Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Carbon dots for photoswitching enzyme catalytic activity

(Supporting information)

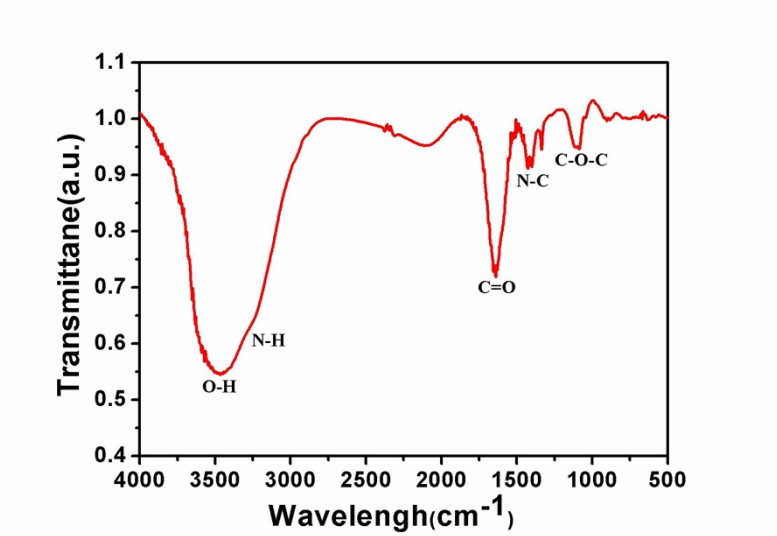

Figure S1. FTIR spectra of CQDs.

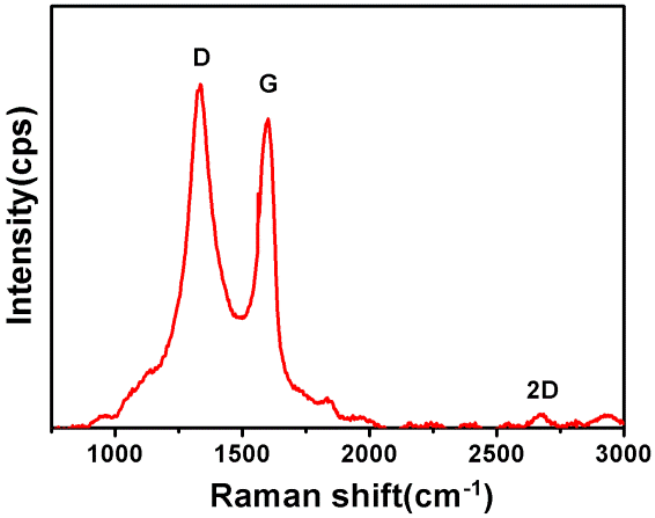

Figure S2. The Raman spectra of CQDs.

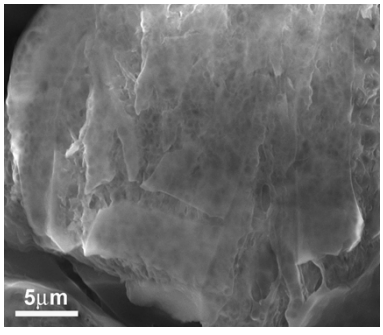

Figure S3. SEM images of free PPL

Figure S4. The digital photographs of the CQDs under sunlight and UV light

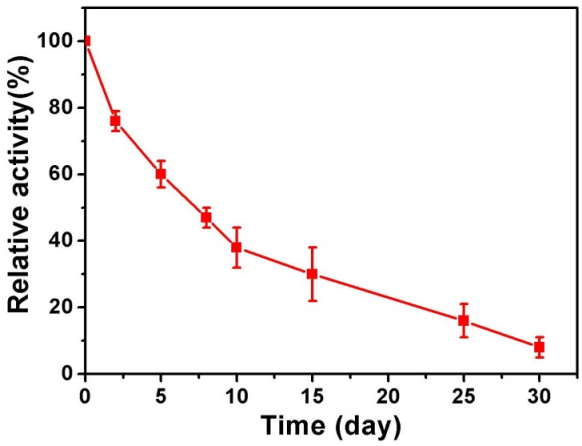

Figure S5. Lifetime of PPL/CQDs-Light in PBS (pH 7.0) at 311K.

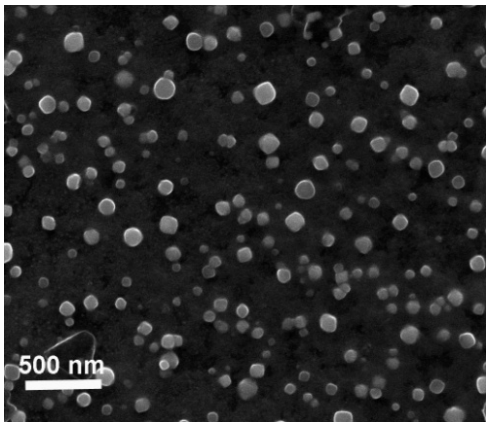

Figure S6. SEM image for graphite nanoparticles.

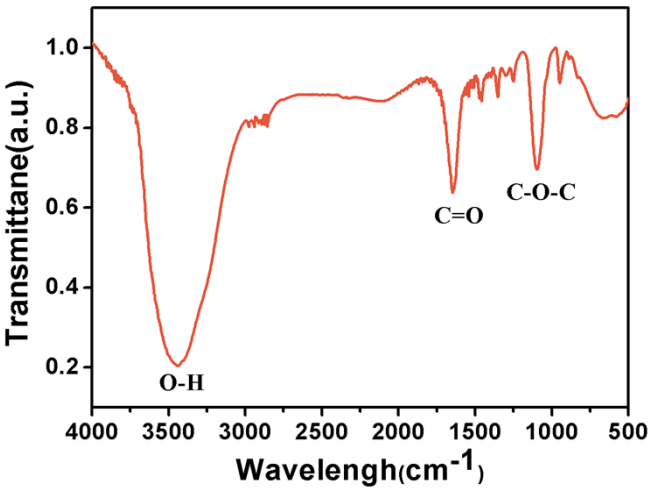

Figure S7. The IR spectrum for graphite nanoparticles

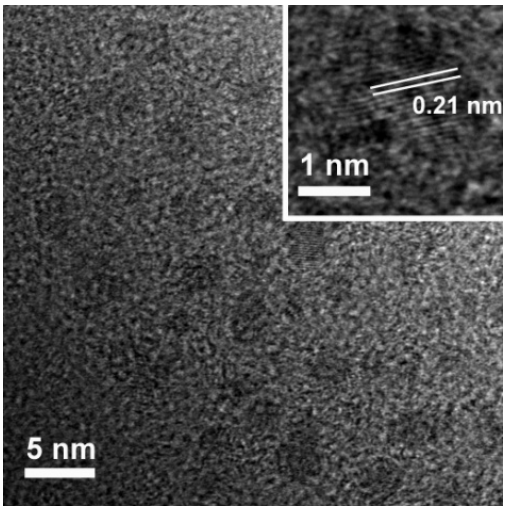

Figure S8. TEM image for reduced CQDs.

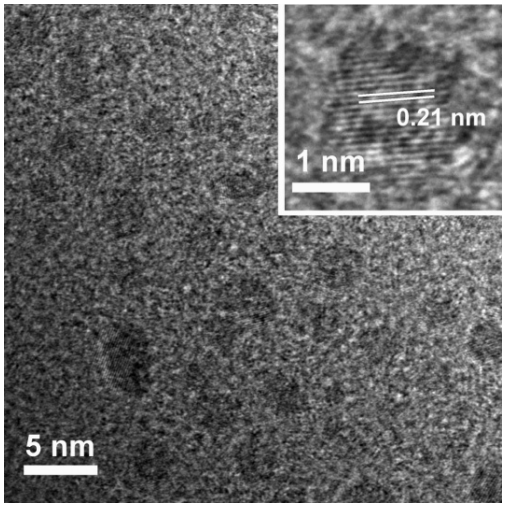

Figure S9. TEM image for partial-reduced CQDs.

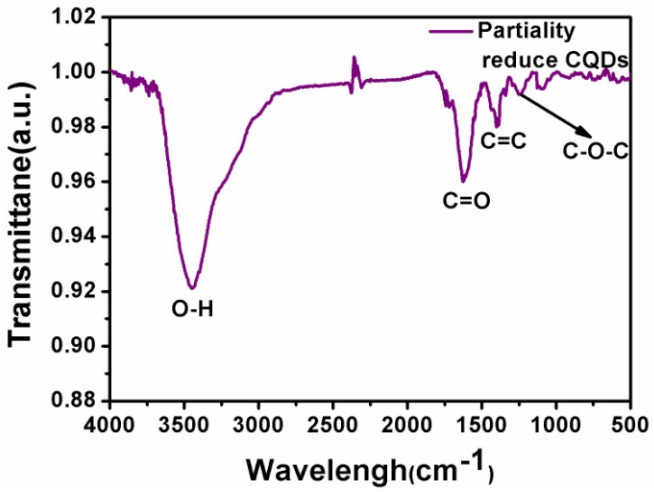

Figure S10. The IR spectrum for partial-reduced CQDs.

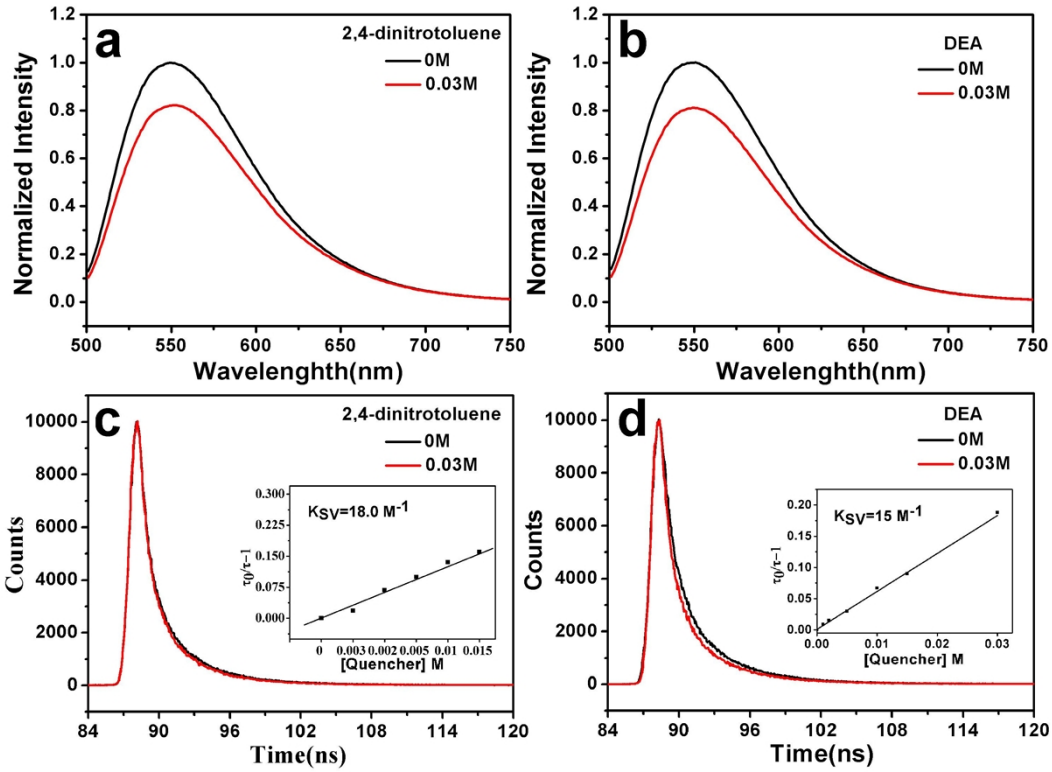

Figure S11. Luminescence decays (485 nm excitation, monitored with 550 nm narrow band pass filter) of the partiality reduce CQDs with (c) 2, 4-dinitrotoluene and (d) DEA. Inset: Stern–Volmer plots for the quenching of luminescence quantum yields (485nm excitation) of the CQDs by (a) 2, 4-dinitrotoluene and (b) DEA.

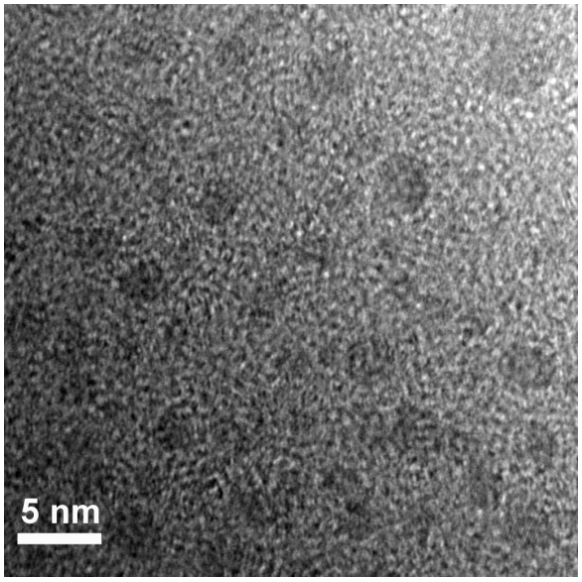

Figure S12. TEM image for other CQDs obtained from glucose by reflux treatment.

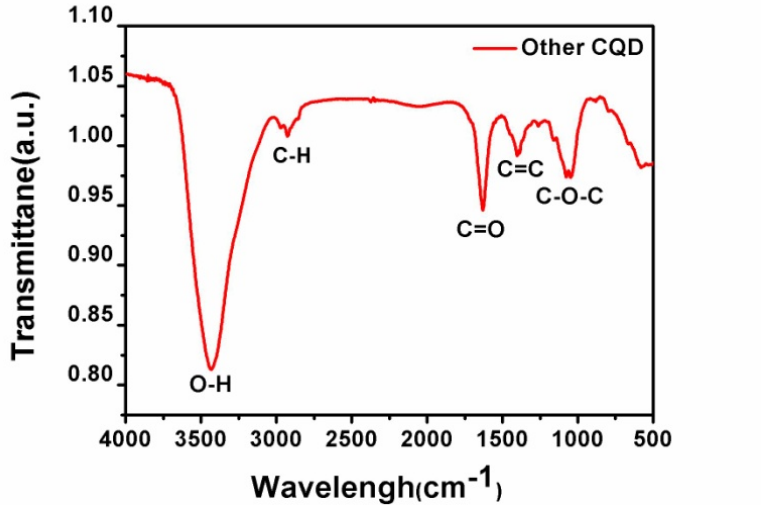

Figure S13. The IR for other CQDs obtained from glucose by reflux treatment.

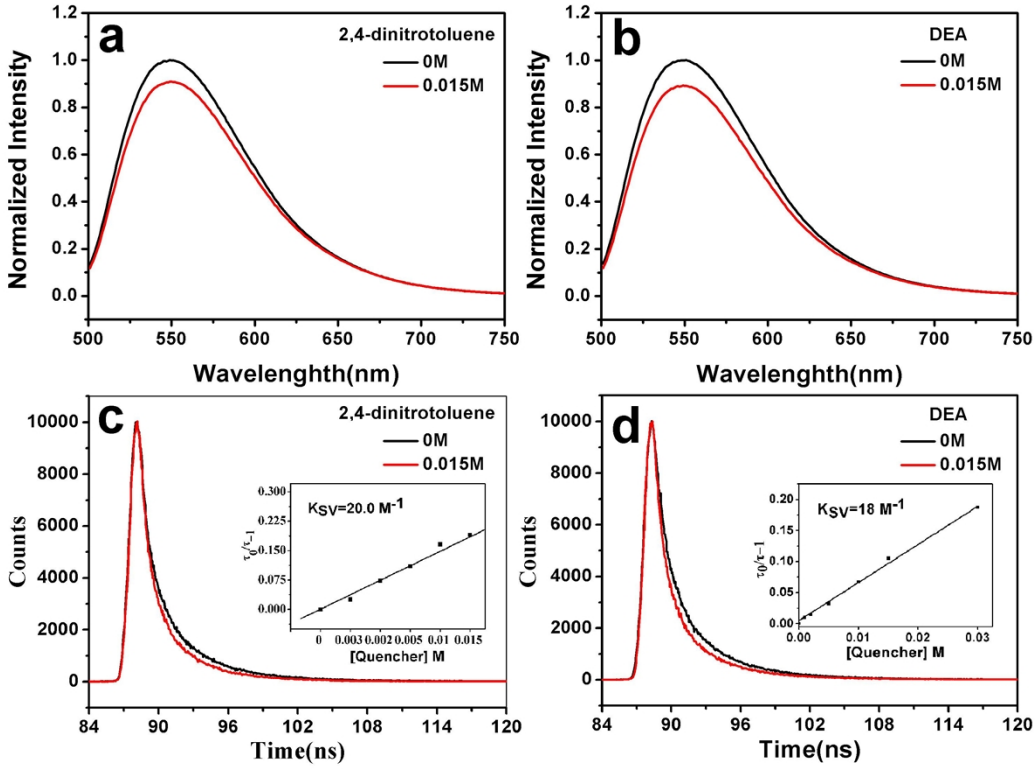

Figure S14. Luminescence decays (485 nm excitation, monitored with 550 nm narrow band pass filter) of the other CQDs (CQDs-HCl) with (c) 2, 4-dinitrotoluene and (d) DEA. Inset: Stern–Volmer plots for the quenching of luminescence quantum yields (485nm excitation) of the CQDs by (a) 2, 4-dinitrotoluene and (b) DEA.