Electronic Supplementary Information

Facile synthesis of a Co$_3$O$_4$@carbon nanotubes/polyindole composite and its application in all-solid-state flexible supercapacitors

Fig. S1 Schematic illustration of the symmetric supercapacitor configuration.
Fig. S2 Photographs of CNTs (a), Co$_3$O$_4$ (b), CNTs/PIn (c), Co$_3$O$_4$@CNTs (d) and Co$_3$O$_4$@CNTs/PIn (e) dispersed in water (1 mg/mL) after 1 h ultrasonication and stood for 72 h.
**Fig. S3** TEM images of Co$_3$O$_4$, inset is HRTEM micrographs of Co$_3$O$_4$ nanoparticles.
Fig. S4 XRD pattern of prepared Co$_3$O$_4$@CNTs/PIn and Co$_3$O$_4$@CNTs.
Fig. S5 Galvanostatic charge/discharge curves of four different materials at a scan rate of 1 A g⁻¹.
Fig. S6 (A) Cyclic voltammetry curves of bare GCE, CNTs, CNTs/PIn, Co$_3$O$_4$@CNTs and Co$_3$O$_4$@CNTs/PIn modified GCE in a 10 mM K$_3$Fe(CN)$_6$ and 0.1 M KCl solution at a scan rate of 100 mV s$^{-1}$, (B) Peak currents as a function of scan rate for the determination of the effective working surface area.
The specific capacitance of Co$_3$O$_4$@CNTs/PIn device as a function of PIn (A) and Co(NO$_3$)$_2$•6H$_2$O (B), respectively. Co(NO$_3$)$_2$•6H$_2$O mass is fixed at 0.3 g for (A) plot, PIn mass is fixed at 0.1 g for (B) plot.