Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Highly Bright Solid-State Carbon Dots for Efficient Anticounterfeiting

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Figures

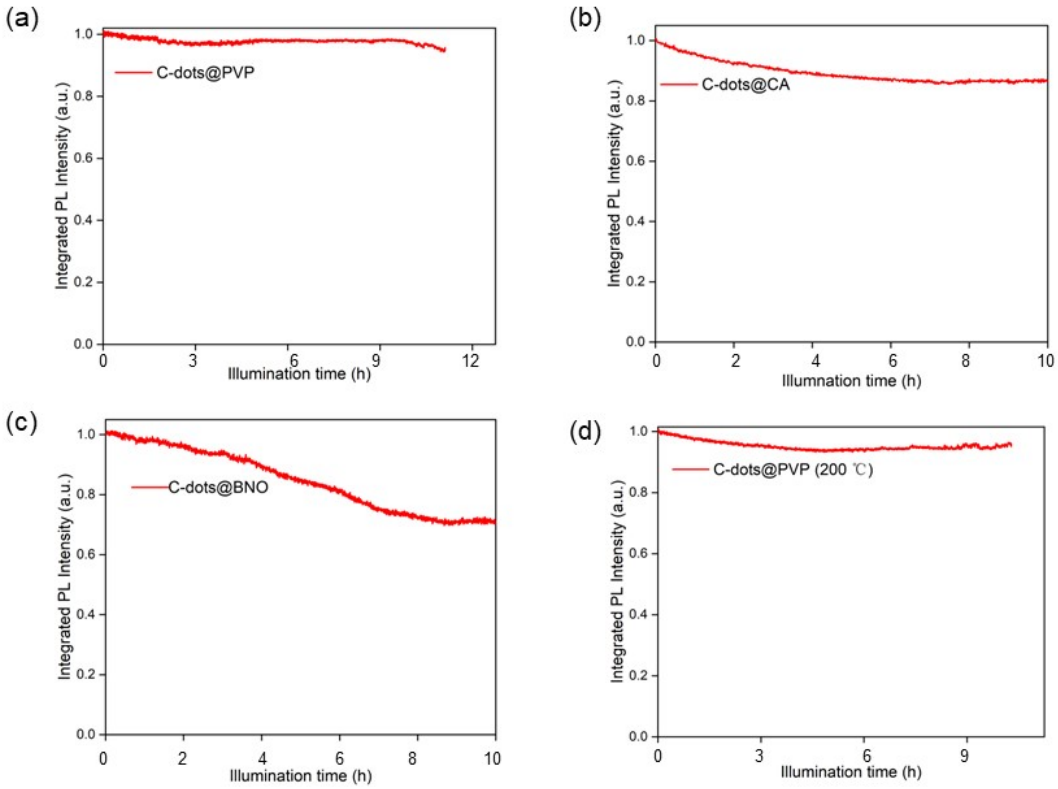

Fig. S1 Integrated PL Intensity of C-dots@PVP (a), C-dots@CA (b), C-dots@BNO (c) and C-dot@PVP (200 ℃) (d).

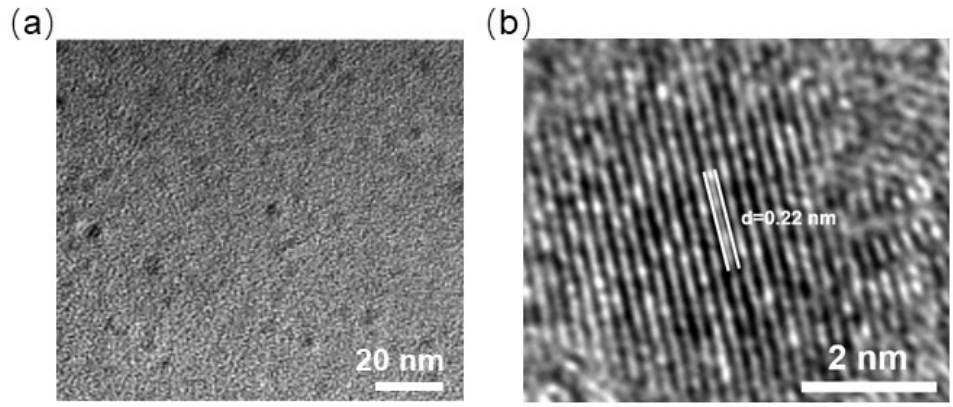

Fig. S2 TEM and HRTEM images of C-dots

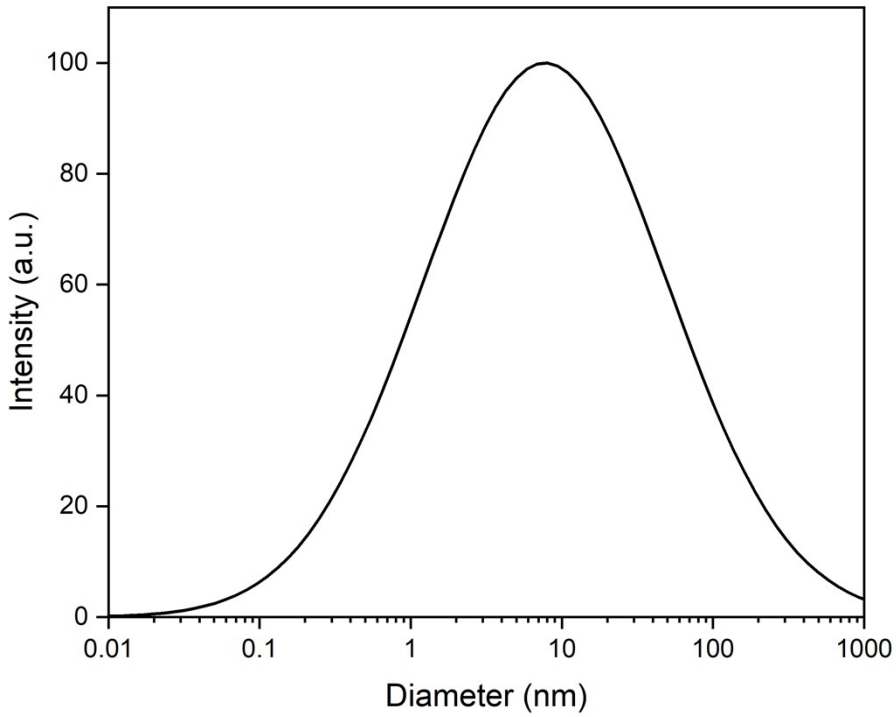

Fig. S3 DLS of C-dots aqueous solution.

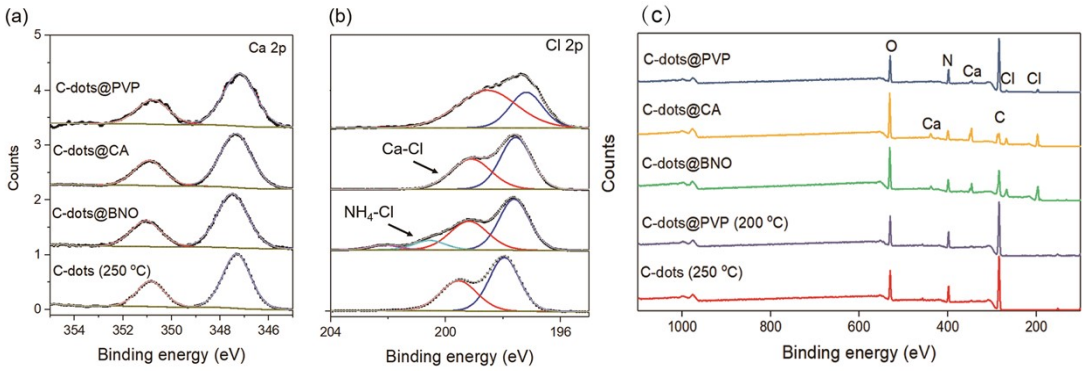

Fig. S4 (a) High resolution XPS of Ca 2p (b) Cl 2p. (c) The survey XPS spectra of the C-dots@PVP, C-dots@CA, C-dots@BNO, C-dots@PVP(200 ℃) and C-dots (250 ℃).

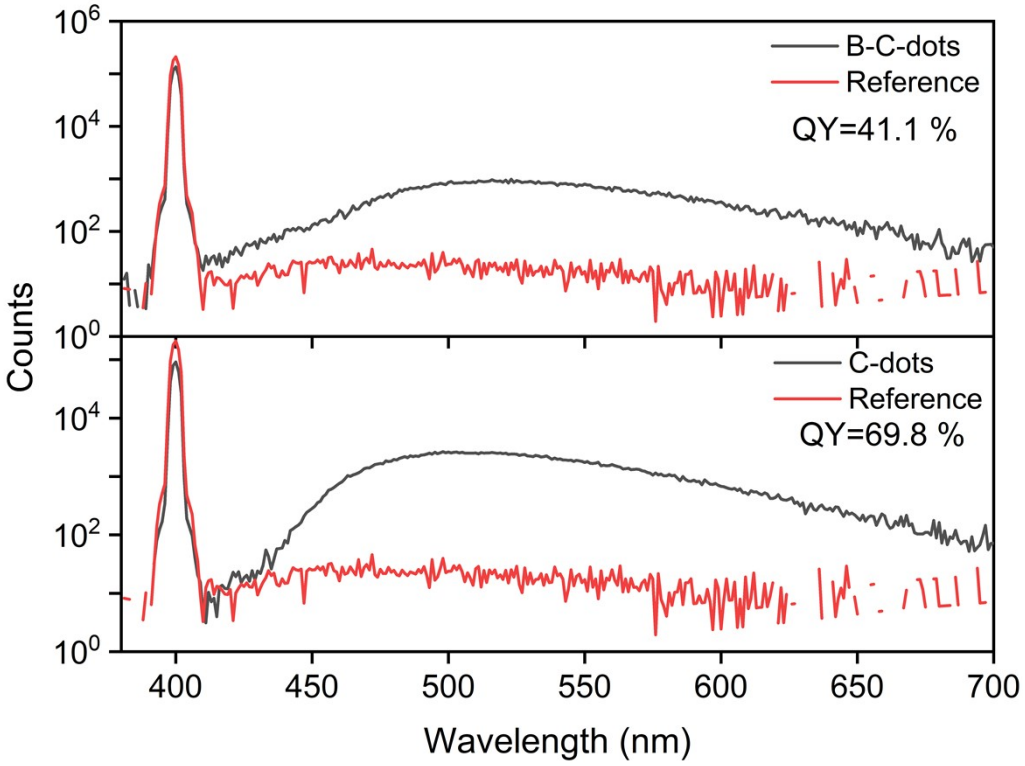

Figure S5 QYs of liquid C-dots and B-C-dots.

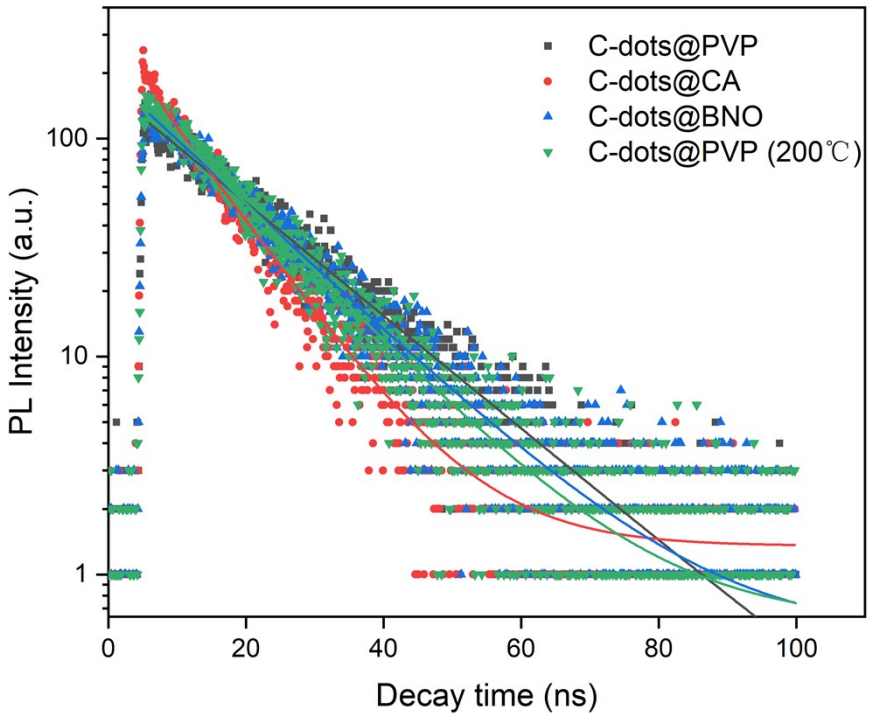

Figure S6 Fluorescence decay curves of C-dots@PVP, C-dots@CA, C-dots@BNO, C-dots@PVP(200 ℃).

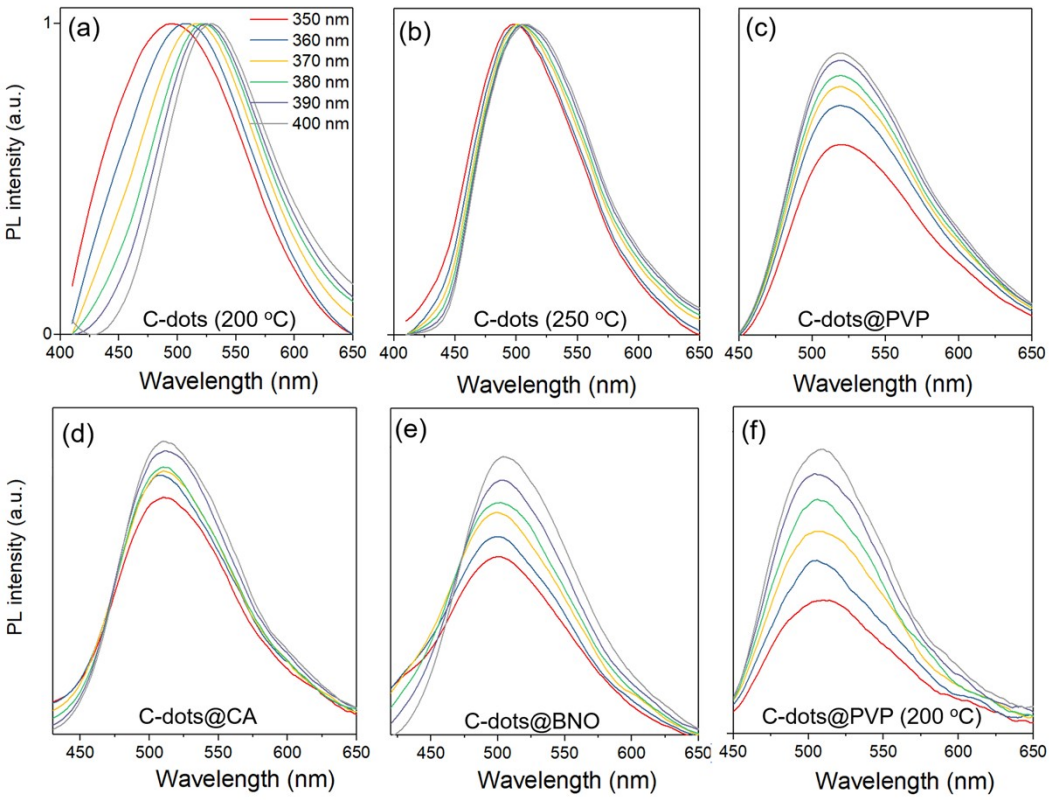

Fig. S7 PL spectra of the C-dots (200 ℃) (a), C-dots (250 ℃) (b), C-dots@PVP (c), C-dots@CA (d), C-dots@BNO (e), and C-dots@PVP(200 ℃) (f) excited from 350 nm to 400 nm.

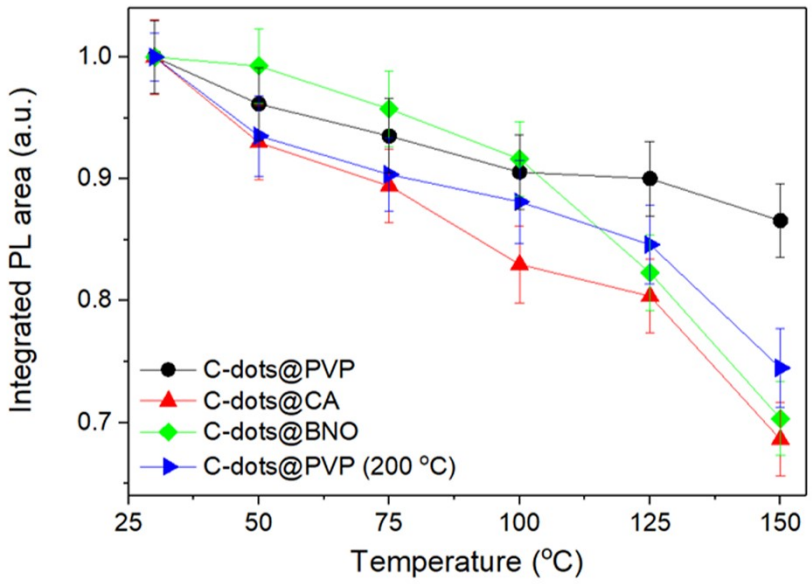

Figure S8 Integrated PL intensity of C-dots@PVP, C-dots@CA, C-dots@BNO and C-dots@PVP(200 ℃) at different temperature.

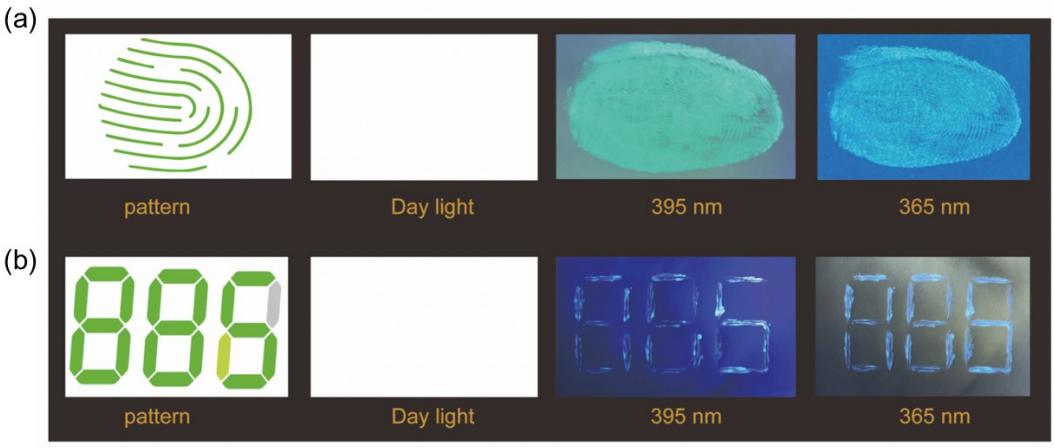

Figure S9 (a) Fingerprint at different excitation wavelengths; (b) Design and fluorescence images of the anti-counterfeiting patterns “888” at different excitation wavelengths, C-dots@PVP for the green part, C-dots@BNO for the light-yellow part, and PVP for the gray part.