

## Supplementary information

### Single- and few-layer graphene growth on stainless steel substrates by direct thermal chemical vapor deposition

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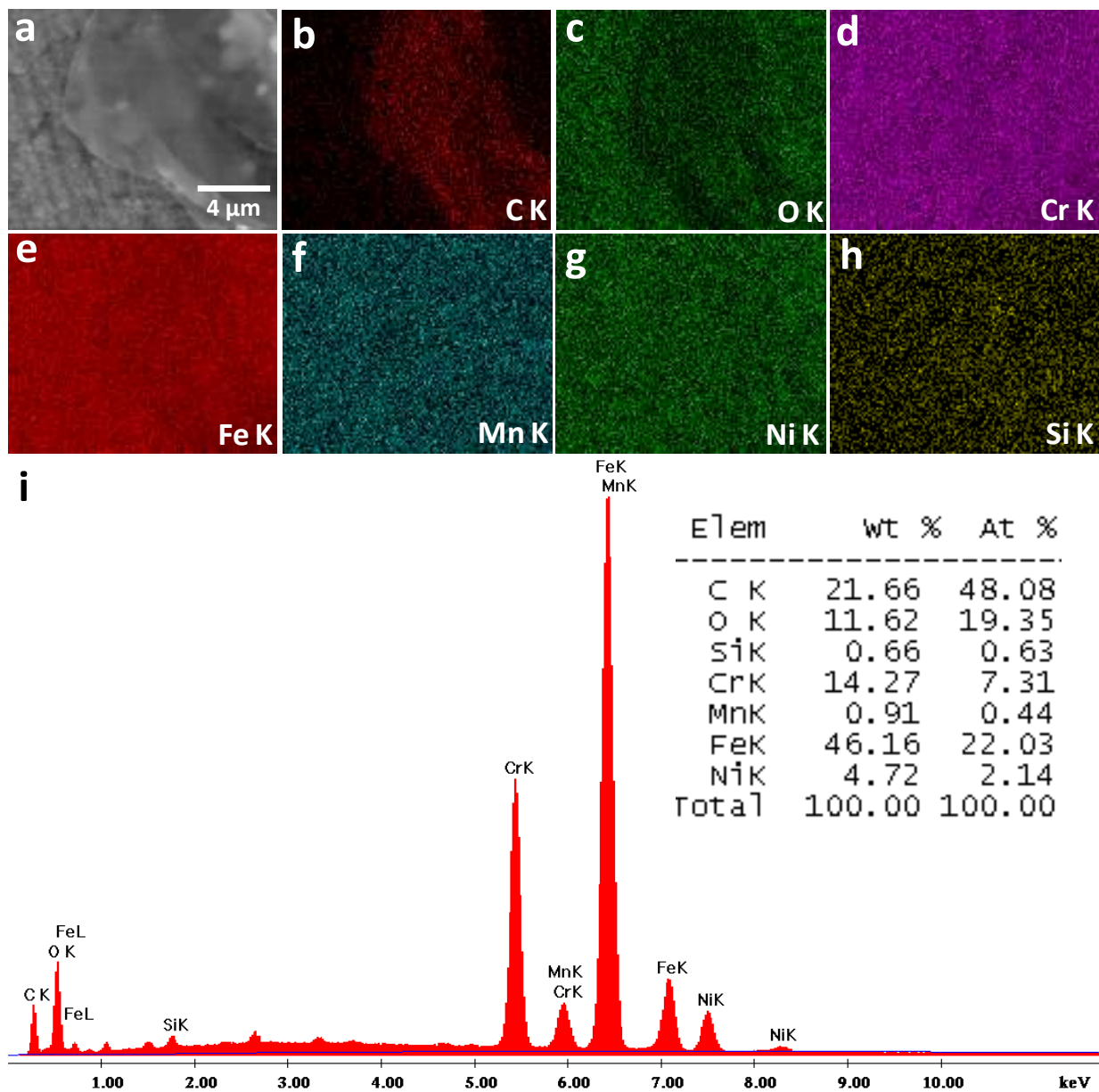


Figure S1. SEM and EDAX analysis of grown graphene at a growth temperature and cooling rate of 850°C and 10 min respectively, with ethanol as carbon source. (a) SEM image; EDAX images collected using (b) C K, (c) O K, (d) Cr K, (e) Fe K, (f) Mn K, (g) Ni K, (h) Si K; and (i) the corresponding EDAX spectrum showing elemental composition.

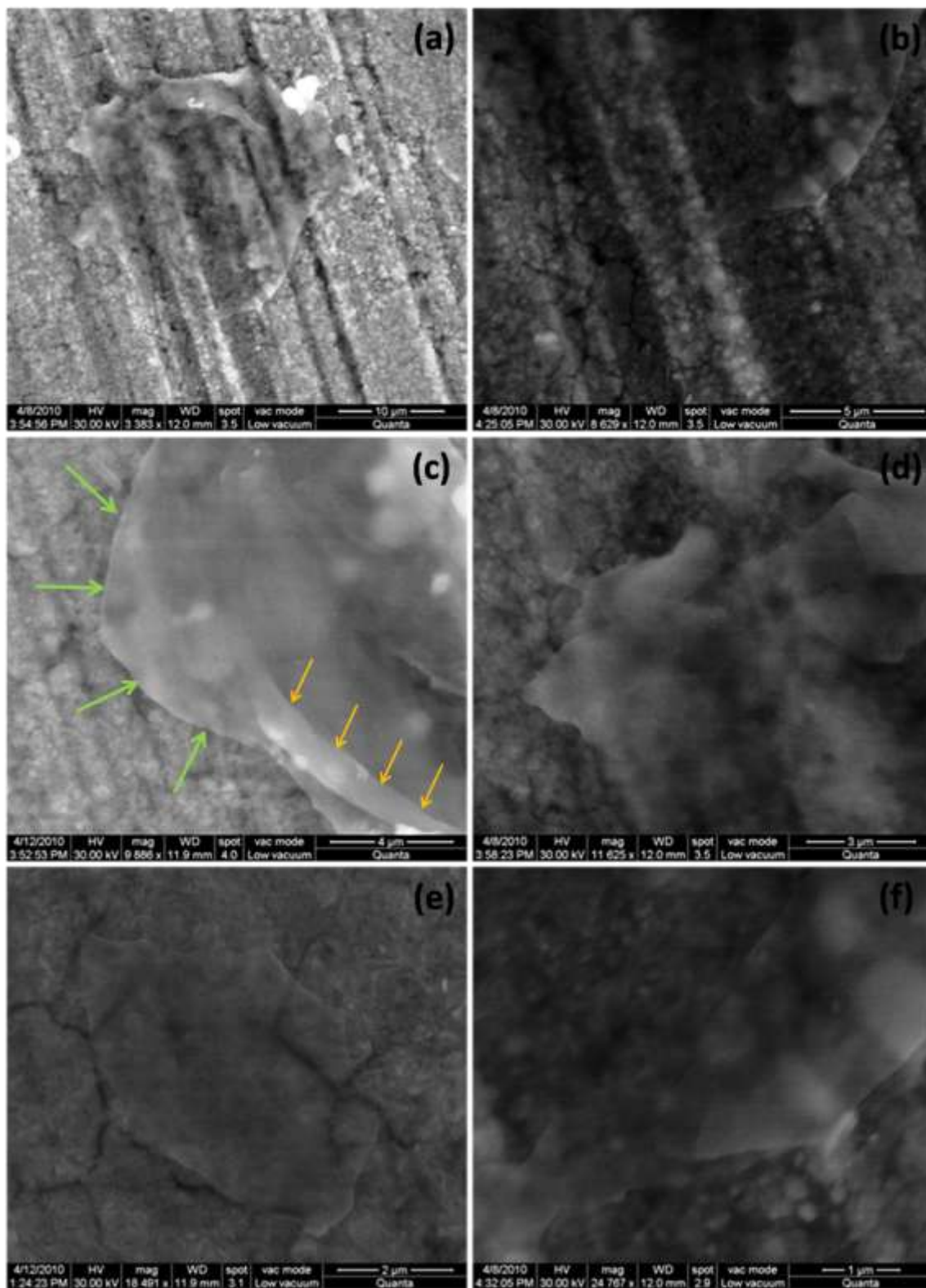


Figure S2(a-f). SEM images of multi-layer graphene under different magnifications; (c) Multi-layer features are evident from the images with the edges marked by green arrows and corrugations on the layers are marked by orange colored arrows.

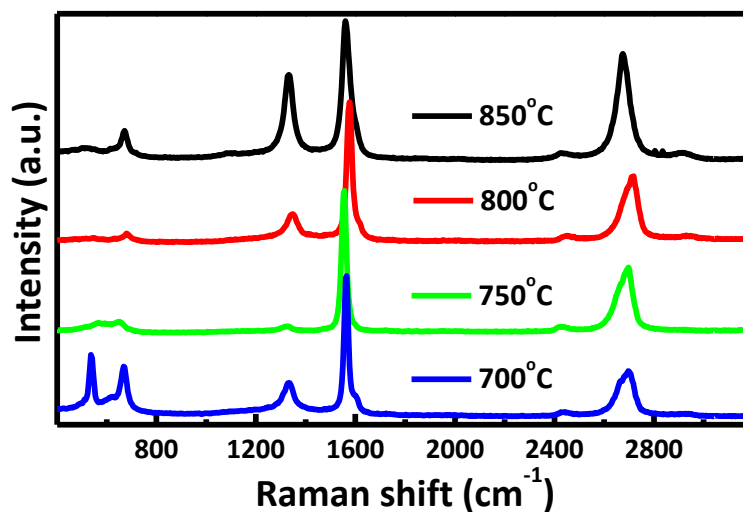


Figure S3. Raman spectra obtained at various temperatures with ethanol as the carbon source. Features indicate multi-layers of graphene.

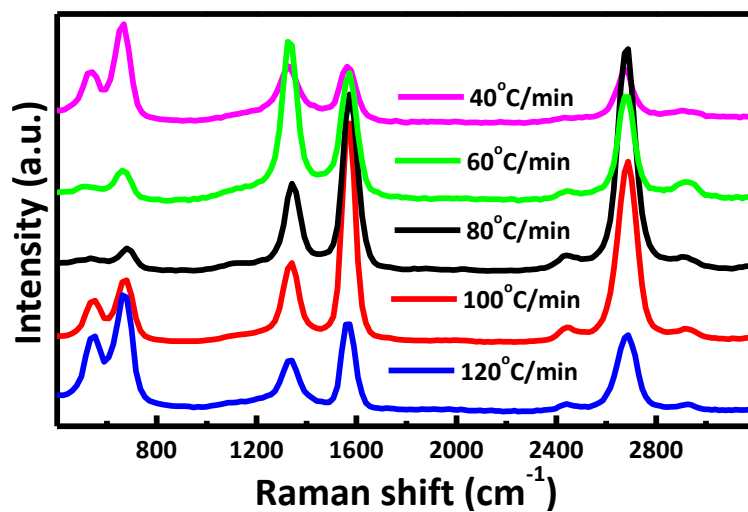


Figure S4. Raman spectra obtained for various cooling rates with ethanol as the carbon source and a reaction time of 10 minutes, at 850°C.

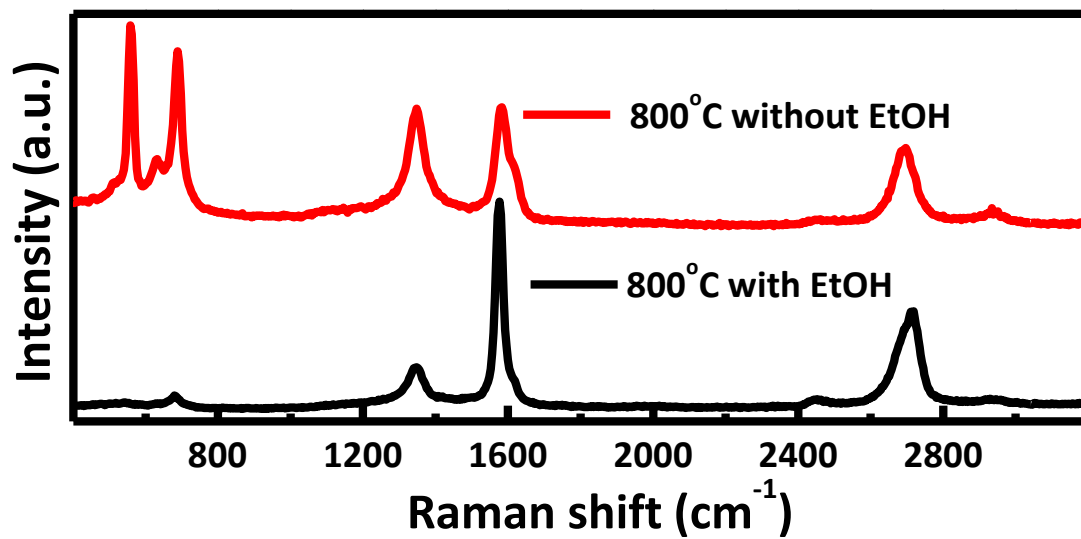


Figure S5. Raman spectra obtained with and without ethanol as the carbon source, at 850°C at a cooling rate of 100 °C/minute.