Electronic Supplementary Material (ESI) for Analytical Methods.

SUPPORTING INFORMATION

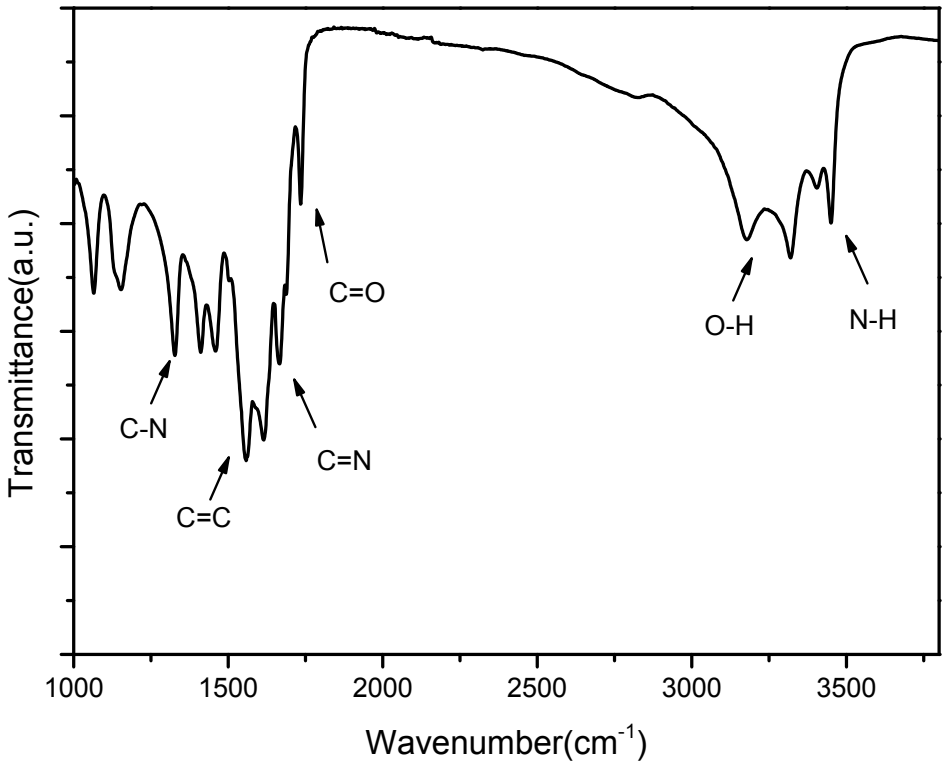


Figure S-1. FTIR spectra of prepared C-dots

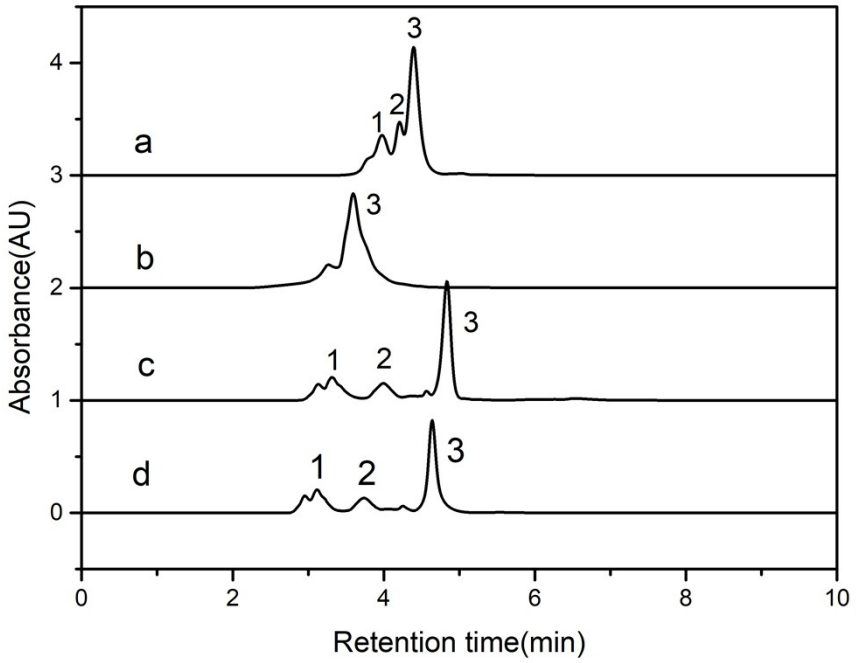


Figure S-2. The separation of C-dots at different of ratio of flow rates of water-methanol in isocratic elution (v/v): (a) 0.16 mL min^{-1}: 0.64 mL min^{-1}, (b) 0.32 mL min^{-1}: 0.48 mL min^{-1}, (c) 0.48 mL min^{-1}: 0.32 mL min^{-1} and (d) 0.64 mL min^{-1}: 0.16 mL min^{-1}. Total flow rate was 0.8 mL min^{-1}. The detection wavelength was 410 nm. The temperature was 35℃.The injection volume of the C-dots samples was 20 μL (the concentration was 1.0 mg mL^{-1}).

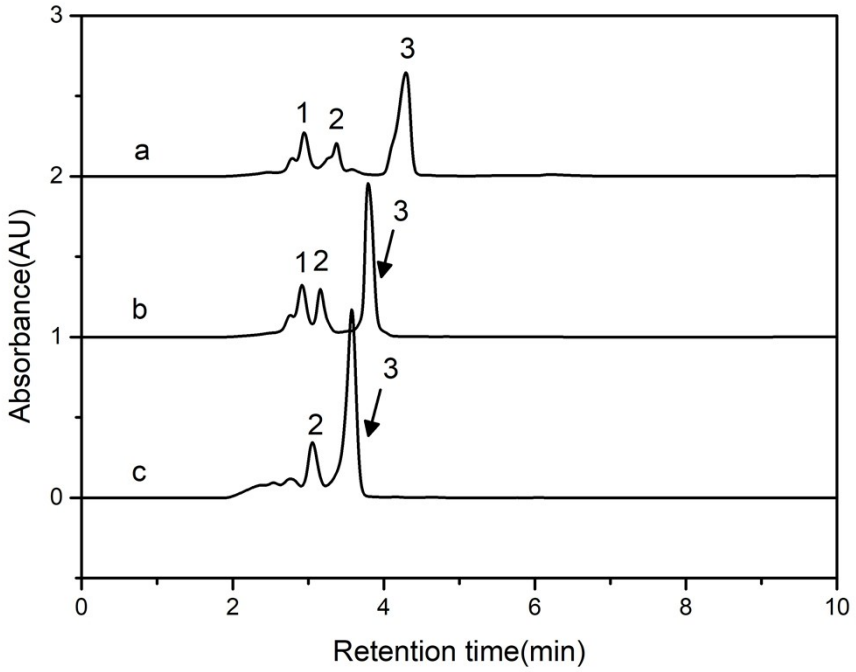


Figure S-3. The separation of C-dots was used by gradient elution. The different gradient elution programs were as follows: (a) 0 to 2 min 90 % water and 10 % methanol; 2 to 8 min 0 % water and 50%methanol, then holding up to 10 min. (b) 0 to 2 min 80 % water and 20 % methanol; 2 to 8 min 50 % water and 50 % methanol, then holding up to 10 min. (c) 0 to 2 min 70% water and 30% methanol; 2 to 8 min 50 % water and 50% methanol, then holding up to 10 min. Other conditions as in Fig. S-2

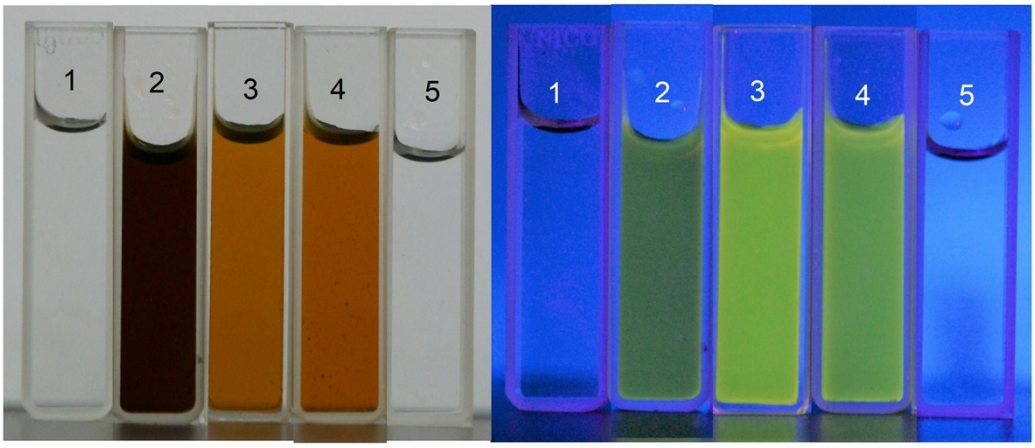
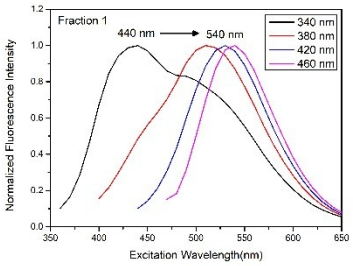
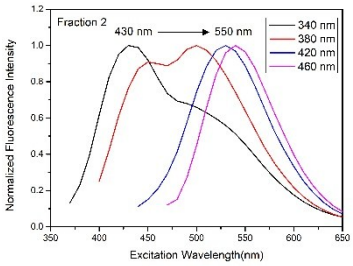


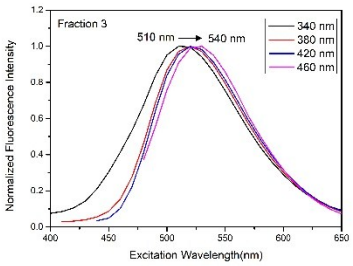
Figure S-4. The photographs of the different ratios of Citric acid /Urea: were visualized under white light (lift) and under a UV lamp (365 nm, right). (1) 6.0 g: 0.0 g, (2) 4.0 g: 2.0 g, (3) 3.0 g: 3.0 g, (4) 2.0 g: 4.0 g, (5) 0.0: 6.0 g


Fraction 1
440 nm
540 nm
340 nm
380 nm
420 nm
460 nm
Normalized Fluorescence Intensity
Excitation Wavelength(nm)

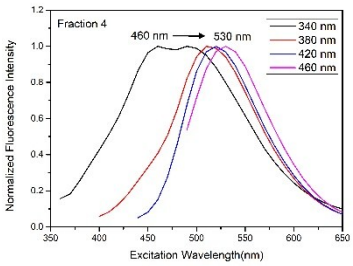
(1)


Fraction 2
430 nm
550 nm
340 nm
380 nm
420 nm
460 nm
Normalized Fluorescence Intensity
Excitation Wavelength(nm)

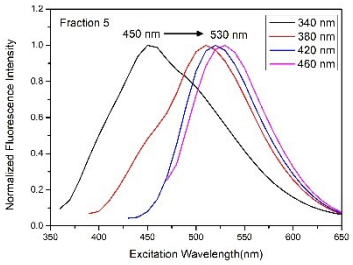
(2)


Fraction 3
510 nm
540 nm
340 nm
380 nm
420 nm
460 nm
Normalized Fluorescence Intensity
Excitation Wavelength(nm)

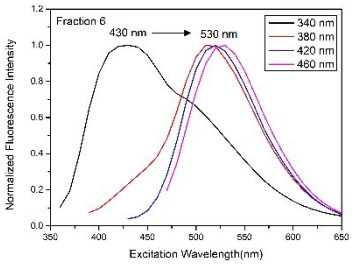
(3)


Fraction 4
460 nm
530 nm
340 nm
380 nm
420 nm
460 nm
Normalized Fluorescence Intensity
Excitation Wavelength(nm)

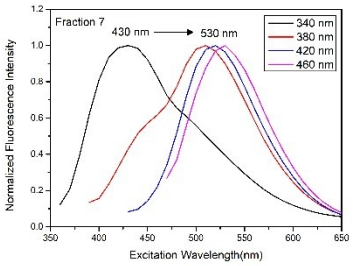
(4)


Fraction 5
450 nm
530 nm
340 nm
380 nm
420 nm
460 nm
Normalized Fluorescence Intensity
Excitation Wavelength(nm)

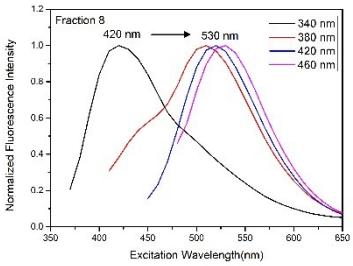
(5)


Fraction 6
430 nm
530 nm
340 nm
380 nm
420 nm
460 nm
Normalized Fluorescence Intensity
Excitation Wavelength(nm)

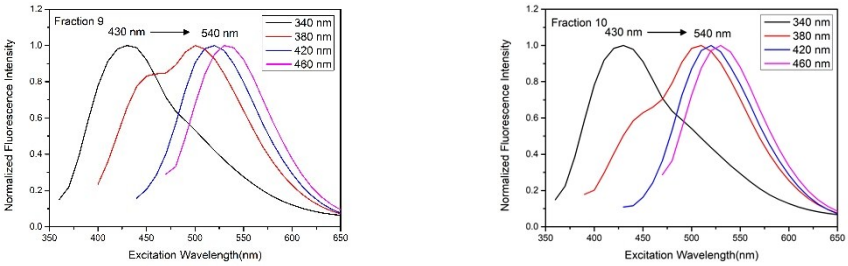
(6)


Fraction 7
430 nm
530 nm
340 nm
380 nm
420 nm
460 nm
Normalized Fluorescence Intensity
Excitation Wavelength(nm)

(7)


Fraction 8
420 nm
530 nm
340 nm
380 nm
420 nm
460 nm
Normalized Fluorescence Intensity
Excitation Wavelength(nm)

(8)



(9) (10)

Figure S-5. Fluorescence emission spectrum of fractions separated by silica gel column chromatography; excitation wavelength: 340 - 460 nm; (1) - (10) fractions (1-10) collected after separation.