

## Electronic Supporting Information

### Colorimetric and Ratiometric Fluorescence Dual Mode Sensing of Glucose Based on Carbon Quantum Dots and Potential UV/Fluorescence of *o*-Diaminobenzene

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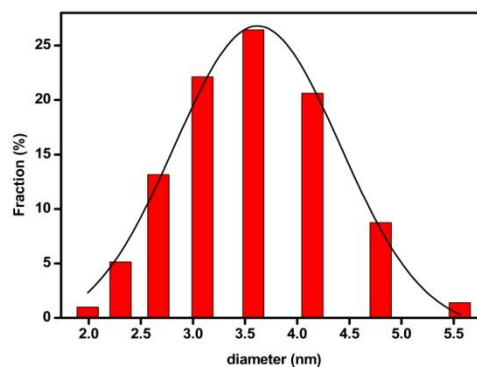


Figure S1 Particle size distribution of CQDs

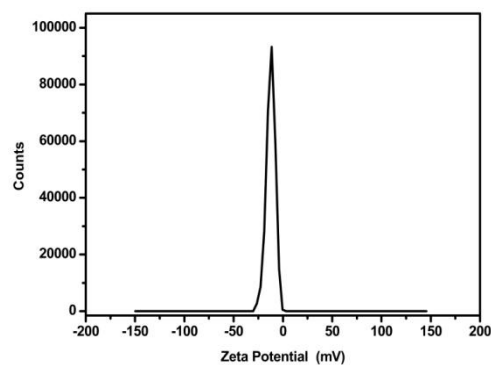
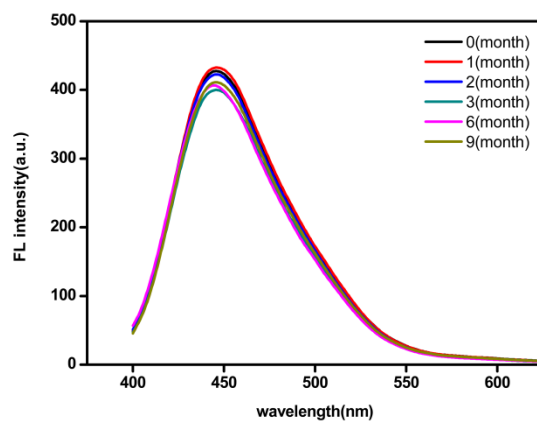
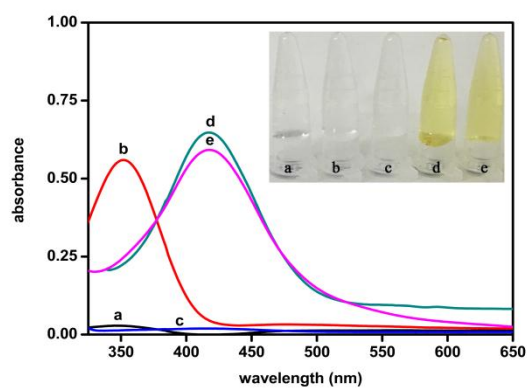


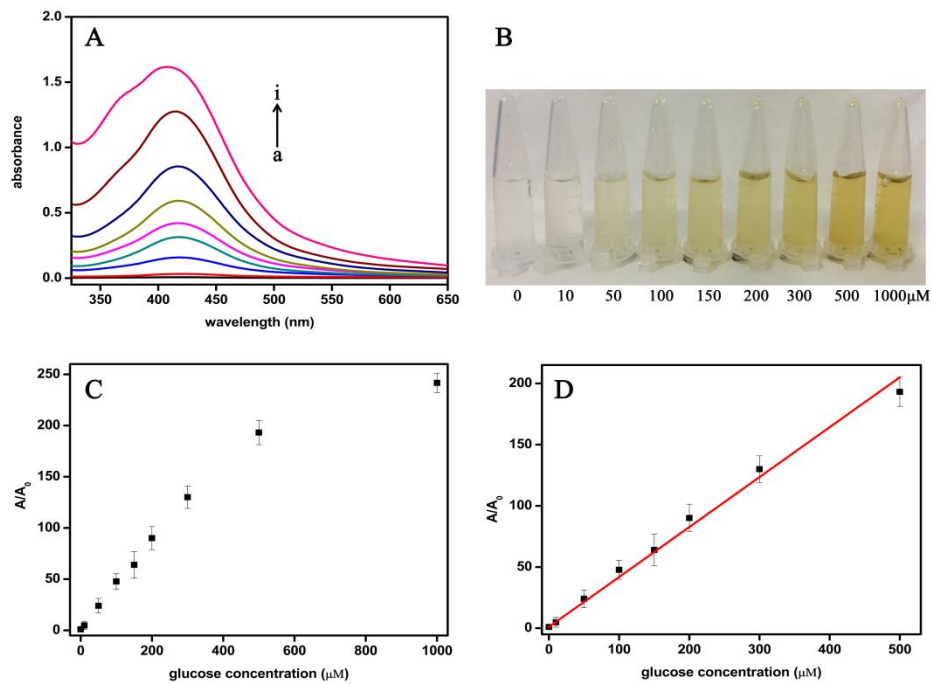
Figure S2 The zeta potential of CQDs



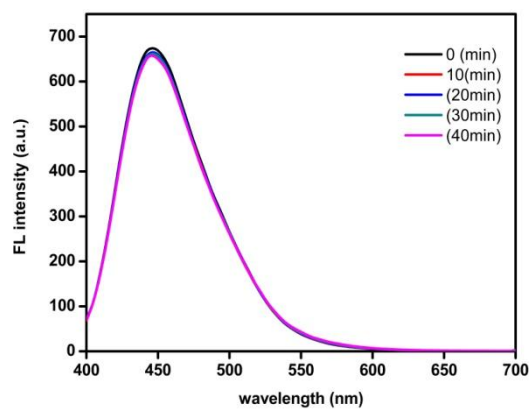
**Figure S3** The stability experiment of CQDs in PBS



**Figure 4** Absorption spectra of (a) 0.02 mg/ ml CQDs, (b) 2 mg/ml CQDs, (c) 1mM ODB, (d) oxODB, (e) 200  $\mu$ M glucose detection solution.



**Figure S5** (A) Absorbance spectra for the detection of glucose with different concentrations. (B) The colors of glucose detection solution with different concentrations. (C) The relationship curve between absorbance ratio ( $A/A_0$ ) and glucose concentration between 10 and 1000  $\mu\text{M}$ . (D) The linear relationship between  $A/A_0$  and glucose concentrations ranging from 10 to 500  $\mu\text{M}$ .



**Figure S6** CQDs (0.02 mg/ml) fluorescence spectra in the reaction medium at different times

Table S1 Comparison of recently reported fluorescence methods for the detection of glucose

Material	Method	Linear range	Detection limit	Reference
B-doped carbon quantum dots (BCQDs)	fluorescence	8~80 $\mu$ M	8 $\mu$ M	[26]
CdTe/CdS quantum dots–glucose oxidase complex	fluorescence	1~7 mM	0.1 mM	[27]
Ag@CDs composite	fluorescence	7~20 $\mu$ M	1.55 $\mu$ M	[28]
C-dots/AgNPs	fluorescence	2~100 $\mu$ M	1.39 $\mu$ M	[29]
CDs-ODB	fluorescence	10~200 $\mu$ M	1.15 $\mu$ M	This Work

Table S2 Comparison of recently reported colorimetric methods for the detection of glucose

Material	Method	Linear range	Detection limit	Reference
Ag nanoparticles/ cotton fabric	colorimetry	0.1~2 mM	0.08 mM	[30]
chloranil	colorimetry	0.03~1 mM	0.03 mM	[31]
MoS <sub>2</sub> @MgFe <sub>2</sub> O <sub>4</sub> nanocomposite	colorimetry	5~200 $\mu$ M	2.0 $\mu$ M	[32]
Fe <sub>3</sub> O <sub>4</sub> @Au-Cys-FA-GOx nanocomposites	colorimetry	10 $\mu$ M~1mM	3.8 $\mu$ M	[33]
CDs-ODB	colorimetry	10~500 $\mu$ M	3 $\mu$ M	This Work