Synthesis of Carbon Quantum Dots based-Hemp Leaves and Cysteamine for Latent Fingerprint Detection and their Potential Therapeutic Anticancer Application

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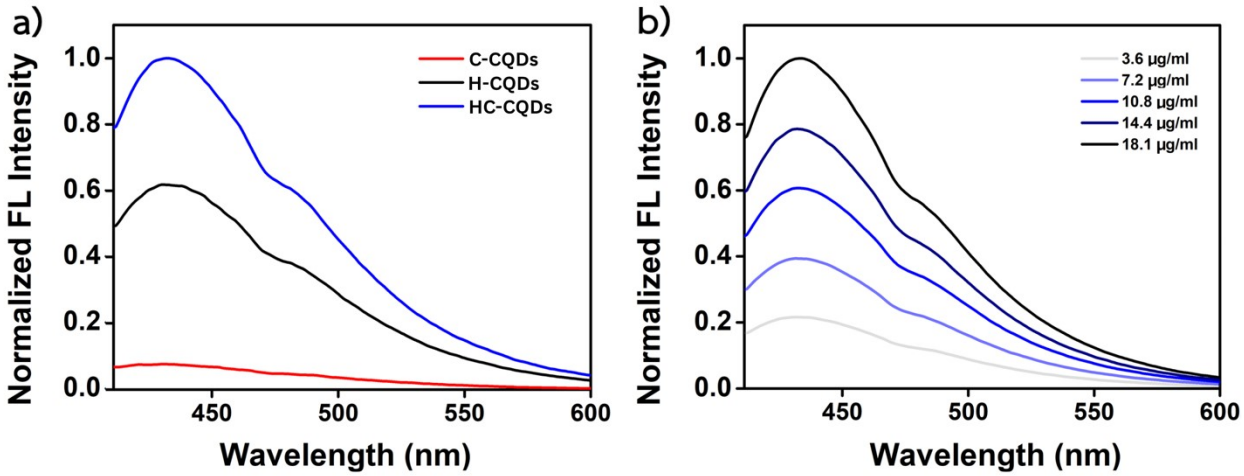

Figure S1 (a) Emission spectra of C-CQDs, H-CQDs and HC-CQDs; (b) emission spectra of HC-CQDs with different concentrations of HC-CQDs solution.

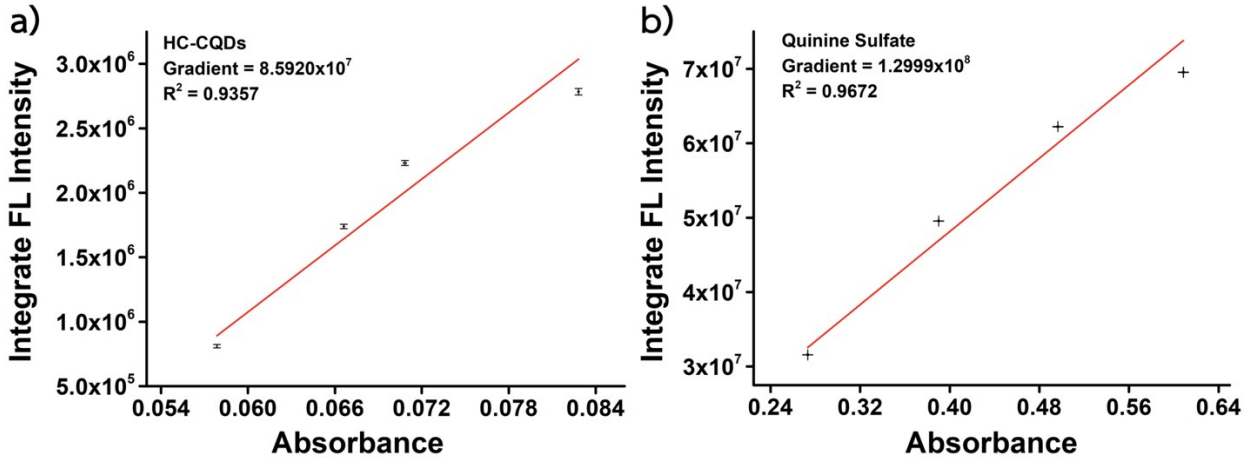

Figure S2 Quantum yield measurement of (a) sample HC-CQDs and (b) reference quinine sulfate.

Table S1 Comparison of quantum yields of CQDs prepared through hydrothermal method using different plants precursor.

Precursor	Application	QY	ref
water hyacinth	sensing Fe^{3+}, cellular imaging	3.3 %	[30]
corn straw	sensing Fe^{3+}	3.8 %	[31]
paulownia leaves	sensing Fe^{3+}	4.74 %	[32]
carrot juices	cellular imaging	5.16 %	[33]
peach leaves	biological imaging	7.71 %	[34]
Ophiopogon japonicus	sensing Fe^{3+}	10.6 %	[35]
red lentils beans	sensing Fe^{3+}	13.2 %	[36]
hemp leaves	LFPs detection, anti-lung cancer cells	36.1 %	This study

Table S2 Zeta potential and average particle size from dynamic light scattering (DLS) technique of HC-CQDs.

Sample	Zeta potential (mV) + SD	Particle size (d, nm) + SD
HC-CQDs	-5.3 ± 1.6	278.6 ± 14.2

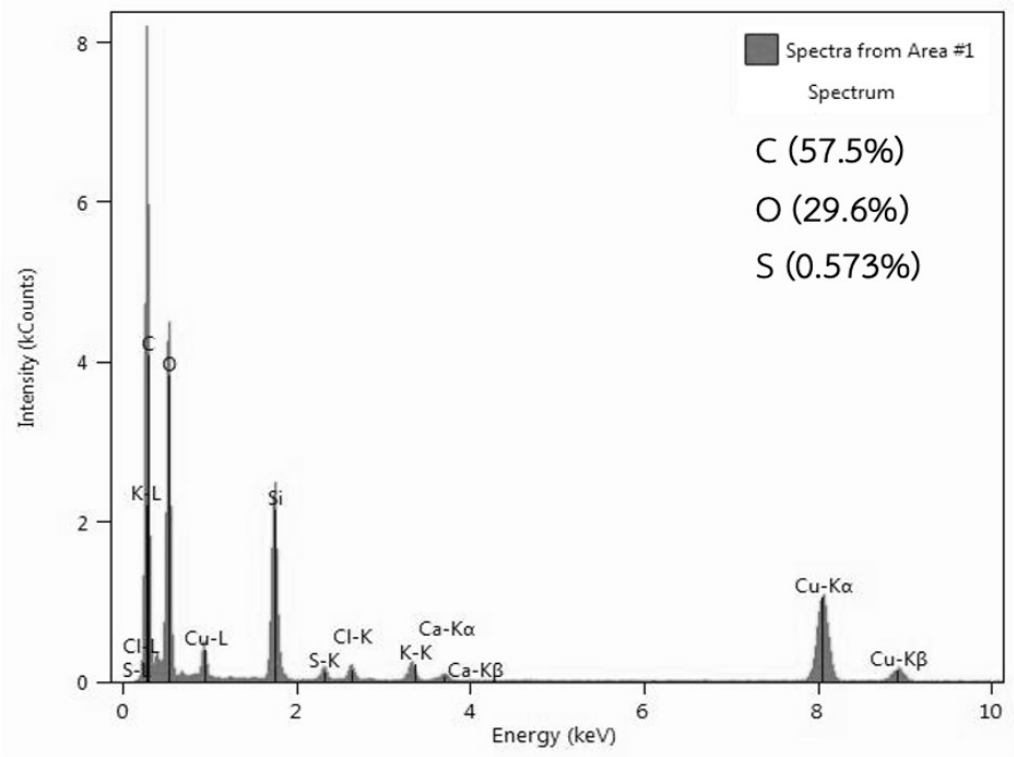

Figure S3 EDX spectrum of HC-CQDs.

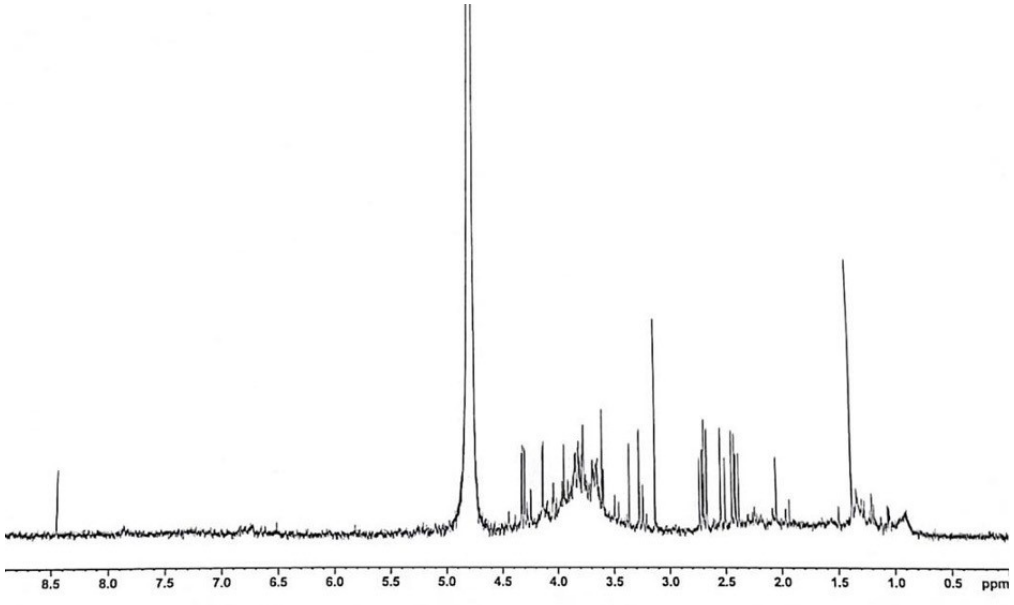

Figure S4 H-NMR spectrum of Hemp extracted solution.