the text; (b)  $\sim$ 40nm NP (not discussed in the manuscript).