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Additions and Corrections

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Self-Catalyzed Epitaxial Growth of Vertical Indium Phosphide Nanowires on Silicon.

Page 2223. Figure 7 shows cross-sectional TEM images of the interface between an InP nanowire and the Si substrate. Figure 7a is a lower-magnification bright-field TEM image showing a portion of the InP wire on Si substrate acquired from a Pt-covered sample prepared using focused ion beam (FIB). Figure 7 panels b and c are higher-resolution TEM images obtained from nanowire and Si, respectively. The insets are Fast Fourier transforms (FFT) of the TEM images. The streaks in FFT of Figure 7b are indicative of stacking faults perpendicular to the wire direction and are visible in the TEM image. From the FFTs, we note that the wire is epitaxial with respect to the substrate. Figure 7d is a high-resolution image of the wire-substrate interface. The local variations in the contrast at the interface suggests the presence of misfit dislocations.

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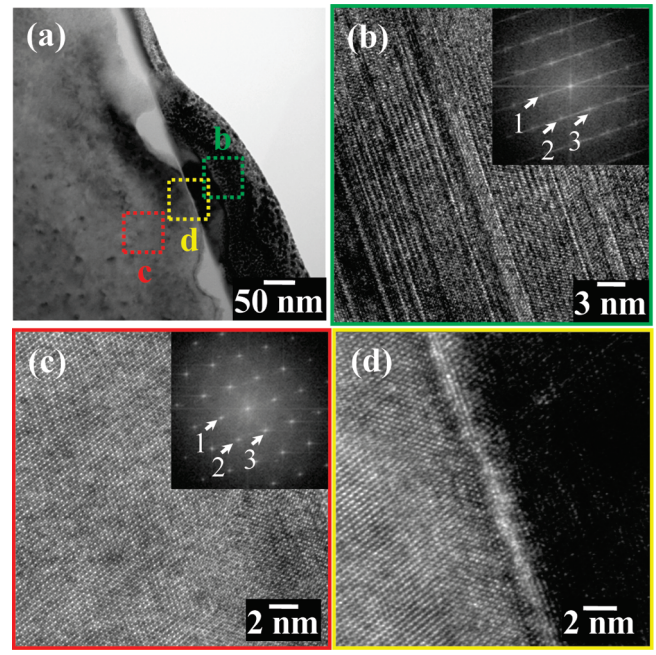

Figure 7. (a) Bright-field TEM image of the InP/Si interface. Higher-resolution TEM images of (b) InP wire, (c) Si substrate, and (d) InP/Si interface. Insets in (b) and (c) are Fourier transforms of the TEM images. Interplanar distances measured from spots labeled 1 and 3 in the inset (b) are 0.34 nm while spot 2 yields 0.30 nm. These values correspond to {111} and {200} planes of InP (S.G.: F-43m (216) structure, $a = 0.587$ nm, PDF no. 320452), respectively. Interplanar distances measured from spots labeled 1 and 3 in the inset (c) are 0.31 nm and from spot 2 is 0.27 nm, which correspond to {111} and {200} planes of Si (S.G.: Fd3m (227), $a = 0.543$ nm, PDF no. 271402), respectively. Both the wire in (b) and Si in (c) are viewed along ⟨011⟩. The wire and the Si wafer are oriented along ⟨111⟩.