

## Supporting Information

### Highly-Ordered Multilayered 3D Graphene Decorated with Metal Nanoparticles

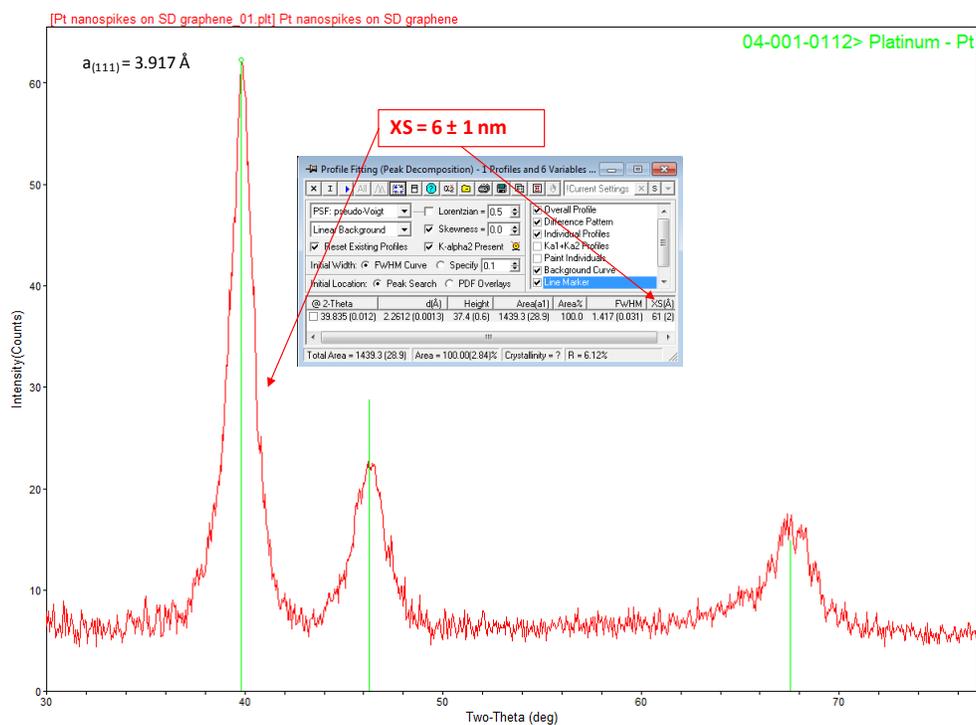
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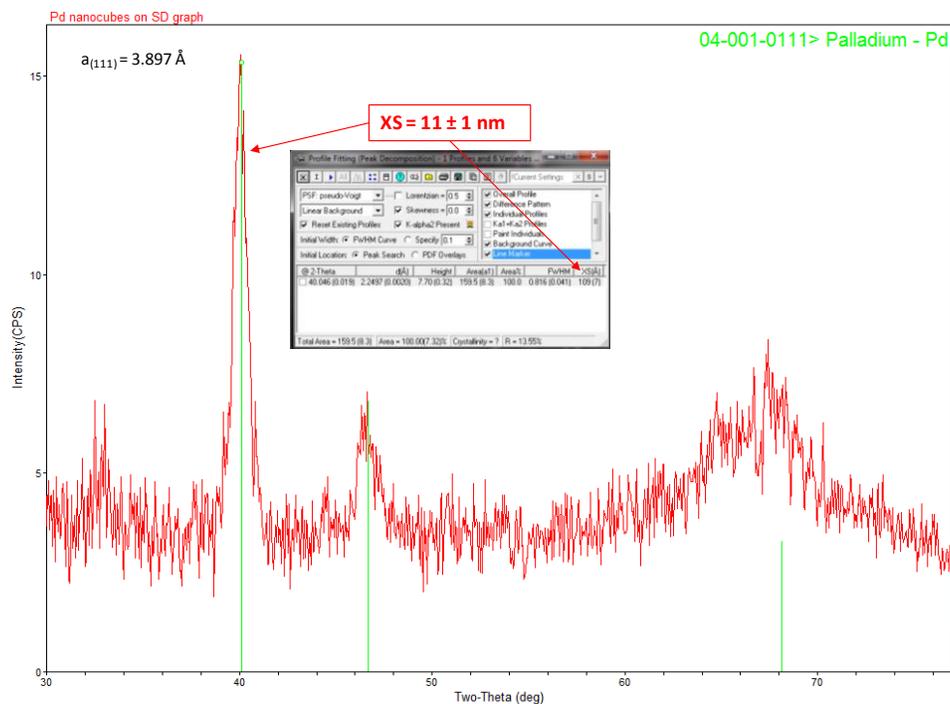
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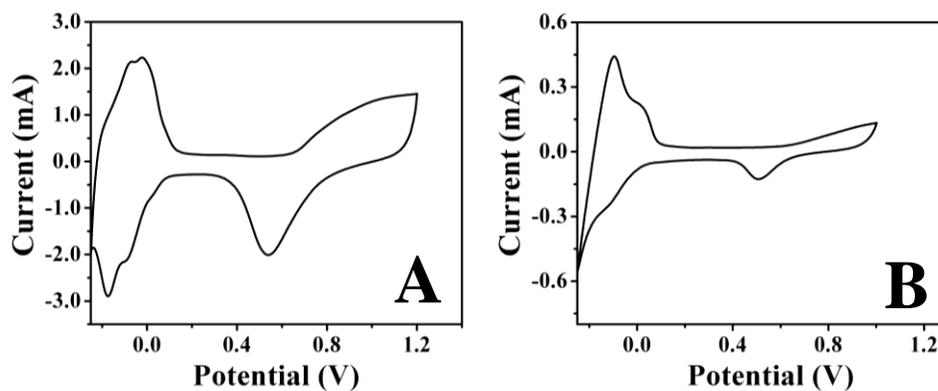
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**Figure S1**  $\mu$ -XRD results of Pt nanopikes on 3D graphene prepared from solutions containing 1.4 mM Pt precursor along with 8% formic acid.



**Figure S2**  $\mu$ -XRD results of Pd nanocubes on 3D graphene. Pd NPs were electrodeposited at 0.1 V for 250 s using a solution containing a 4 mM  $\text{PdCl}_2$  in 0.2 M  $\text{HClO}_4$  mixed with acetonitrile (1:1).



**Figure S3** Cyclic voltammograms of Pt nanopikes/3-graphene-electrode prepared from 1.4 mM of  $\text{H}_2\text{PtCl}_6$  and 8% formic acid; A) and Pd NPs prepared from electrodeposition at 0.1 V for 500 s B) modified 3D graphene in  $\text{N}_2$ -saturated 0.5 M  $\text{H}_2\text{SO}_4$  with a sweep rate 50 mV/s.