

## **Supplementary Information**

### ***In situ* synthesis of luminescent carbon nanoparticles toward target bioimaging**

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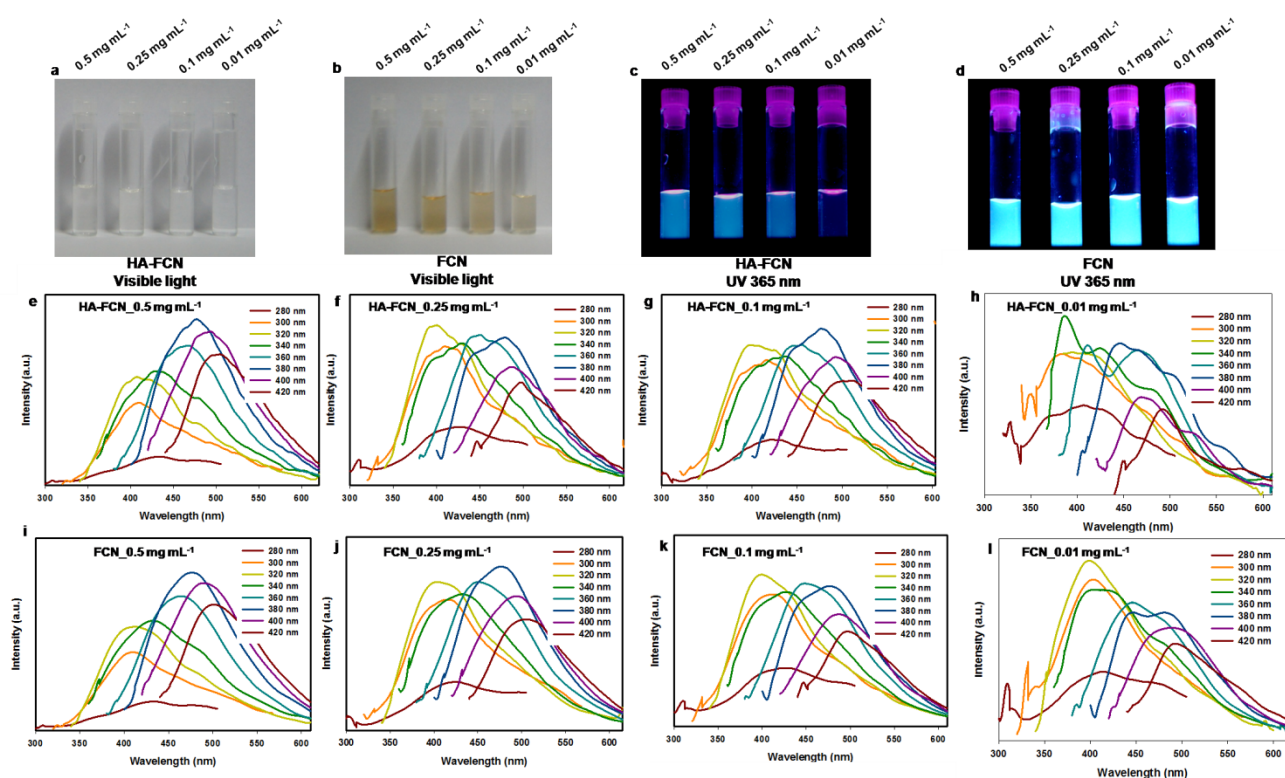
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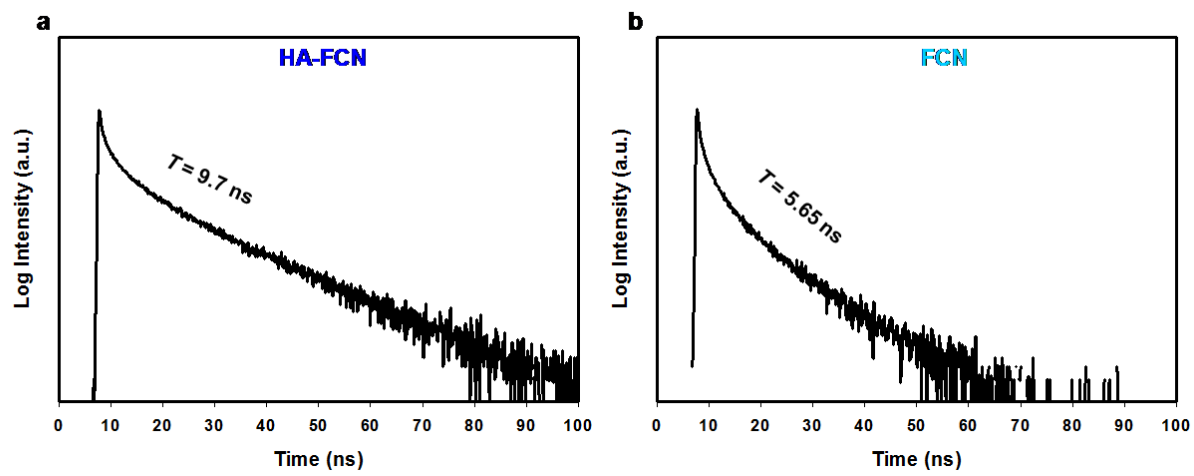
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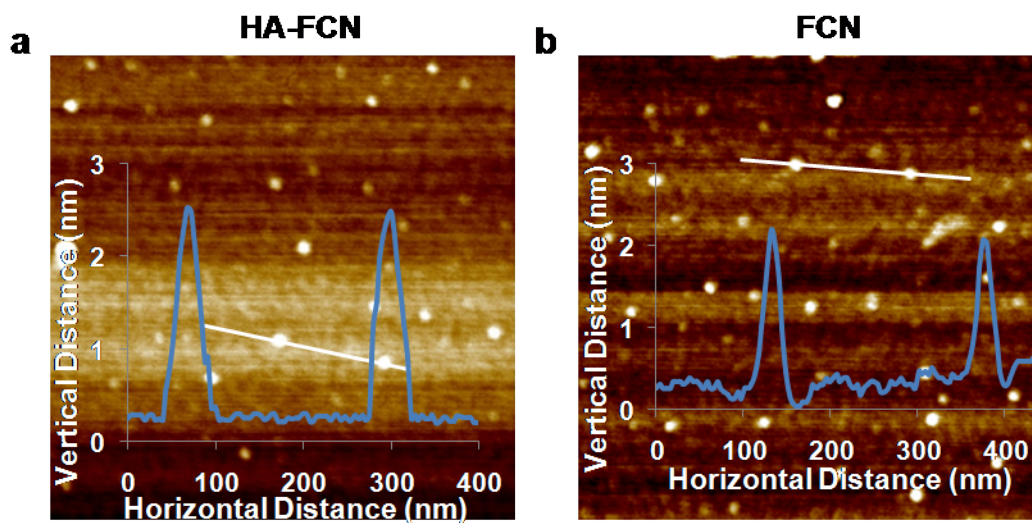
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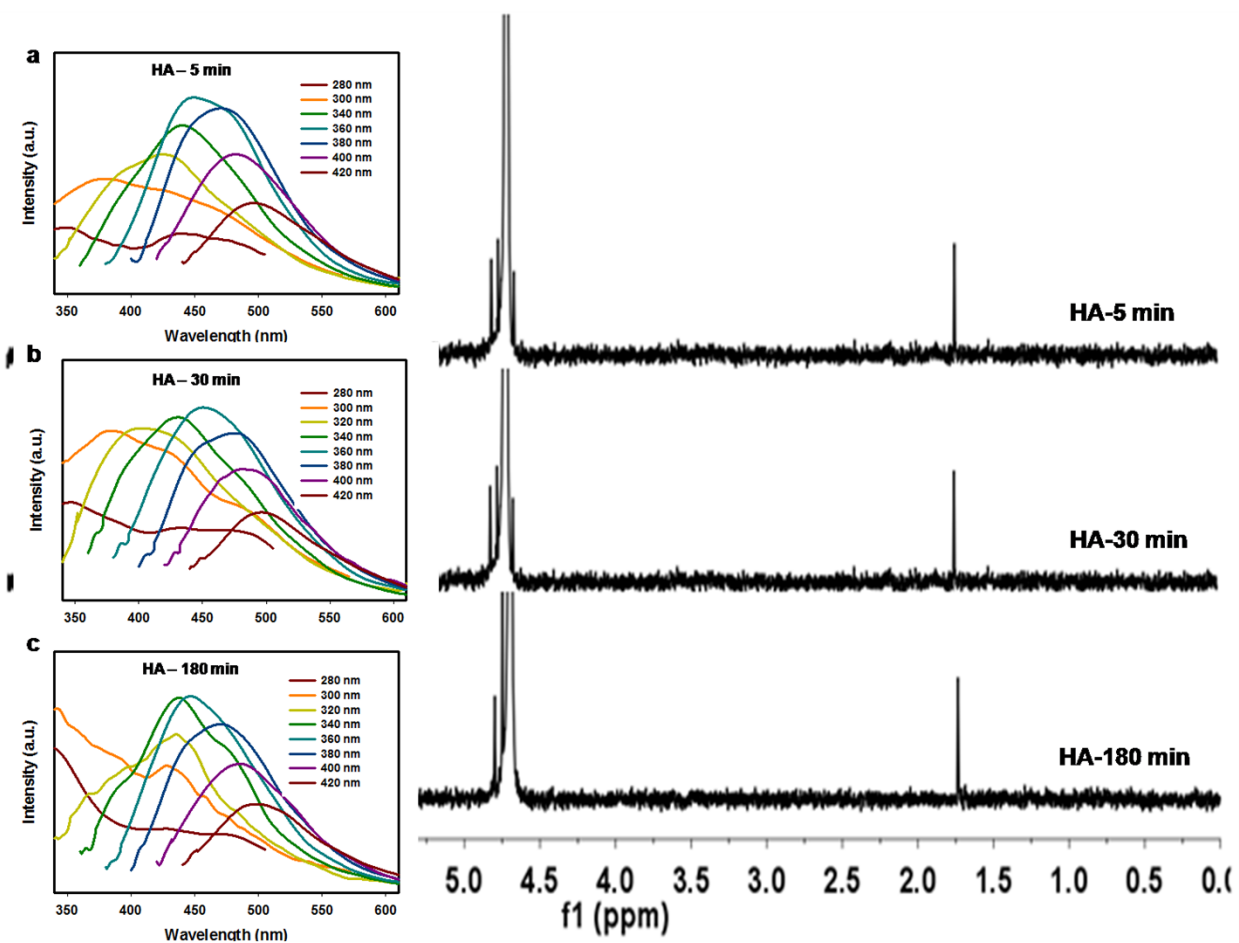
**Fig. S1-** An illuminated photographs of different concentrated aqueous solutions (0.5, 0.25, 0.1 and 0.01 mg mL<sup>-1</sup>) of HA-FCN and FCN under visible light (a-b), and 365 nm UV lamps (c-d), respectively. The concentration dependents (0.5, 0.25, 0.1 and 0.01 mg mL<sup>-1</sup>) fluorescence emission spectra of different excited wavelength (from 280 to 420 nm) of HA-FCN (e - h) and FCN (i - l), respectively.



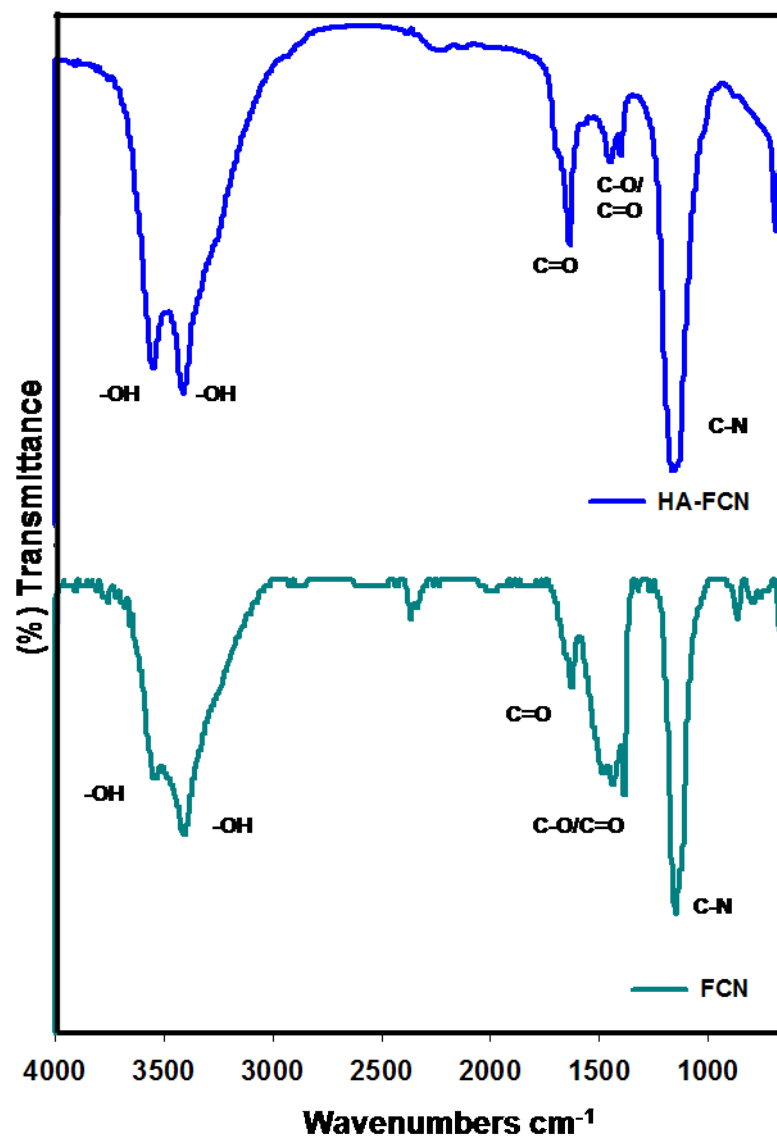
**Fig. S2-** Fluorescence life time curve of HA-FCN (a) and FCN (b) in 375 nm wavelength. The  $\tau$  value indicates respective fluorescence lifetime.



**Fig. S3-** Atomic Force Microscopy (AFM) images and height profile of a droplet of HA-FCN (a) and FCN (b) on a silicon wafer.



**Fig. S4-**  $^1\text{H}$  NMR spectra, and fluorescence emission intensity (from 280 to 420 nm excited wavelength) of hyaluronic acid (HA) in different dehydrated condition of 5 min (a), 30 min (b), and 180 min (c).

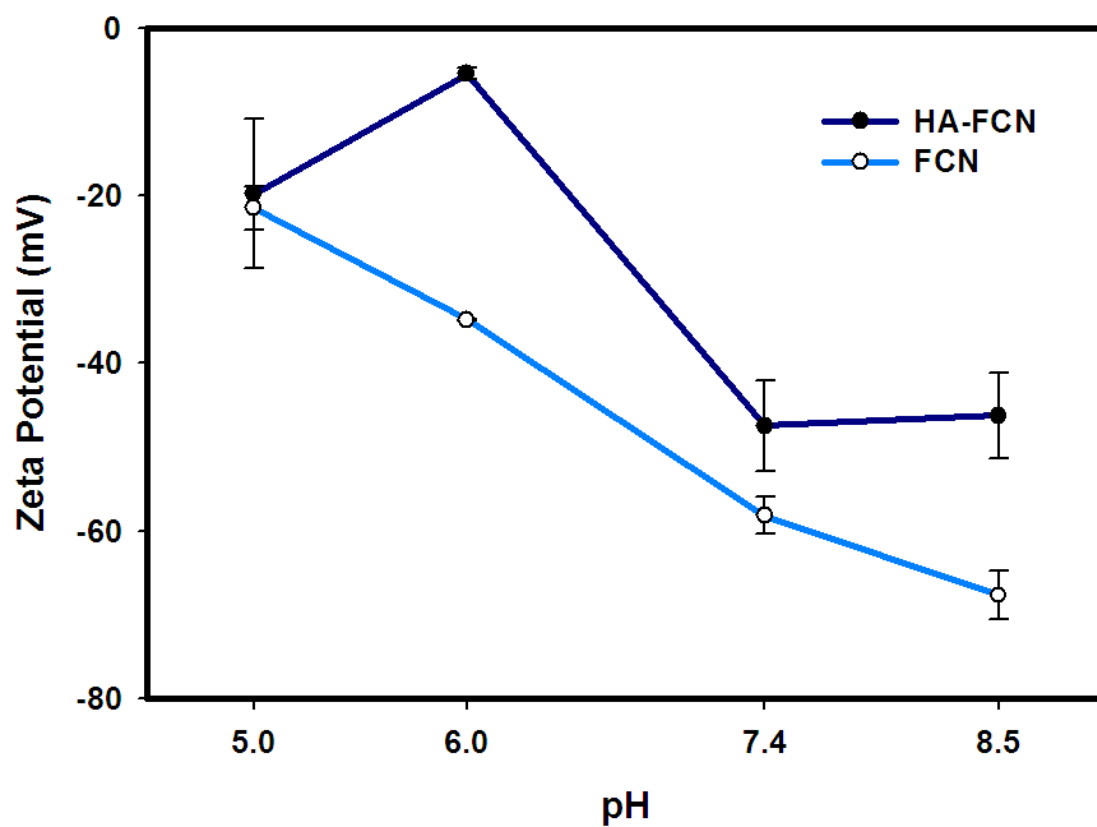


**Fig. S5-** FT-IR characterization of HA-FCN and FCN obtained from hyaluronic acid (HA).

**Table S1.** Elemental analysis and XPS based elemental composite of HA-FCN and FCN

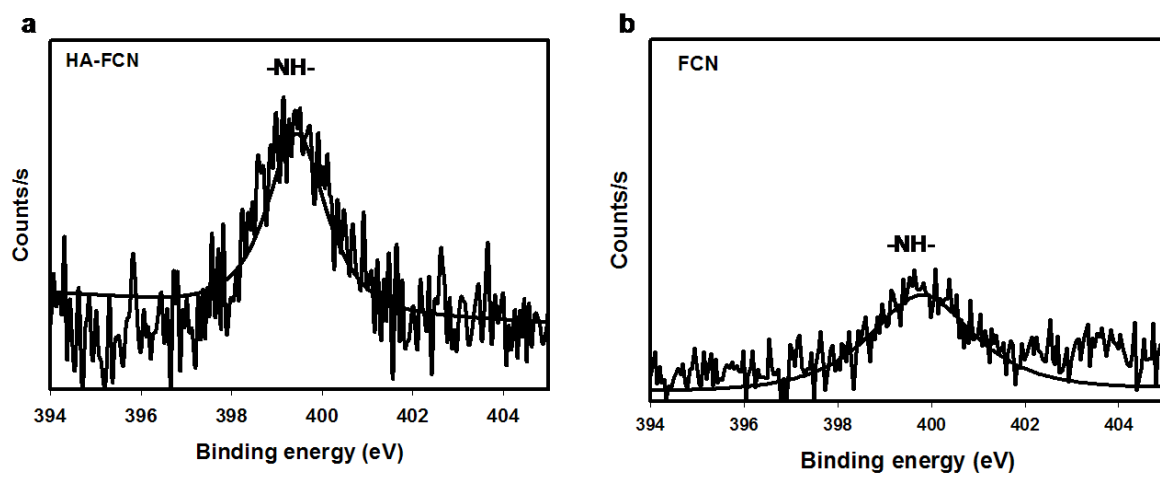
	Area (%) of HA-FCN				Area (%) of FCN			
	Elemental analysis	XPS			Elemental analysis	XPS		
C	18.6	17.2	C=C	27.20	35.5	38.6	C=C	44.8
			C-C	55.63			C-C	34.97
			O-C=O	17.17			O-C=O	20.23
N	0.6	0.6			5.3	5.4		
O <sup>a</sup>	79.5	82.2			56.3	56.0		
H	1.3	-			2.9	-		

<sup>a</sup> O by difference.

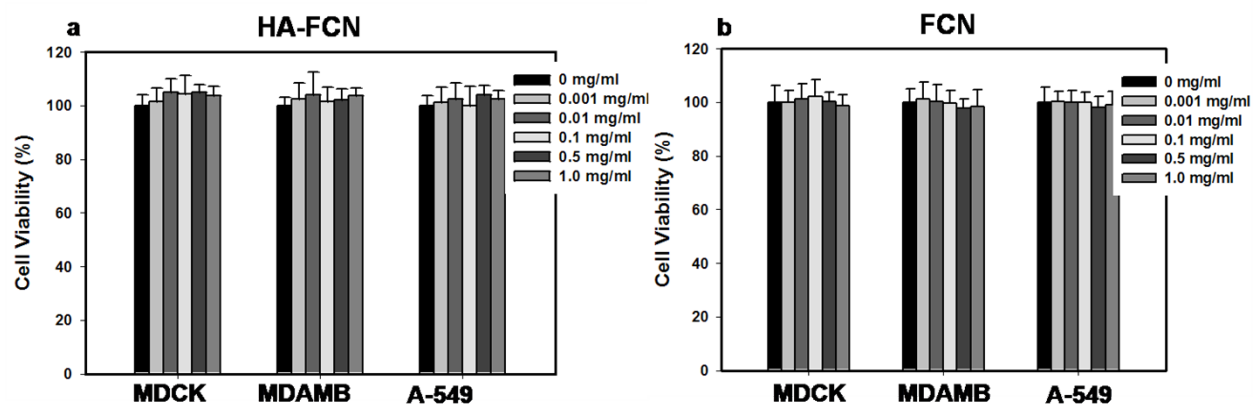


**Fig. S6** - Zeta potential of HA-FCN and FCN as a function of pH in an aqueous dispersion at a concentration of  $0.01 \text{ mg mL}^{-1}$ .

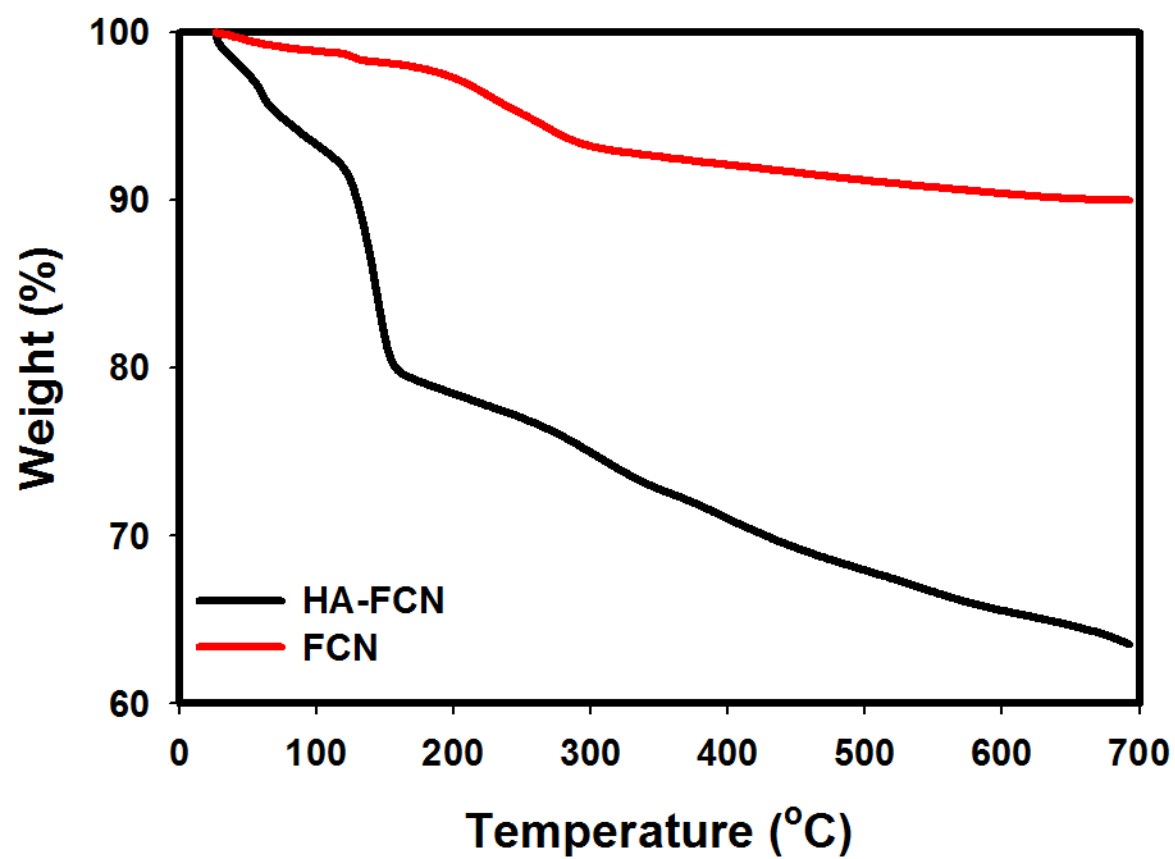




**Fig. S7** - XPS (N1s) peak for ratio characterization of amino groups in HA-FCN (a) and FCN (b).



**Fig. S8** - MTT mediated *in vitro* cell viability assays at different concentrations of HA-FCN (a) and FCN (b) on MDCK, MDAMB and A-549 cells, respectively.



**Fig. S9** The comparison of thermograms (TGA) of the HA-FCN and FCN as a function weight loss and temperature (°C).