

Electronic Supplementary Information

Yeast powder derived carbon quantum dots for dopamine detection and living cell imaging

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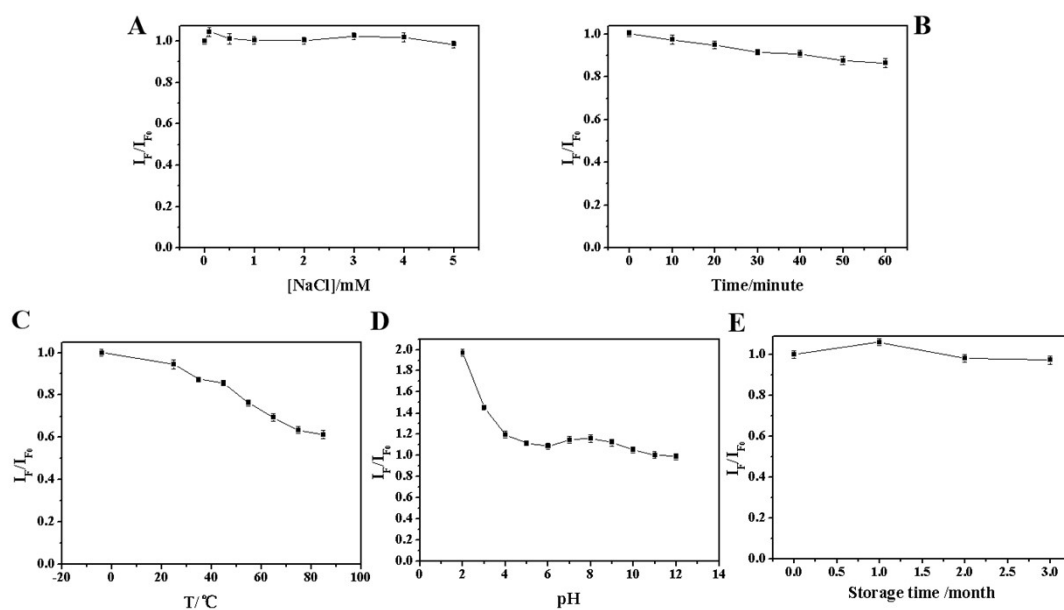


Fig. S1 The stability of as-synthesized Y-CDs. (A) Salt-tolerance of Y-CDs exposed to NaCl solutions with various concentrations. (B) Fluorescence intensity of the Y-CDs under the 365 nm light illumination. (C) Fluorescence intensity of Y-CDs incubated at different temperatures. (D) Fluorescent intensity of Y-CDs in Britton-Robinson (BR) buffer solutions with various pH values. (E) Fluorescence intensity of Y-CDs at different storage time.

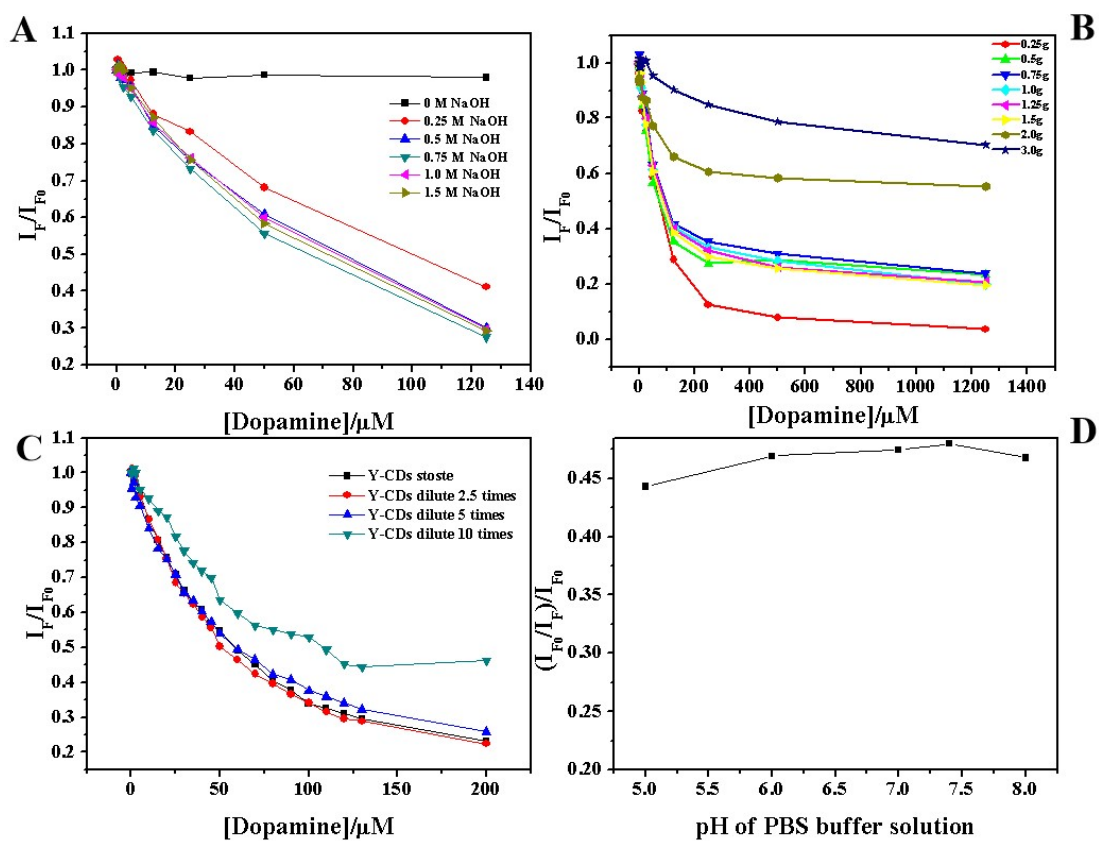


Fig. S2 Optimization of detection conditions. (A) Effect of NaOH concentration. (B) Effect of the mass of yeast powder. (C) Effect of probe content. (D) Effect of solution pH values.

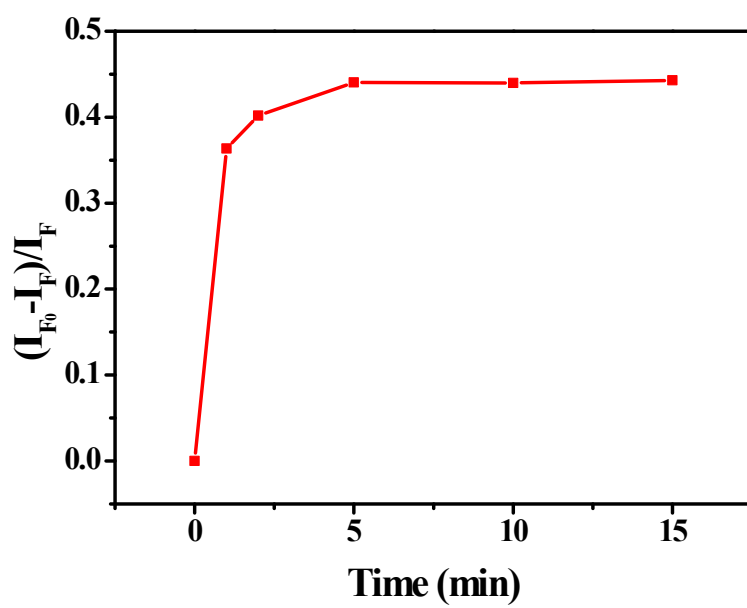


Fig. S3 Effect of incubation time of Y-CDs probe and DA with the concentration of 50 μ M.



Fig. S4 Photographs of the fluorescent patterns hand-drawn by Y-CDs as the fluorescent inks under UV light (up) and daylight (down). The bright blue fluorescent patterns were observed in filter paper under UV light excitation, while the patterned filter paper seemed no apparent change under daylight, indicating its great application potential in anti-counterfeiting, information encryption and storage.

Table S1 Comparison of different methods for DA detection.

Type of probe	Detection range	LOD	Ref
CdTe QDs@CQDs	10-220 μM	0.36 μM	1
CDs	2.0-40.0 μM	0.52 μM	2
ZnO@Cys	26.3-68.5 μM	0.791 μM	3
CQDs	20-100 mM	0.2 mM	4
r-QDs@SiO ₂ -PDA	10-80 μM	0.12 μM	5
N-CQDs	0.25-100 μM	0.0972 μM	6
GQDs	0.01-3 μM	0.0033 μM	7
S,N-CQDs	0-50 μM	0.082 μM	8
Y-CDs	0.05-100 μM	0.03 μM	This work

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