Electronic Supplementary Information

Large scale synthesis of photoluminescent carbon nanodots and their application for bioimaging
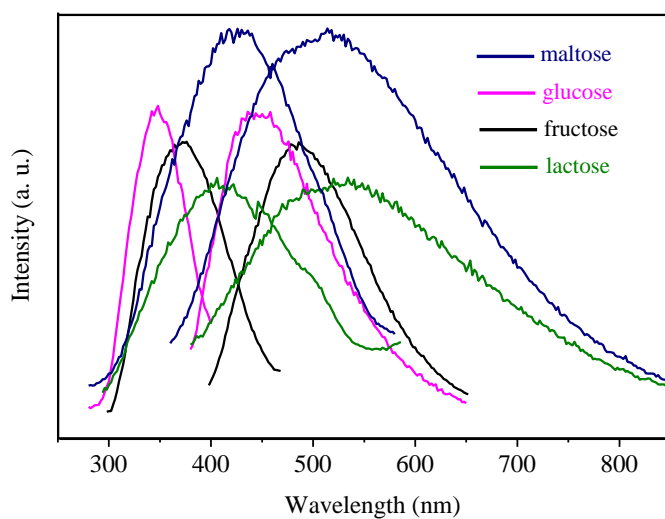
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Fig. S1. The excitation and emission spectra of different CDs obtained by heating different sucrose analogues (glucose, maltose, maltose, and fructose) in oil acid at 215 °C for 5 min

Table S1 The maximum excitation and emission wavelength of CDs from different sucrose analogues

Wavelength	Sucrose analogues			
	glucose	maltose	lactose	fructose
Maximum excitation wavelength (nm)	345.6	426.9	404.6	371.6
Maximum emission wavelength (nm)	444.7	512.9	534.1	485.8

The quantum yield (Φ) of CDs was measured by comparing the integrated photoluminescence intensities and the absorbency values with the re ference quinine sulfate (QS). The quinine sulfate (literature Φ=0.54) was dissolved in 0.001 M H_2SO_4 (refractive index (η) of 1.33) and the CDs was dissolved in distilled water (η=1.33).

$$\Phi = \Phi_R \times \frac{I}{I_R} \times \frac{A_R}{A} \times \frac{\eta^2}{\eta_R^2}$$

Where Φ is the quantum yield, I is the measured integrated emission intensity, η is the refractive index, and A is the optical density. The subscript R refers to the reference fluorophore of known quantum yield.

Table S2 Quantum yiled of CDs

Sample	Integrated emission intensity (I)	Abs. at 349 nm (A)	Refractive index of solvent (η)	Quantum Yield (Φ)
Quinine sulfate	48561.5	0.055	1.33	0.54
CDs sample	16953.0	0.049	1.33	0.216