Supporting Information

Fluorescent carbon dots with tunable emission by dopamine for sensing of intracellular pH, elementary arithmetic operations and living cells imaging based INHIBIT logic gate

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Supporting Figures

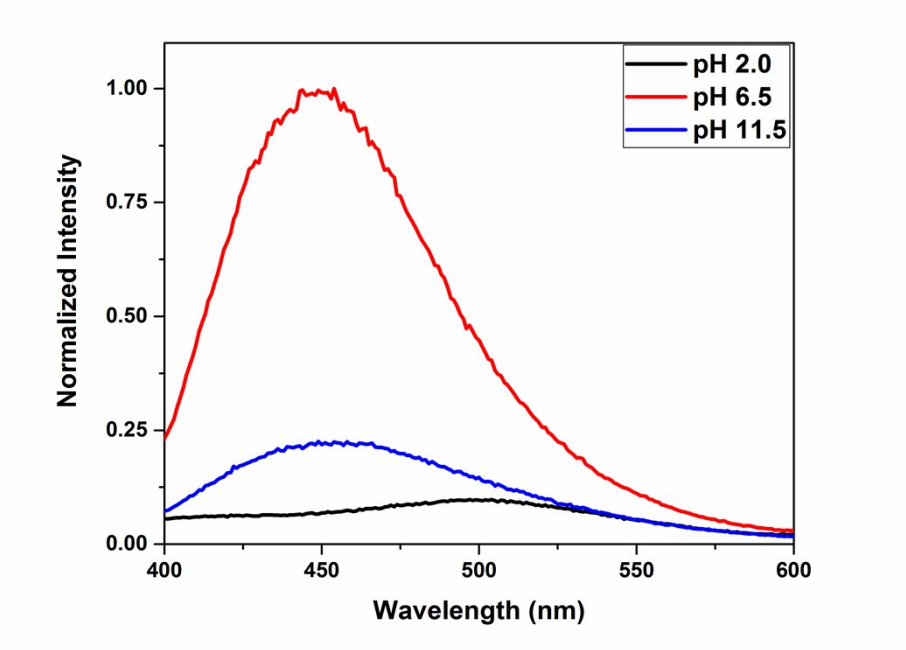

Figure S1. The pH-dependent fluorescence spectra of prepared PCDs derived from CA and DA with CA:DA = 2:1.

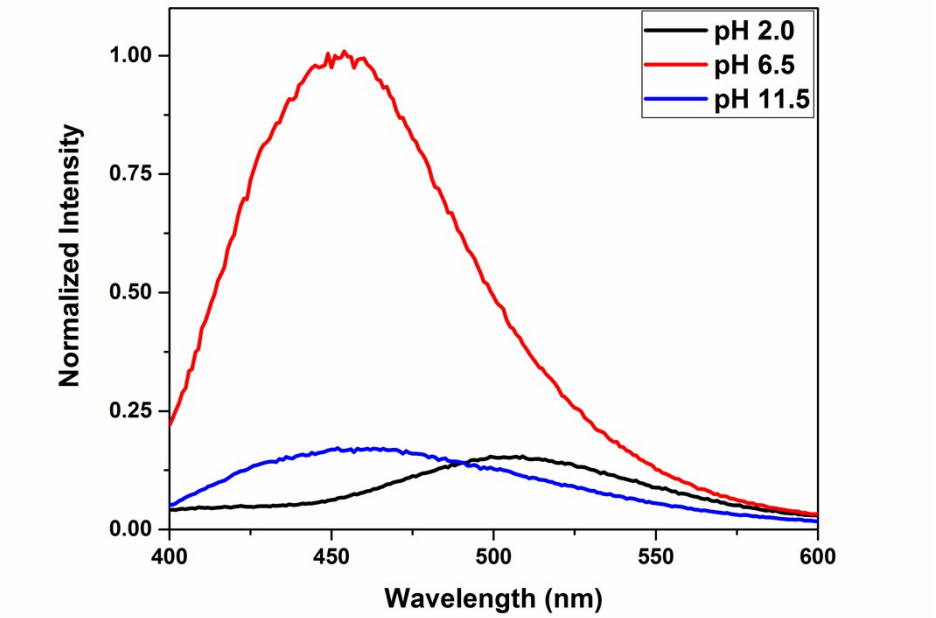

Figure S2. The pH-dependent fluorescence spectra of prepared PCDs derived from CA and DA with CA:DA = 2:1.5.

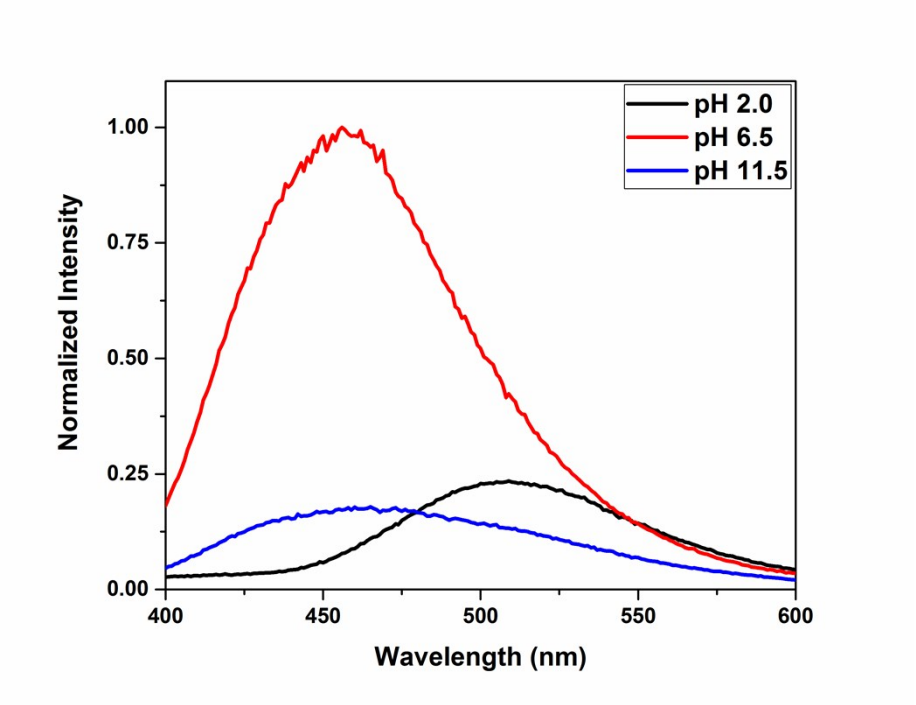

Figure S3. The pH-dependent fluorescence spectra of prepared PCDs derived from CA and DA with CA:DA =2:1.75.

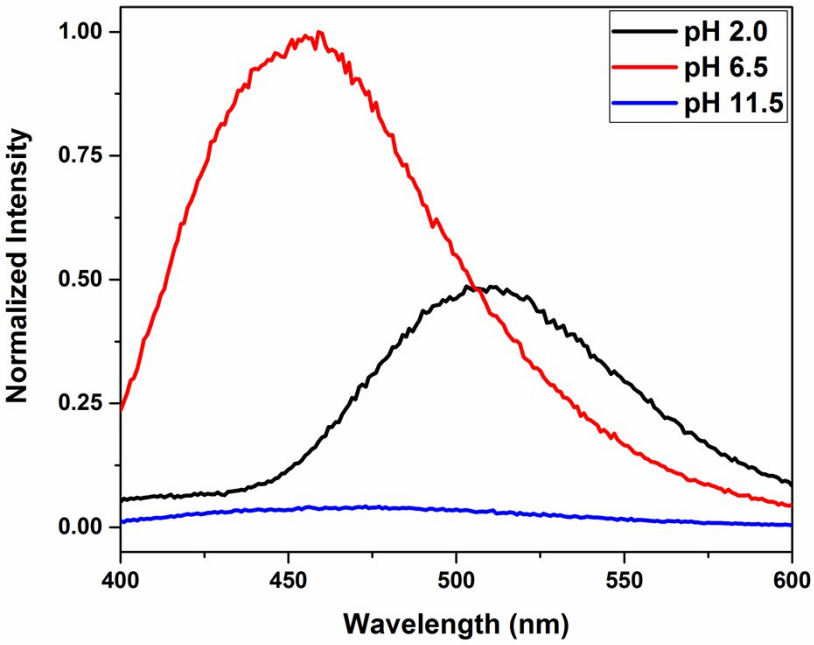

Figure S4. The pH-dependent fluorescence spectra of prepared PCDs derived from CA and DA with CA:DA =2:2.

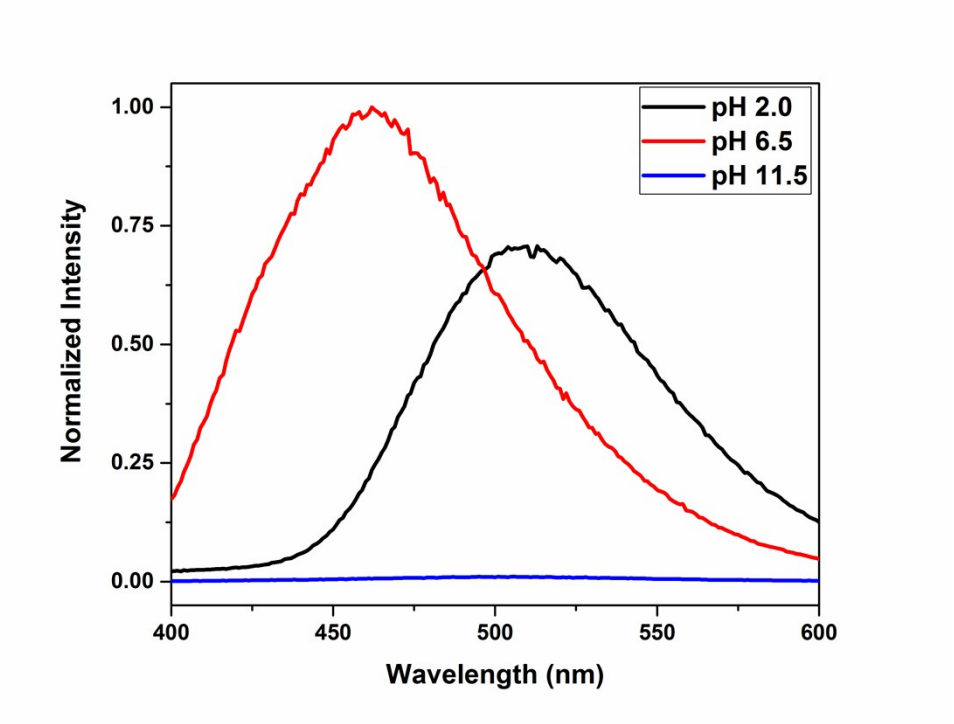

Figure S5. The pH-dependent fluorescence spectra of prepared PCDs derived from CA and DA with CA:DA =2:2.25.

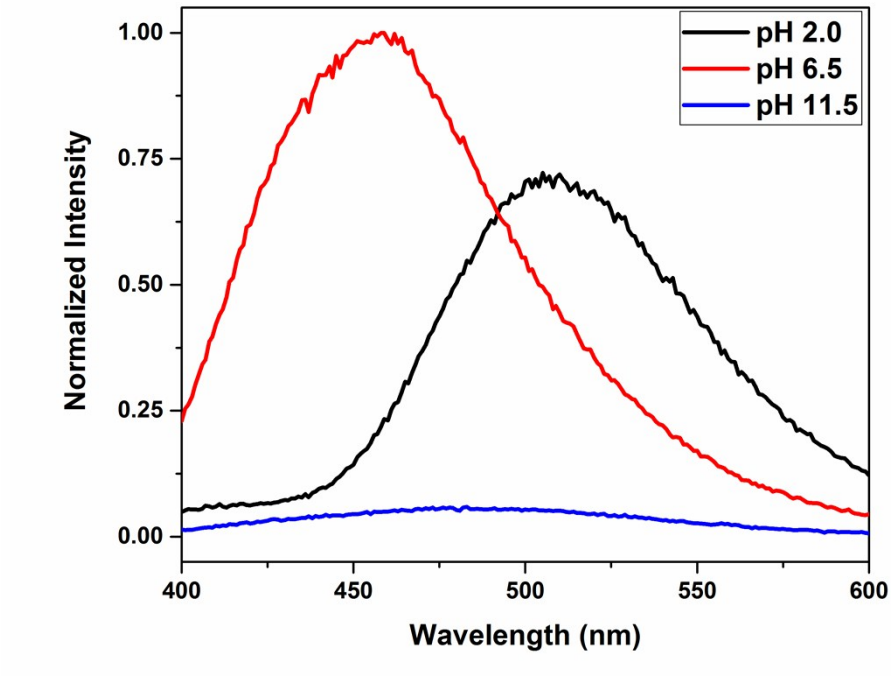

Figure S6. The pH-dependent fluorescencespectra of prepared PCDs derived from CA and DA with CA:DA =2:2.5.

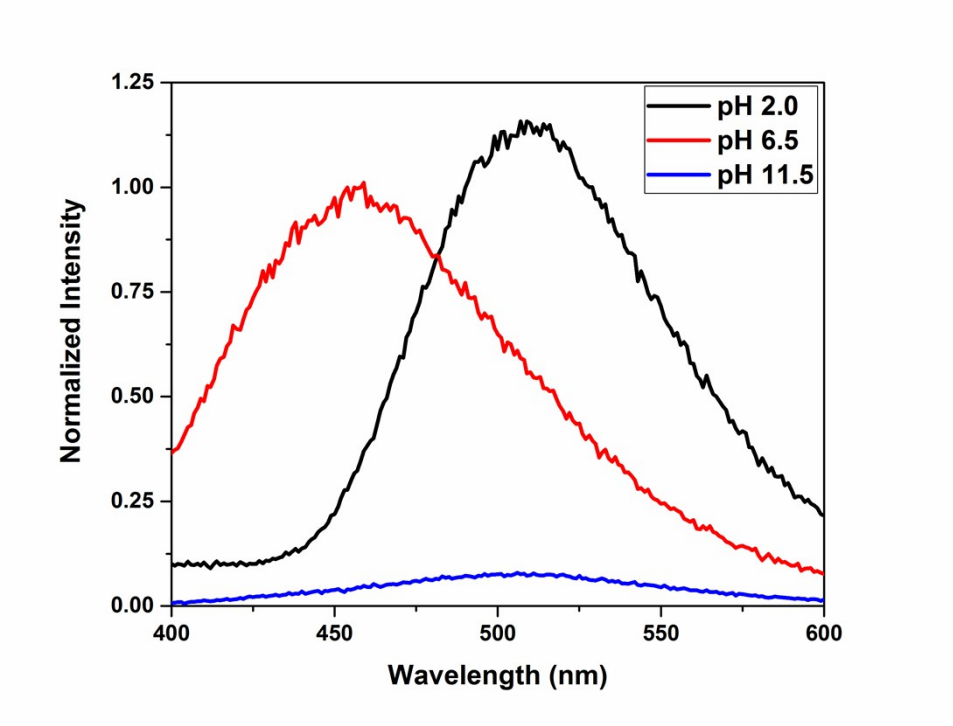

Figure S7. The pH-dependent fluorescence spectra of prepared PCDs derived from CA and DA with CA:DA =2:3.

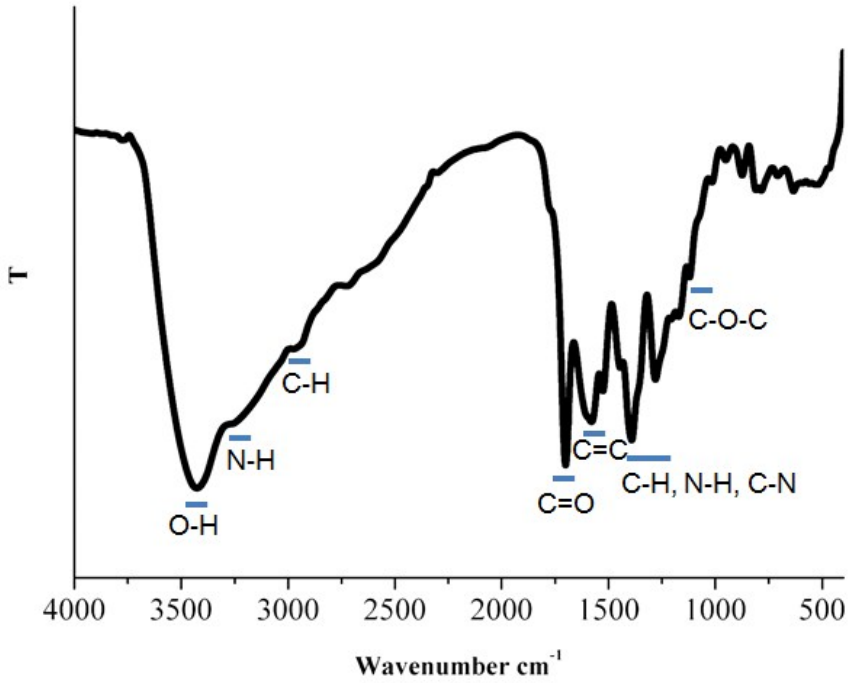

Figure S8. Infrared spectrum of PCDs.

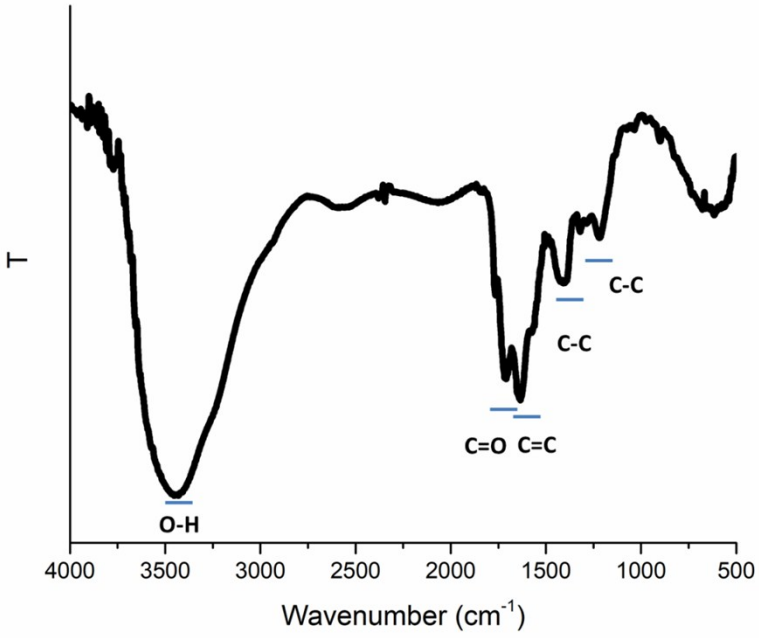

Figure S9. Infrared spectrum of CA-derived C-dots.

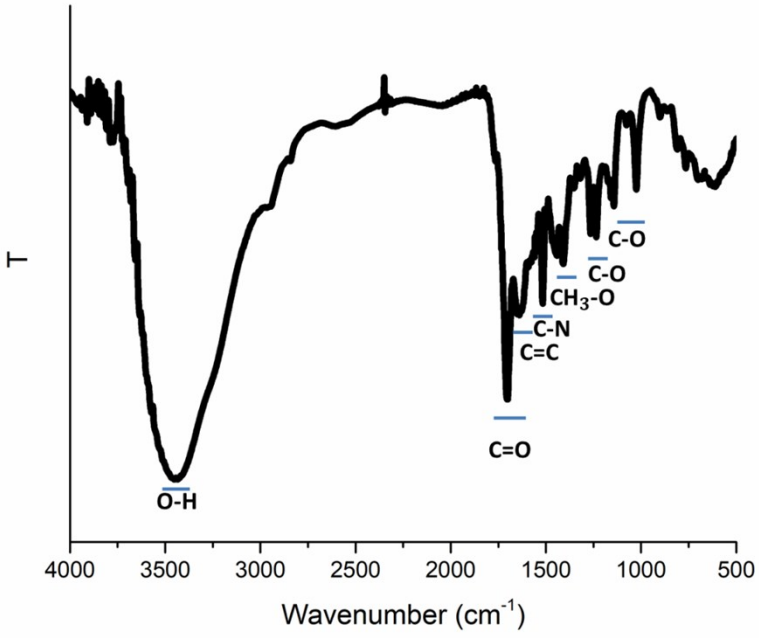

Figure S10. Infrared spectrum of DMPA-derived C-dots

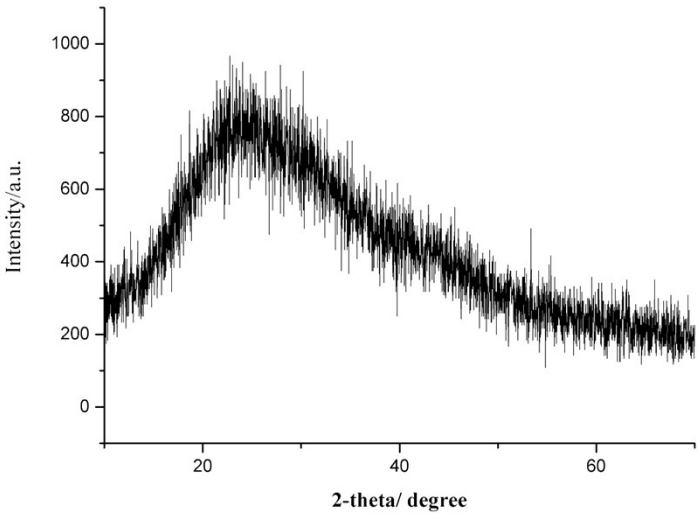

Figure S11. X-ray diffraction pattern of the prepared PCDs.

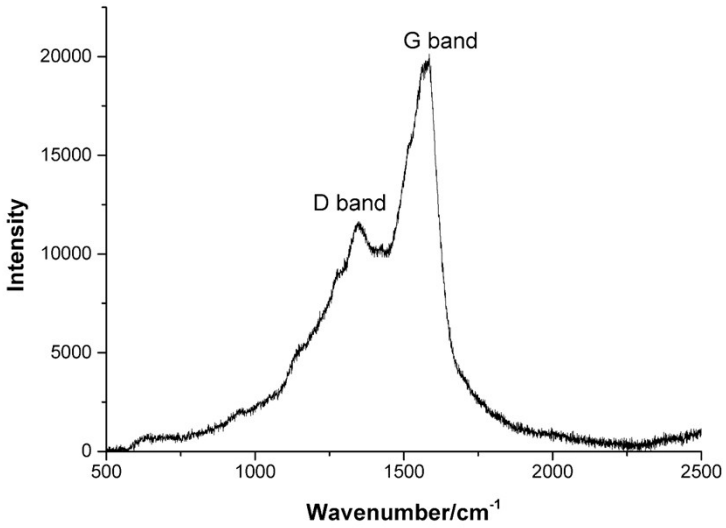

Figure S12. Raman spectrum of the PCDs.

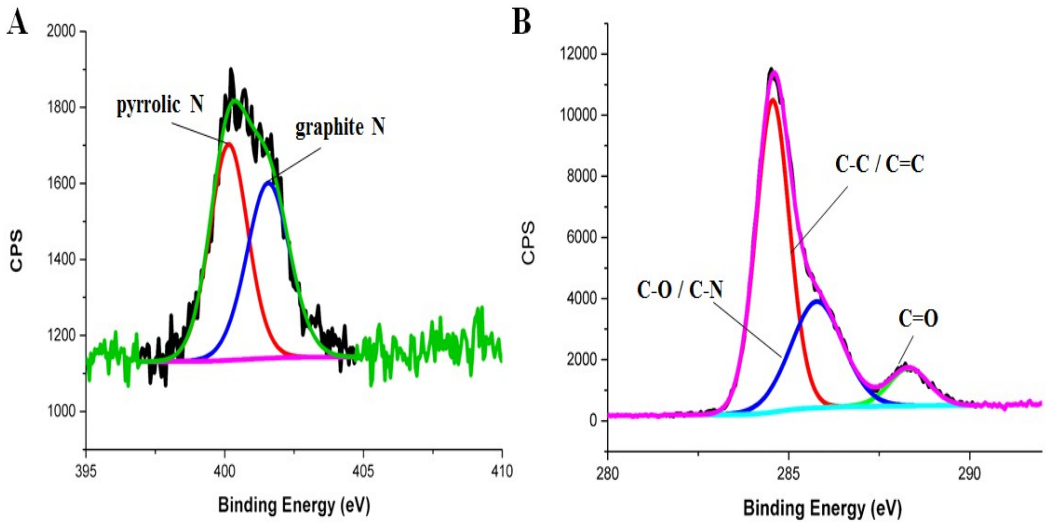

Figure S13. High resolution N1s (A) and C1s (B) spectra of the PCDs.

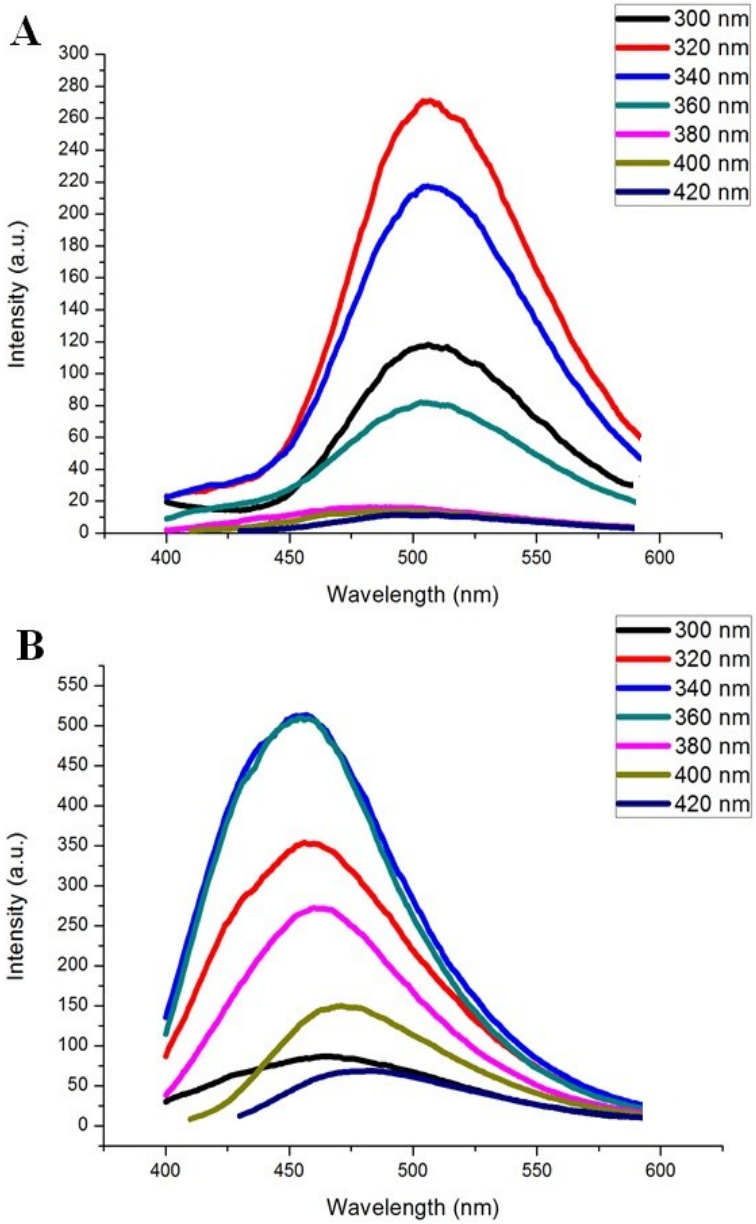

Figure S14. Excitation-dependent fluorescence emission of PCDs under pH 2.0 (A) and pH 7.0 (B).

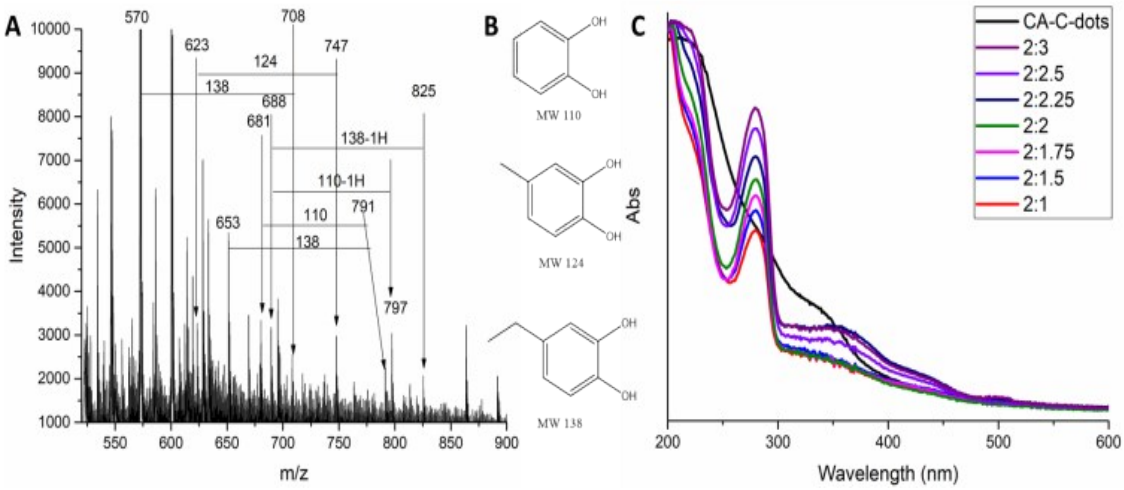

Figure S15. The MADLI-TOF mass spectrum of PCDs (A), the possible fragments of dopamine in MS (B), the UV-Vis spectra of CA derived C-dots and PCDs with different ratio between CA and DA (C).

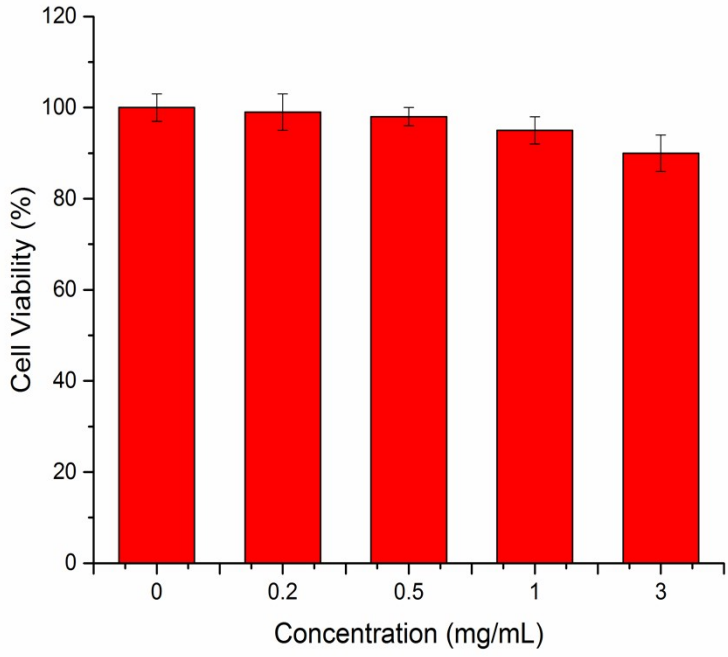

Figure S16. Effects of PCDs at varied concentrations on the viability of T24 cells.