Electronic Supplementary Material (ESI) for RSC Advances.
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Electronic supplementary file for the manuscript

"Hydroquinone as single precursor for concurrent reduction and growth of carbon nanotubes on graphene oxide"

In order to test the repeatability of our newly developed synthesis technique, we carried out additional experiments using cobalt, nickel and palladium catalysts. Cobalt acetate, Nickel acetate monohydrate and palladium acetylacetonate were used as cobalt, nickel and palladium sources, respectively. The microwave oven used in this study was manufactured by Daewoo Korea, Model number: KR-B202WL with output power of 700W and input power of 1120W operating at 2450 MHz frequency.

Figure S1 shows the repeatability of our synthesis technique using cobalt as the catalyst.

Figures S2 and S3 shows the utility of hydrquinone as CNT source with other catalysts namely nickel and palladium, respectively.

Figure S4 Cobalt oxide mediated etching of graphene under microwave radiation in the absence of hydroquinone

Figure S5 TGA of G-Co@CNT in air.

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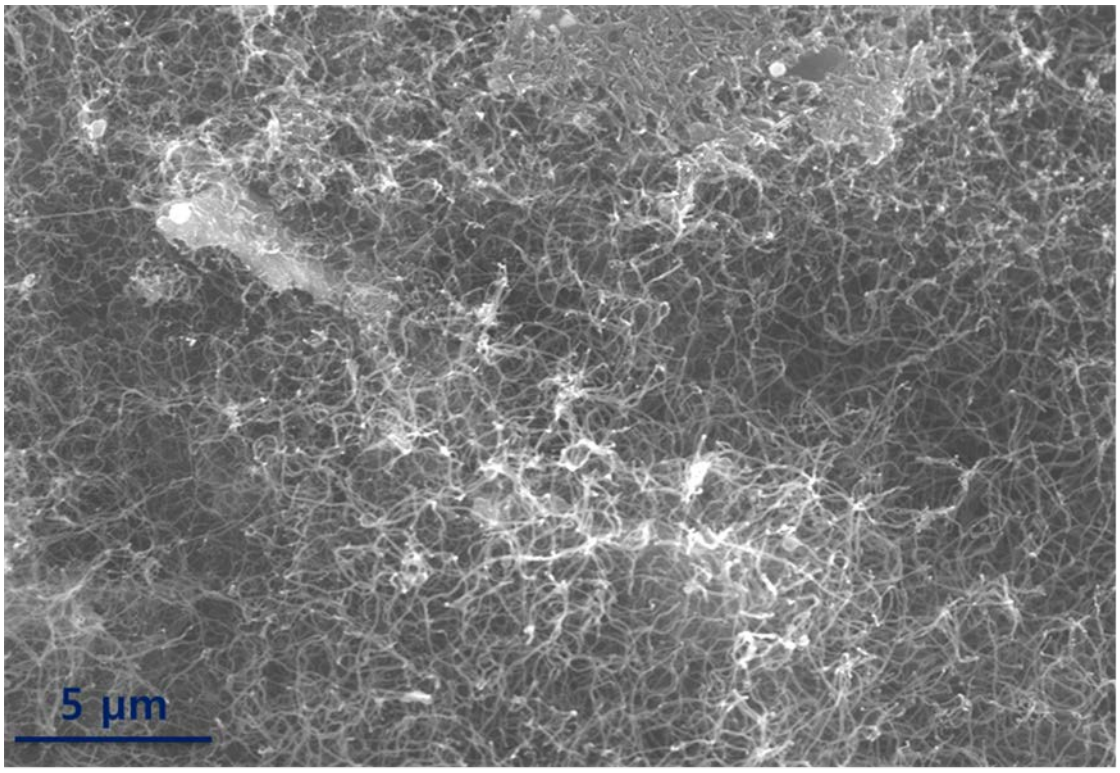
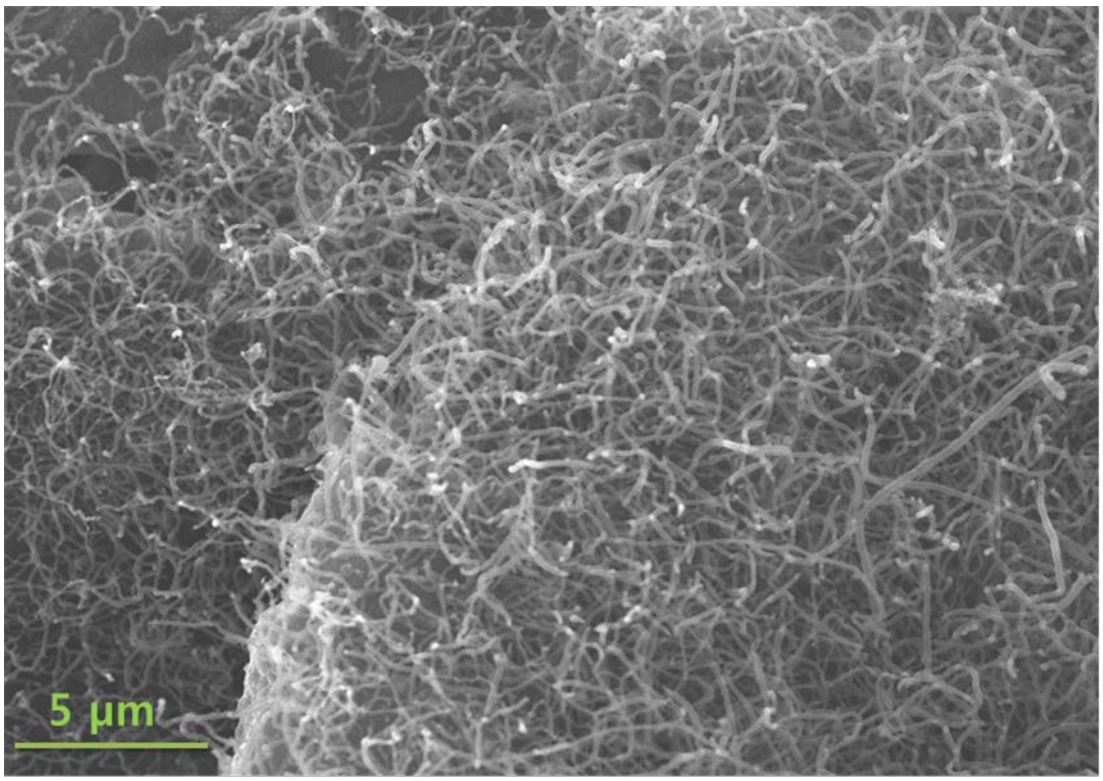


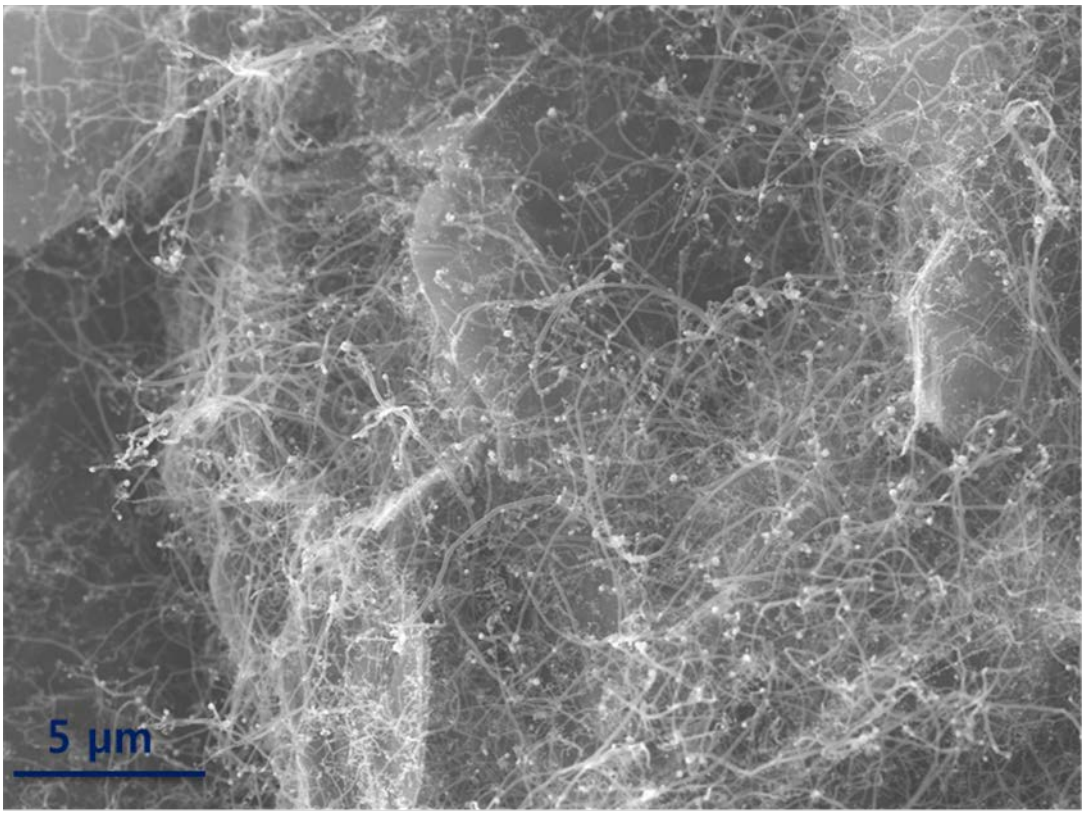
(a)



(b)

Figure S1: SEM micrograph of CNT synthesized from hydroquinone with cobalt catalyst.

(a)



(b)

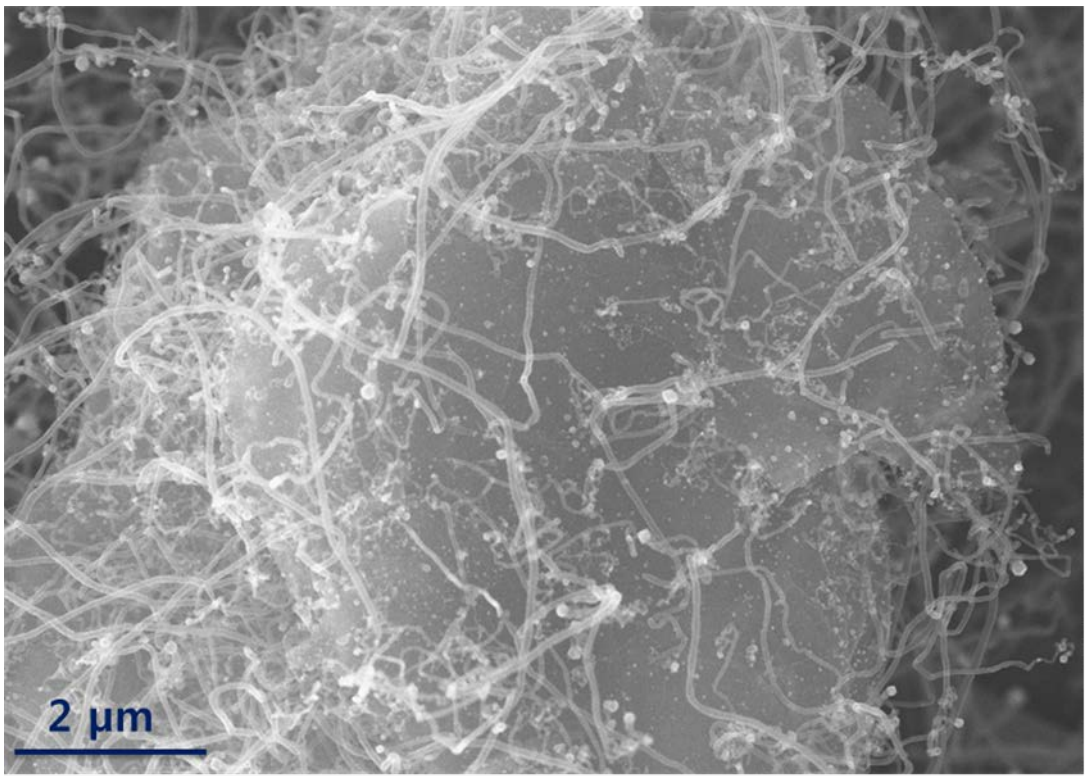
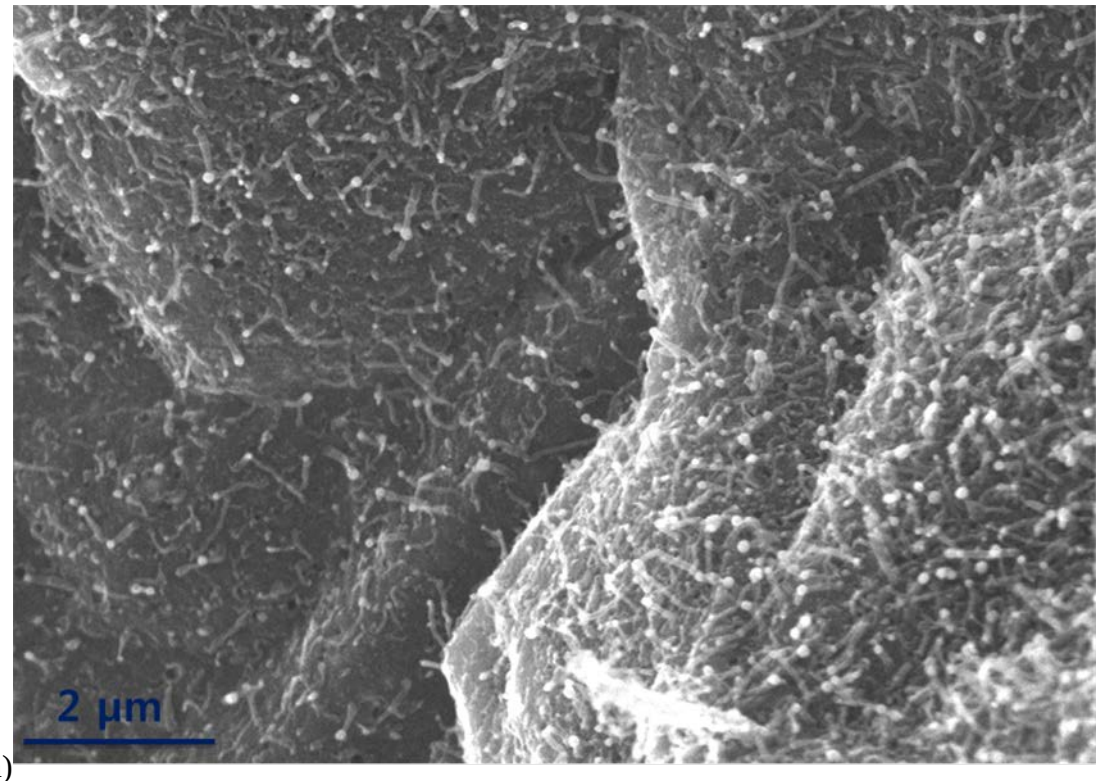
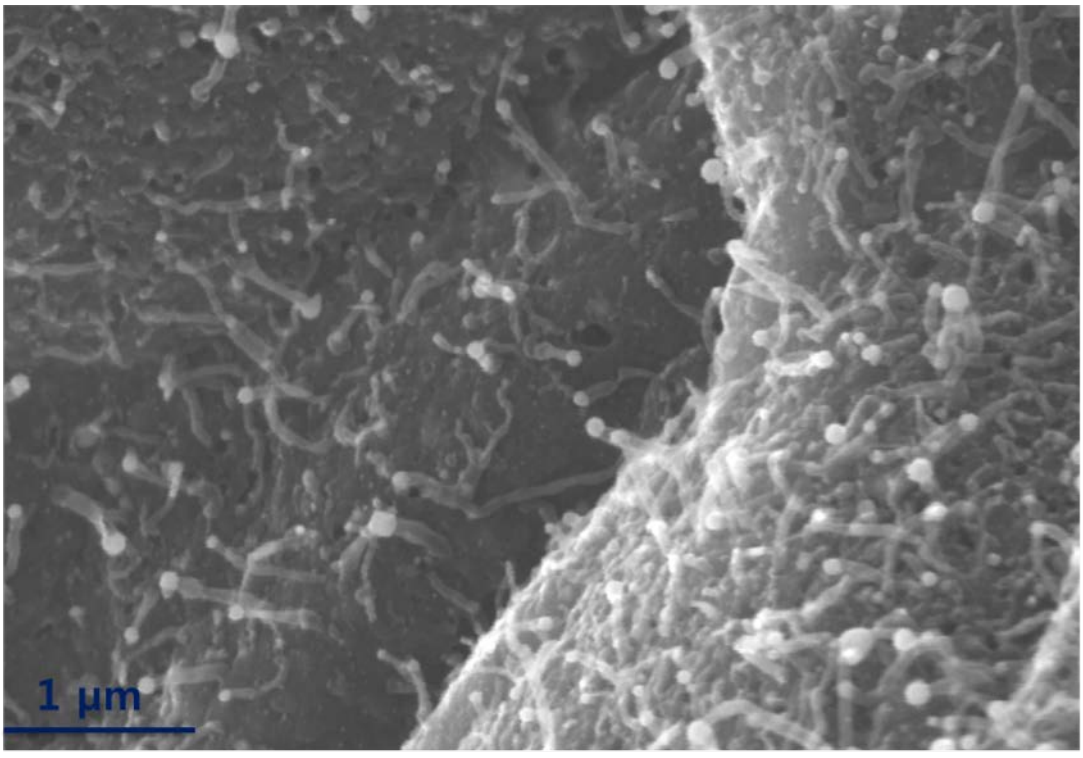


Figure S2: SEM micrograph of CNT synthesized from hydroquinone using nickel as catalyst.



(a)



(b)

Figure S3: SEM micrographs of carbon nanotubes synthesized from hydroquinone using palladium as catalyst.

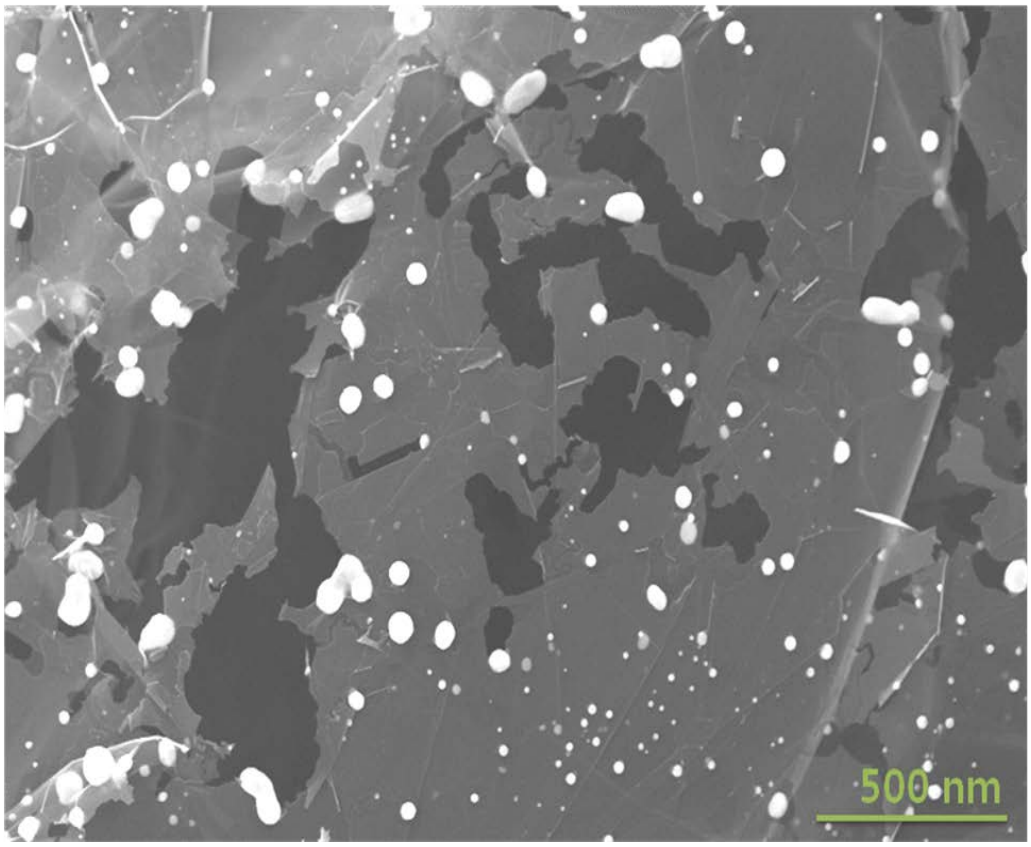


Figure S4 Cobalt oxide mediated etching of graphene under microwave radiation in the absence of hydroquinone.

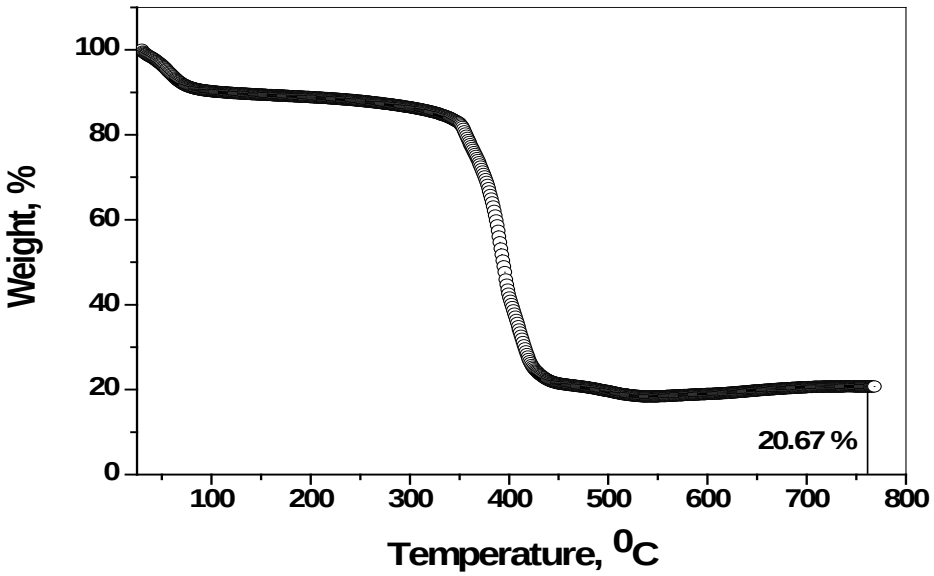


Figure S5 TGA of G-Co@CNT in air.