Electronic Supplementary Information (ESI)

High field emission performance of NiFe$_2$O$_4$/rGO/CNTs tertiary nanocomposite

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Figure S1:

Fig. S1. SEM images of (a) GO, (b) CNTs, (c) NC, (d) NG, (e) GC and (f) NGC nanocomposites.
Figure S2:

**Fig. S2.** Particle size distribution plots for NiFe$_2$O$_4$ in (a) NGC, (b) NC and (c) NG nanocomposites.
Figure S3:

Fig. S3. (a) Field emission current density ($J$) versus applied electric field ($E$) plots of pristine NiFe$_2$O$_4$, rGO and CNTs emitters. Inset shows the corresponding F-N plots. (b) Emission current versus time plot of NG nanocomposite emitter. Inset shows the FE image recorded at the onset of stability study.
Figure S4:

Fig. S4. (a) FESEM image, (b) Raman spectrum, (c) Emission current versus time plot and (d) FE image recorded at the onset of stability study for GC nanocomposite.

Figure S5:

Fig. S5. Ultraviolet photoelectron spectra of pristine rGO and CNTs.
Figure S6:

Fig. S6. Post field emission SEM images of (a, b) NGC and (c, d) NC nanocomposite emitters.