

Figure 1 a) Schematic of CVD reactor used to synthesize graphene and b) the formed resulting sample with graphene grown on  $NiO_x$ . The sample is not shown to scale.

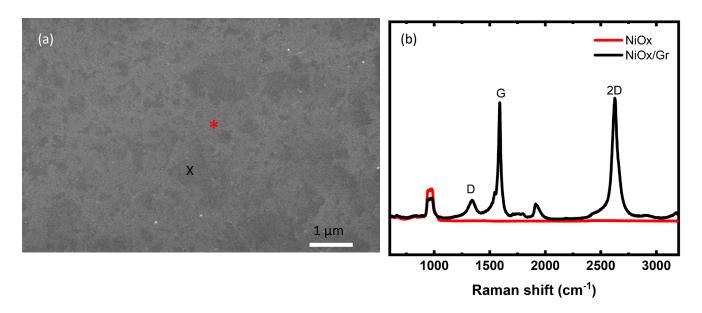


Figure 2. (a) Plan view SEM image showing the grown graphene on  $NiO_x/Gr$  (b) Raman spectra of graphene grown on Si/ALD  $NiO_x$  compared with a Si/ALD  $NiO_x$  sample treated at the same conditions without the carbon source. b). Red (\*) represents the area without graphene, and black (x) the region with graphene.