

# Combining CVD of Graphene and SiC for Efficient Layer Transfer

## Supplemental Document

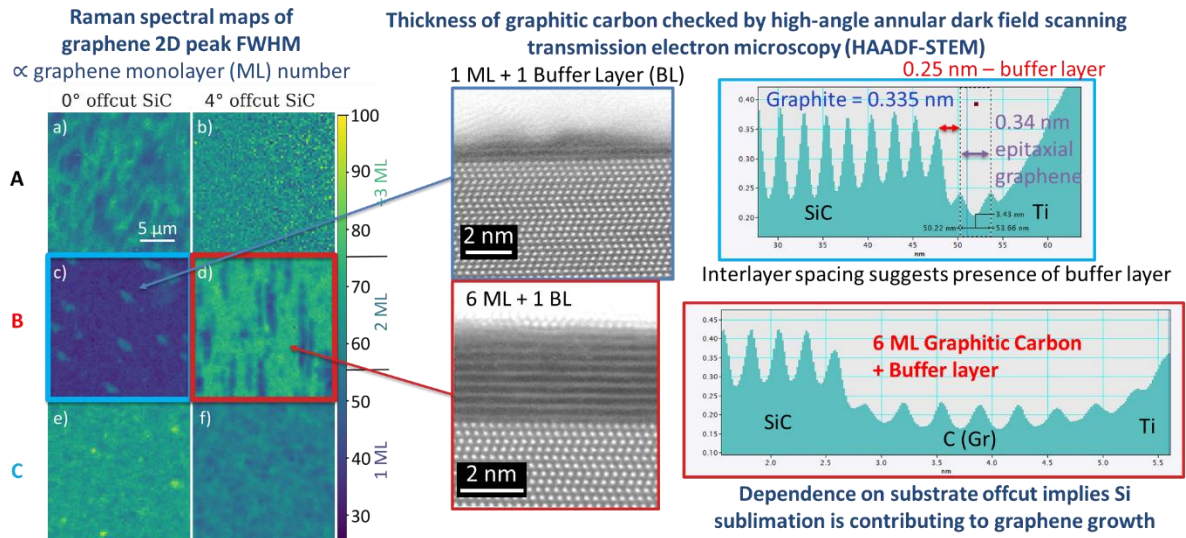


Figure 1: Raman spectral maps of optimized CVD-grown graphene 2D peak FWHM grown on a,c,e) on-axis 6H-SiC(0001) and b,d,f) 4° off-axis 4H-SiC(0001). Cross-sectional HAADF-STEM micrographs of c) and d) can be seen in g) and h), showing the number of graphene monolayers. HAADF-STEM contrast line profiles show that only a monolayer of graphene, along with a graphene-like buffer layer, is present for graphene deposited on on-axis SiC (i), while 6 monolayers of graphene is present when deposited on 4° off-axis SiC (j) despite both samples being exposed to the same growth conditions.

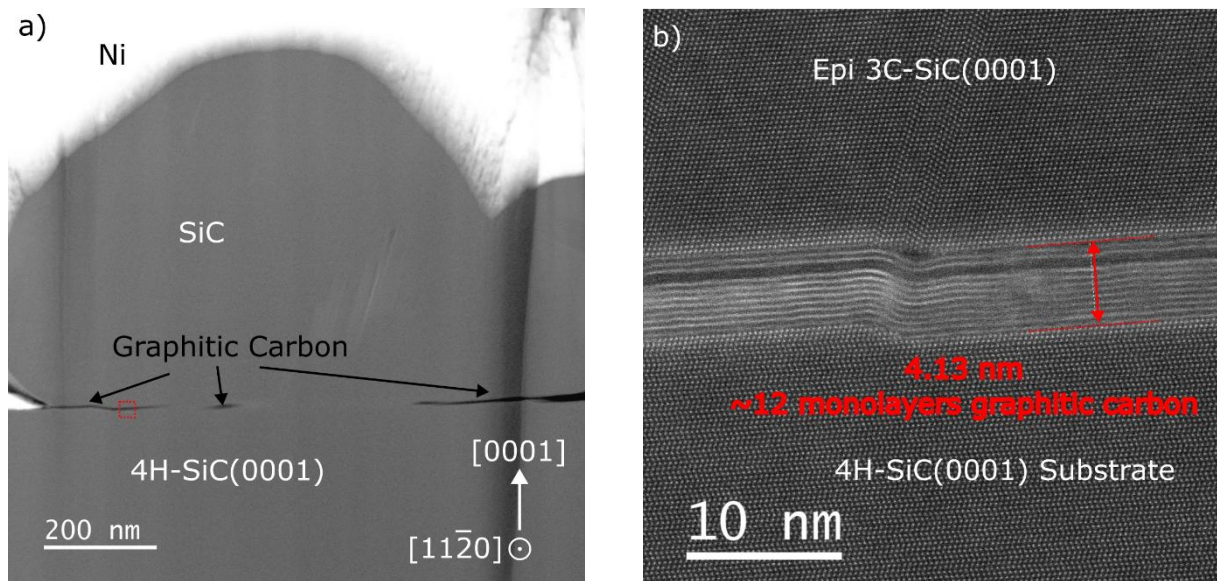


Figure 2: a) HAADF-STEM cross section of a SiC/graphitic carbon/4H-SiC(0001) heterostructure. Ni was used as a protective coating on top of the SiC epilayer. b) A higher magnification medium-angle ADF-STEM image from the dashed square region in a) showing the ~12 monolayers of graphitic carbon and the epitaxial alignment of the grown 3C-SiC epilayer to the 4H-SiC substrate.