Supporting Information

PEGylated FePt-Fe_3O_4 Composite Nanoassemblies (CNAs): *In vitro* Hyperthermia, Drug Delivery and generation of Reactive Oxygen Species (ROS)

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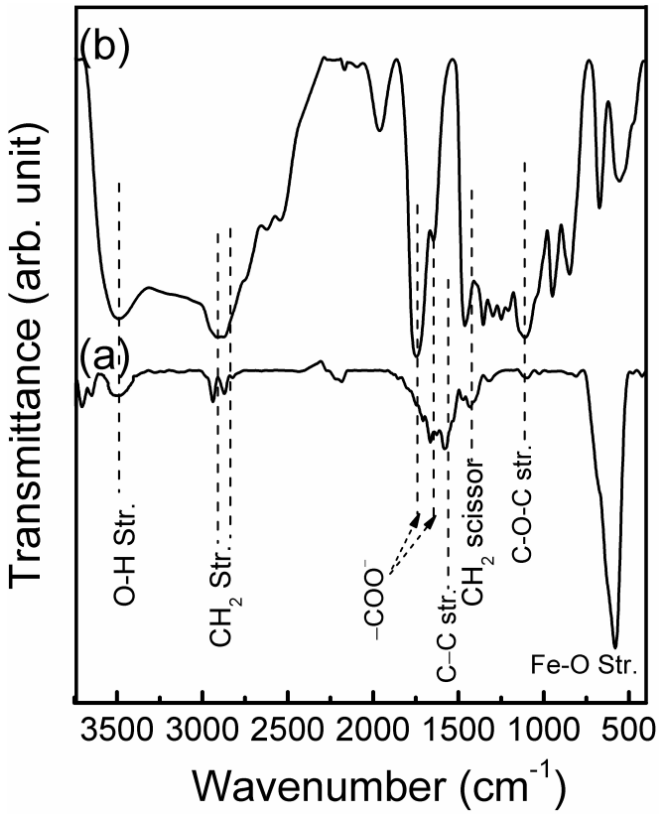

Fig. S1 FTIR spectra of (a) CNAs and (b) HOOC-PEG-COOH.

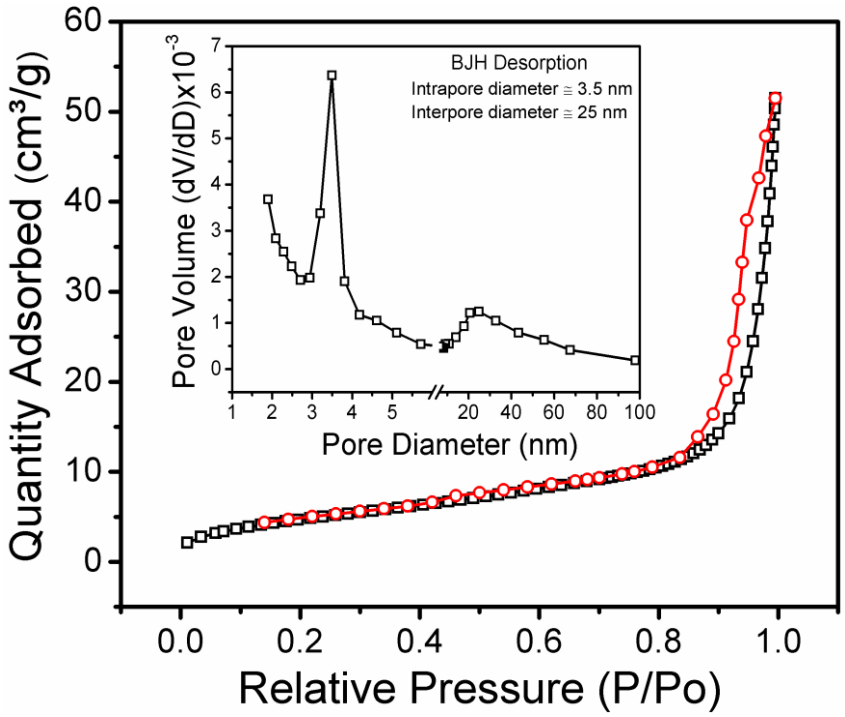

Fig. S2 Nitrogen adsorption/desorption isotherm plots of CNAs. Inset shows the pore size distribution. The square (▪) and circle (●) symbols indicate adsorption and desorption branches.

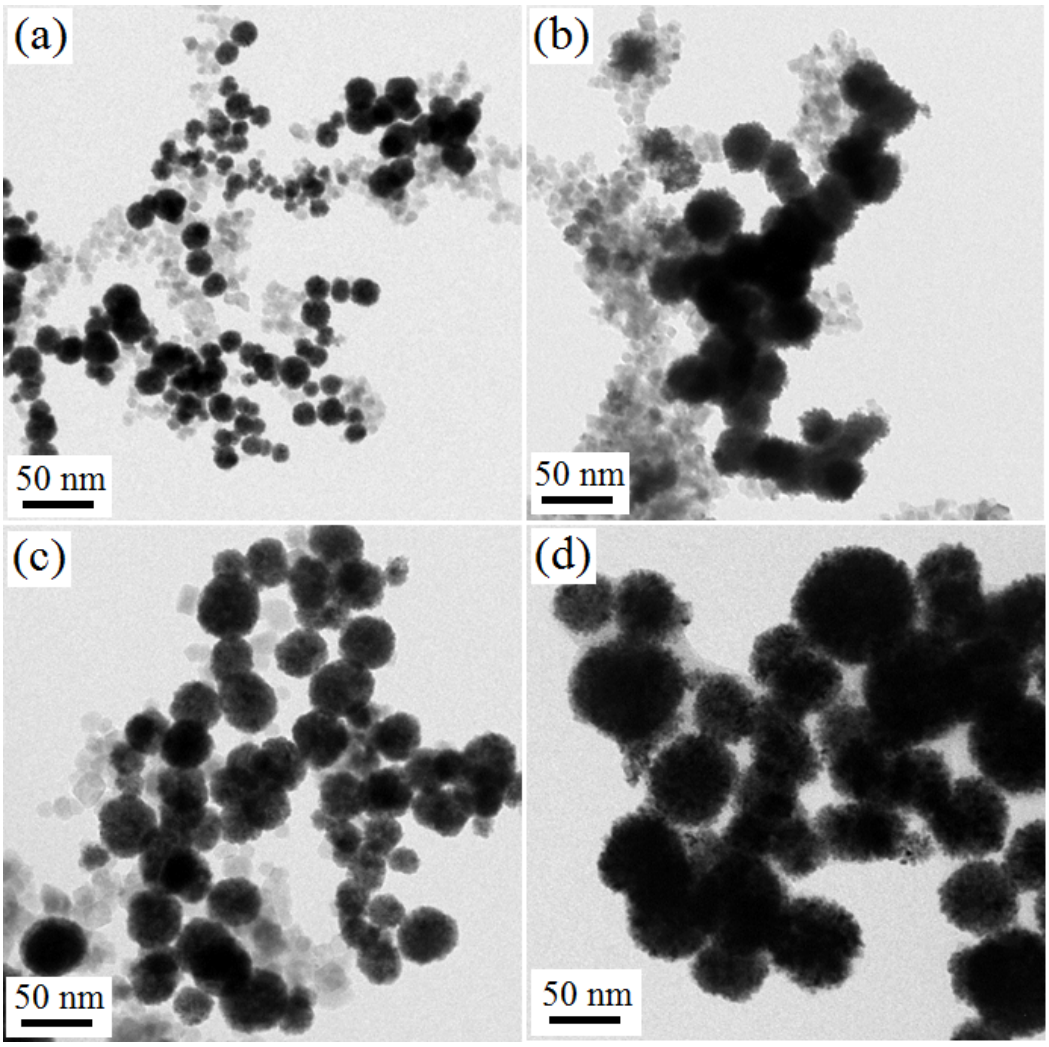

Fig. S3 TEM images of the nanomaterials at different reaction temperatures: (a) 120 ºC for 4h, (b) 160 ºC for 4h, (c) 200 ºC for 4h and (d) 200 ºC for 12 h.

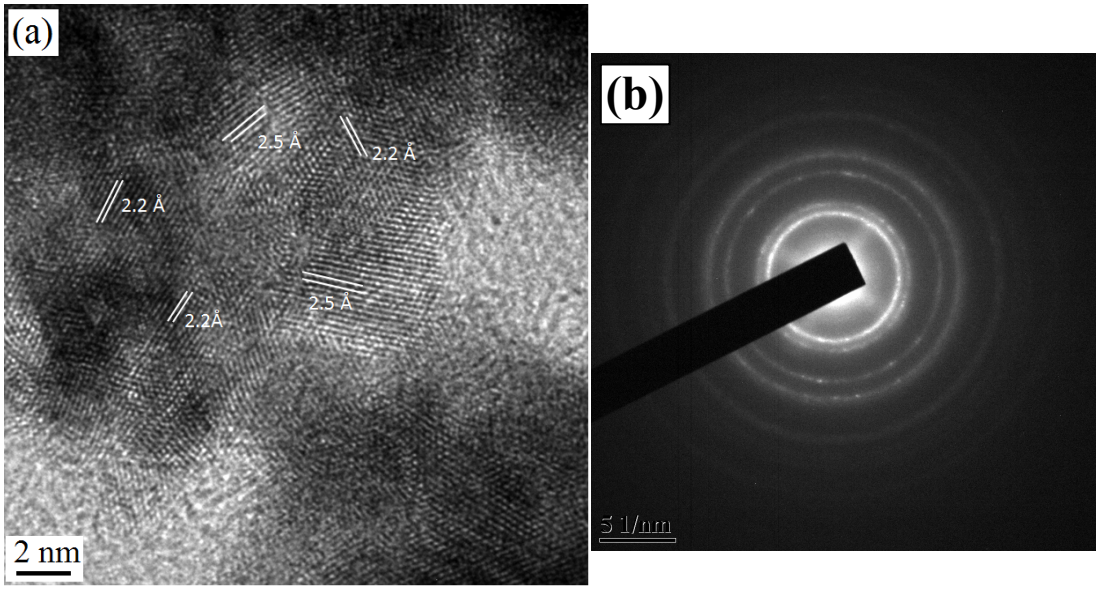

Fig. S4 (a) HRTEM image showing the inter-planar spacing and (b) SAED pattern showing the diffracted planes of CNAs.

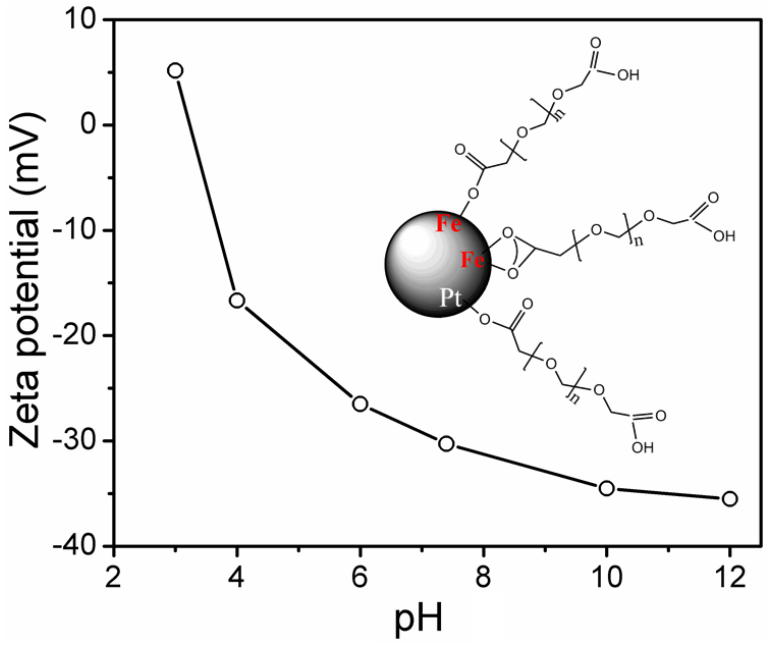

Fig. S5 Zeta potential variation with pH of the water suspension of the CNAs (Conc.~ 0.2 mg/mL).

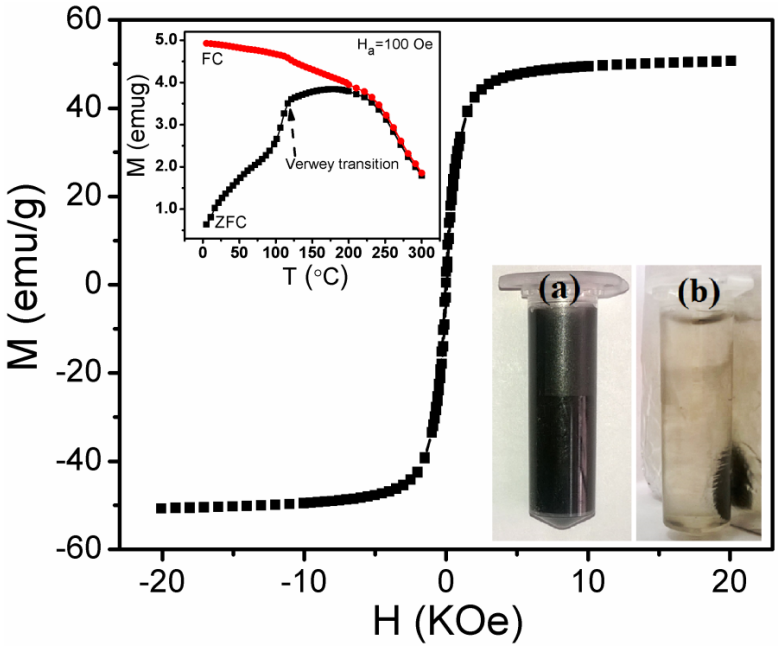

Fig. S6 M-H plot of CNAs measured with applied magnetic field range of -20 to 20 KOe at 300 K. Inset: ZFC-FC plots (left corner) and aqueous dispersion of CNAs and its attraction toward bar magnet (right corner).

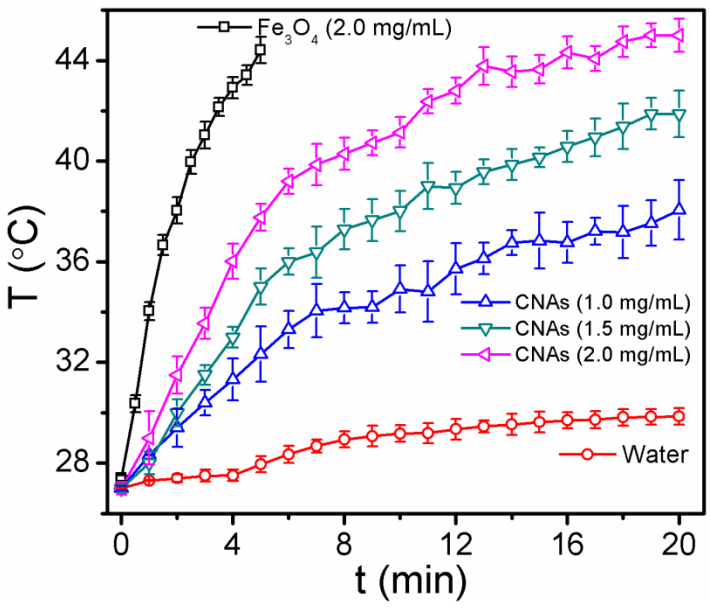

Fig. S7 Temperature (T) versus time (t) plots for an aqueous suspension of different concentration of CNAs in water under ACMF (250 kHz, 460 Oe). Temperature rise in water and Fe_3O_4 also included as control.

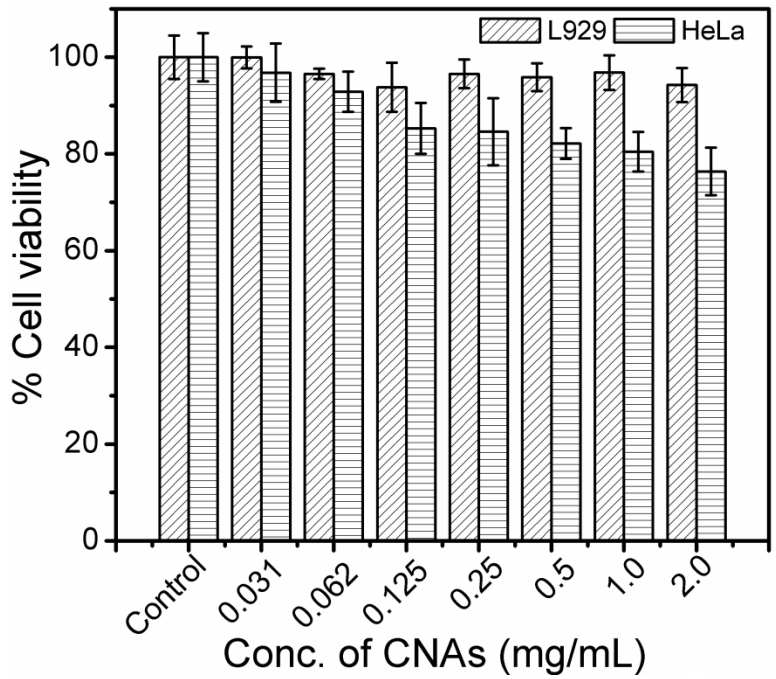

Fig. S8 Viability of L929 and HeLa cells after incubation with different concentration of CNAs for 24 h.

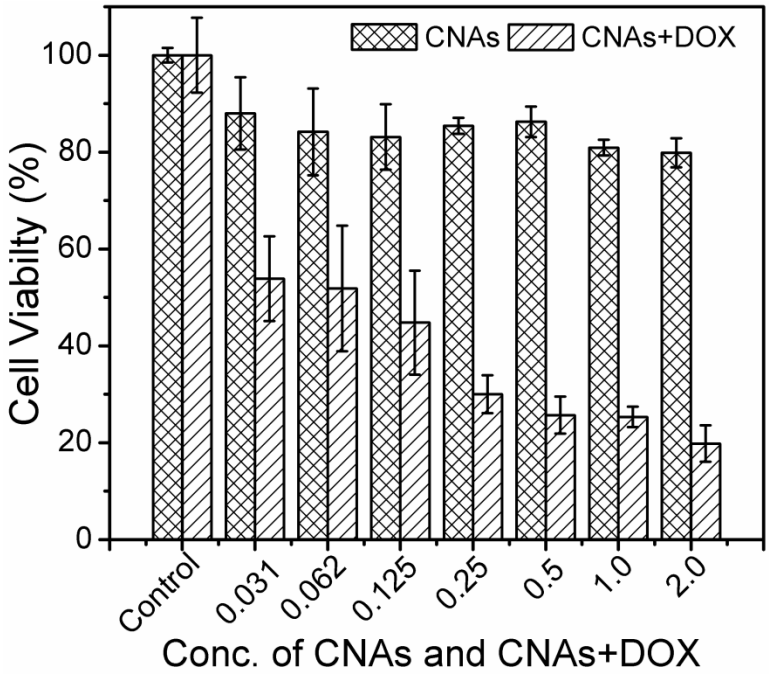

Fig. S9 Viability of HeLa cells after incubation with different concentration of CNAs and CNAs+DOX for 24 h.

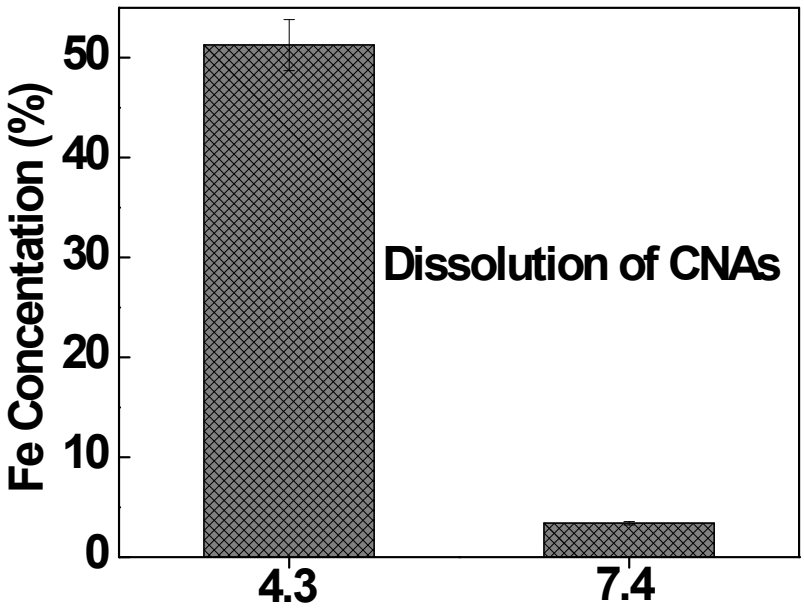

Fig.S10 Dissolution of CNAs in the cell culture media analyzed by ICP-AES analysis.