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Highly luminescent heteroatom doped carbon quantum dots for ultrasensitive sensing of glucosamine and targeted imaging of liver cancer cells

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Electronic Supplementary Information

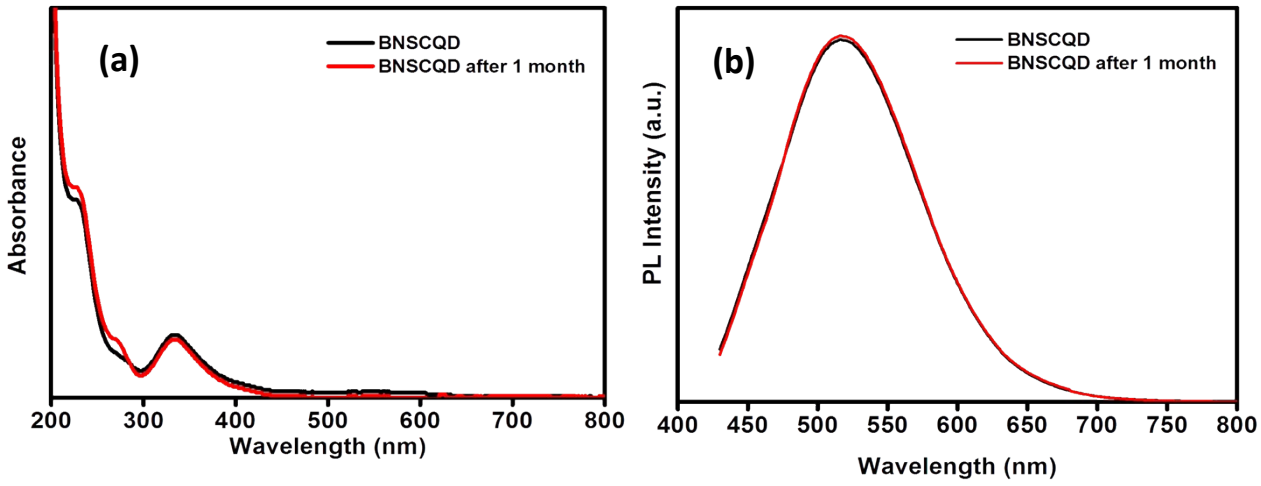

Figure S1 (a) UV-vis absorption spectra and (b) PL spectra showing the stability of BNSCQD-3 after 1 month

Table S1 Quantum yield of various as-synthesized carbon quantum dots

CQDs	Quantum yield
BCQD	5.12
BNCQD	10.28
BNSCQD-1	4.64
BNSCQD-2	16.71
BNSCQD-3	28.39
BNSCQD-4	11.53
BNSCQD-3(160°C)	16.3
BNSCQD-3(180°C)	28.39
BNSCQD-3(200°C)	24.55
BNSCQD-3(220°C)	21.62
BNSCQD-3(240°C)	17.43

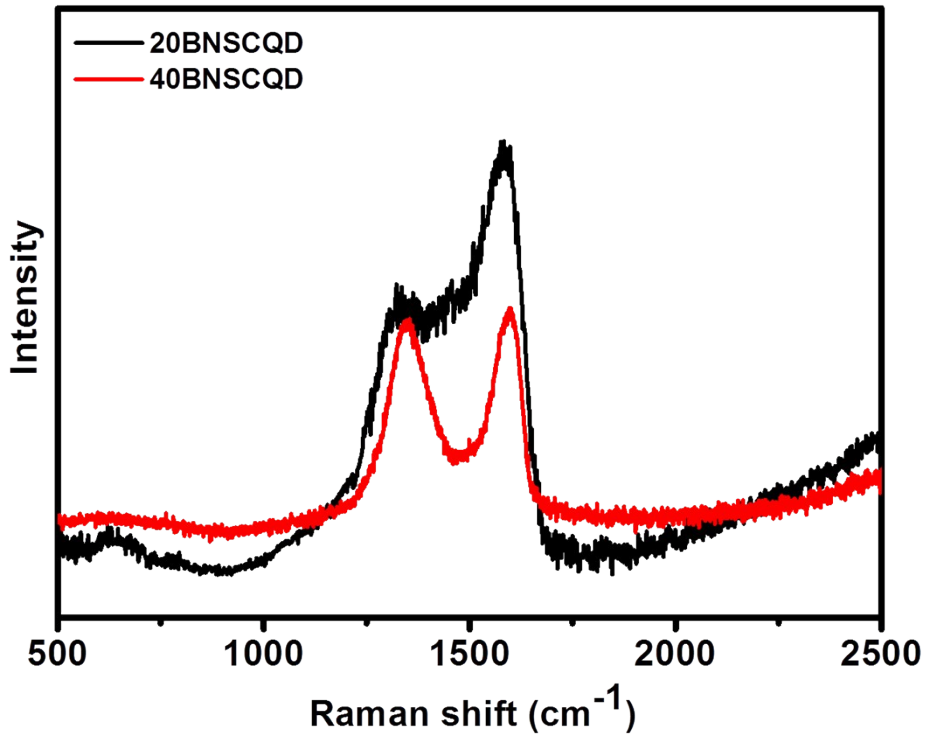

Figure S2 Raman spectra of BNSCQD with different boron content

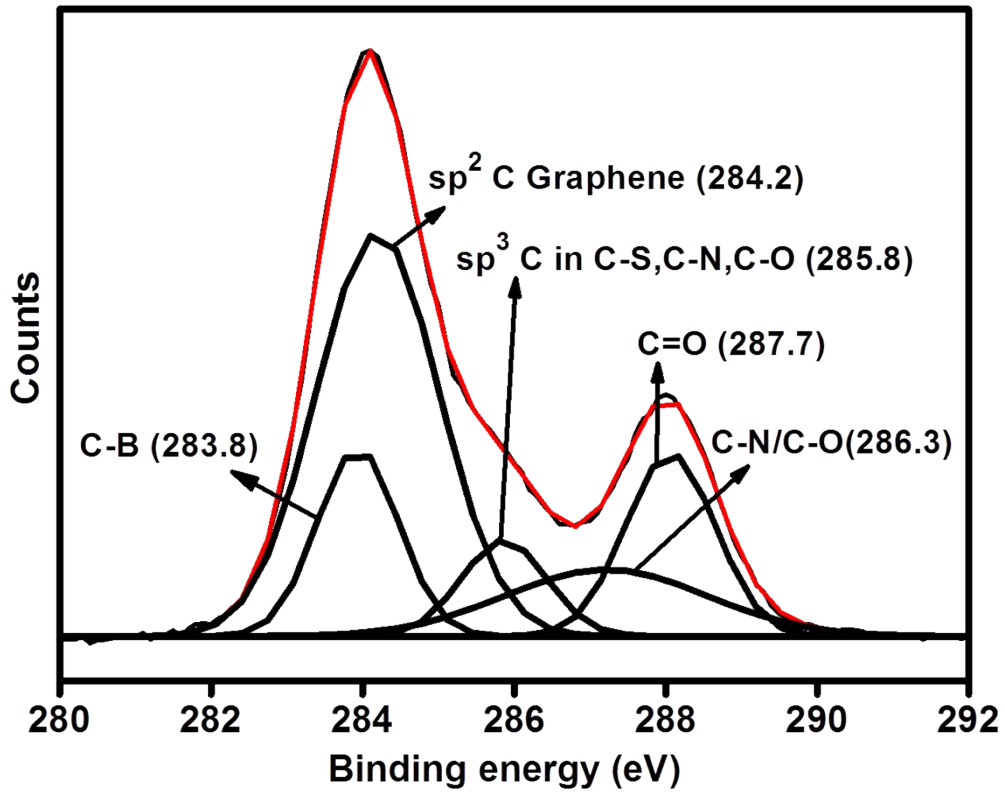

Figure S3 XPS high resolution scan of C1s

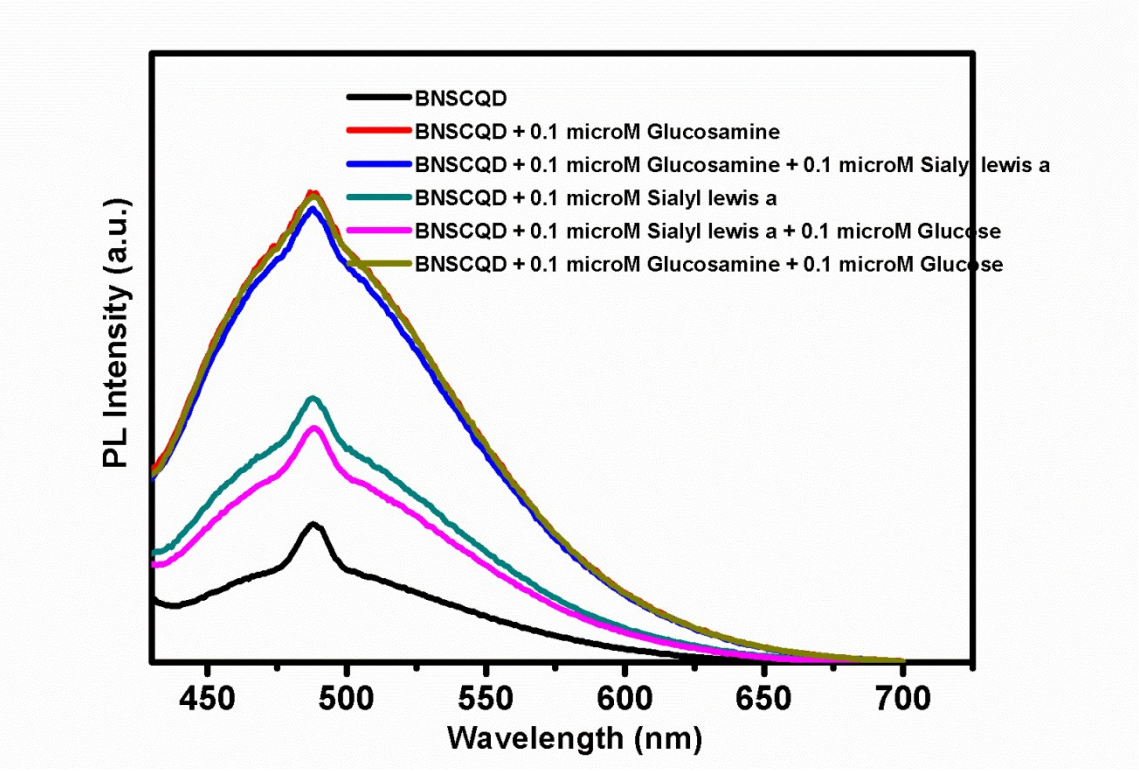

Figure S4 Fluorescence spectra showing the competitive binding of glucosamine, glucose, sialyl lewisa in presence of one another

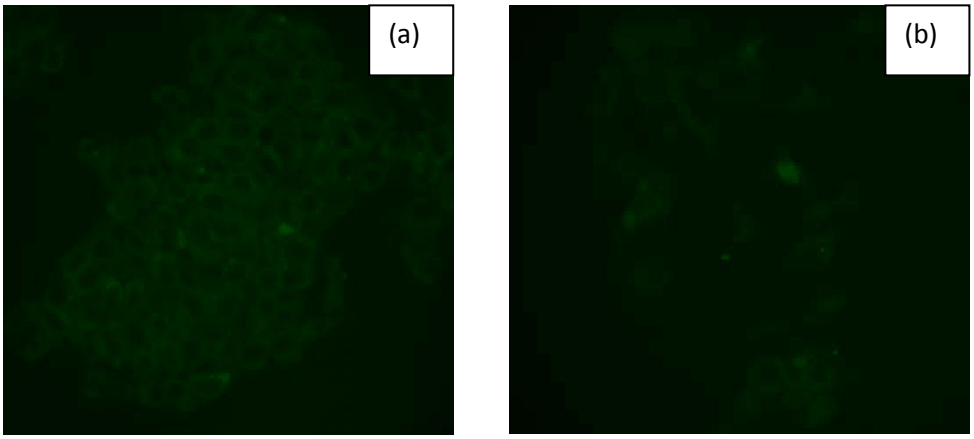

Figure S5 Fluorescence image showing uptake of BNSCQD nanoparticles in (a) 3T3 and (b) PC 3

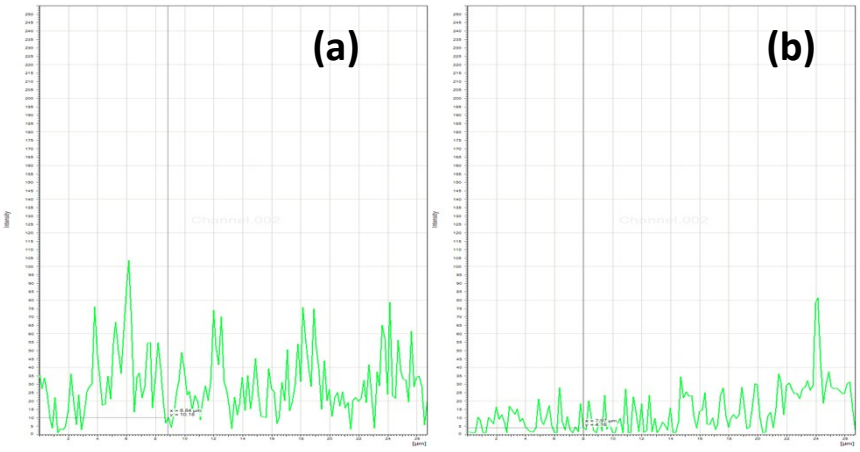

Figure S6 Confocal fluorescence intensity profile for (a) HepG2 cells and (b) L929 cells.