Electronic Supplementary Material (ESI) for Analyst.

Supporting Information

A Conjugated Carbon-Dots-Tyrosinase Bioprobe for Highly Selective and Sensitive Detection of Dopamine

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Supplementary Figures and Tables

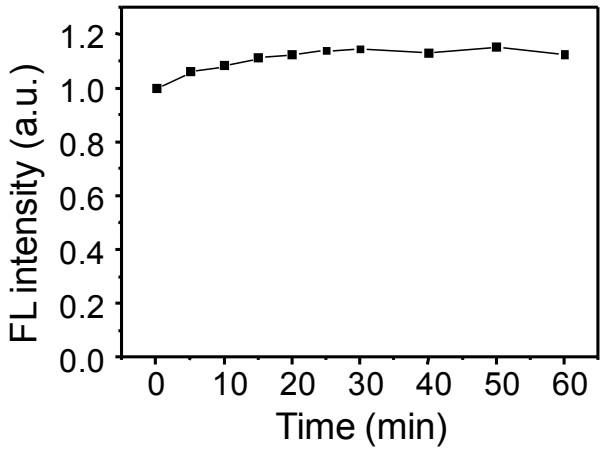

Fig. S1. Photostability of the CDs (normalized emission intensity at 465 nm) under continuous irradiation with a xenon lamp (150 W).

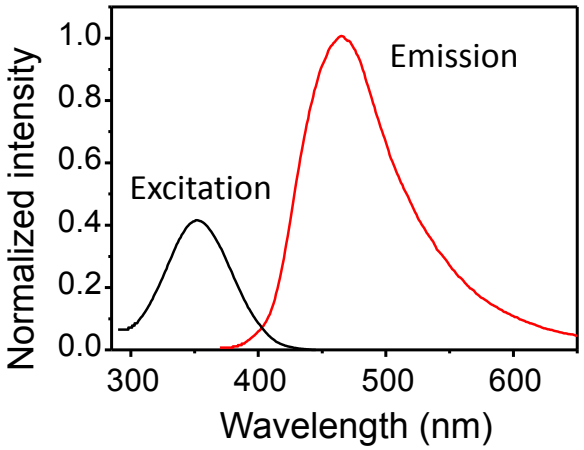

Fig. S2. The optimal fluorescence excitation (λ_{em} = 465, black line) and emission spectra (λ_{ex} = 350 nm, red line) of the bioprobe (i.e. CDs-TYR).

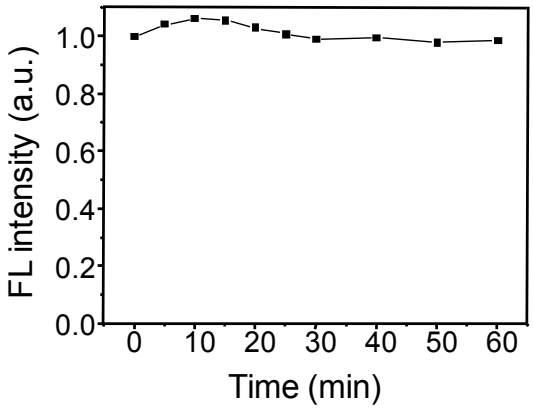

Fig. S3. Photostability of the bioprobe (normalized emission intensity at 465 nm) under continuous UV-light irradiation.

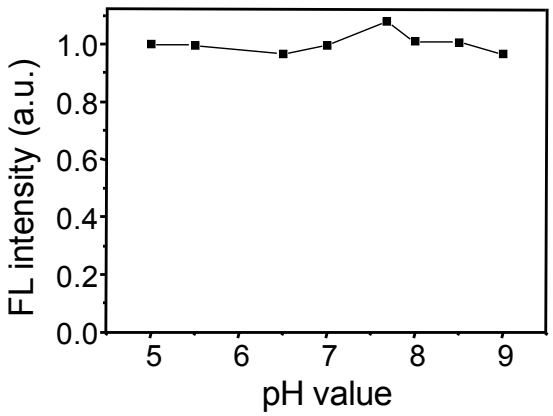

Fig. S4. Normalized fluorescence intensity (λ_{ex} = 350 nm) of the bioprobe (i.e. CDs-TYR) measured at 465 nm under different pH values.

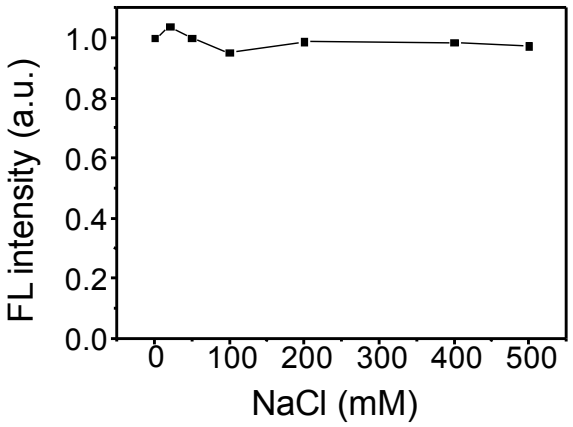

Fig. S5. Normalized fluorescence intensity (λ_{ex} = 350 nm) of the bioprobe measured at 465 nm under different various ionic strengths (NaCl).

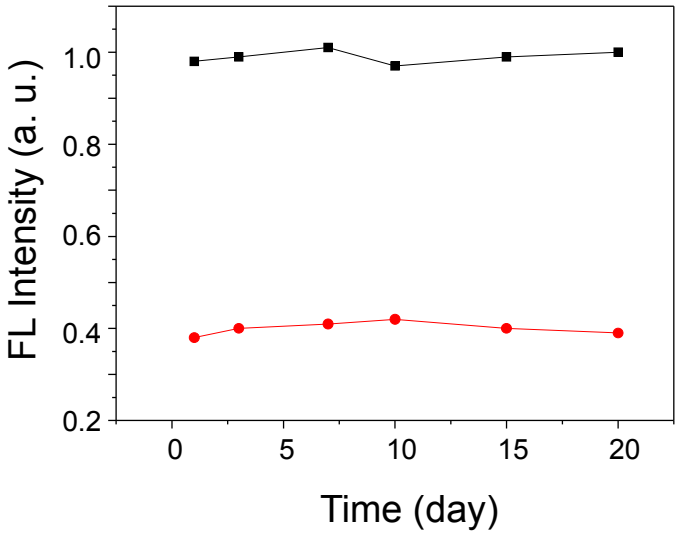

Fig. S6. Storage stability of the bioprobe (15 μg/mL) in the absence and presence of dopamine (10 μM).

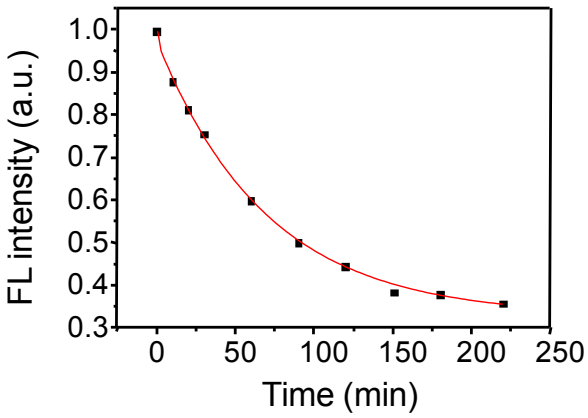

Fig. S7. Time course of the fluorescence quenching of the bioprobe (15 μg/mL) in the presence of dopamine (10 μM).

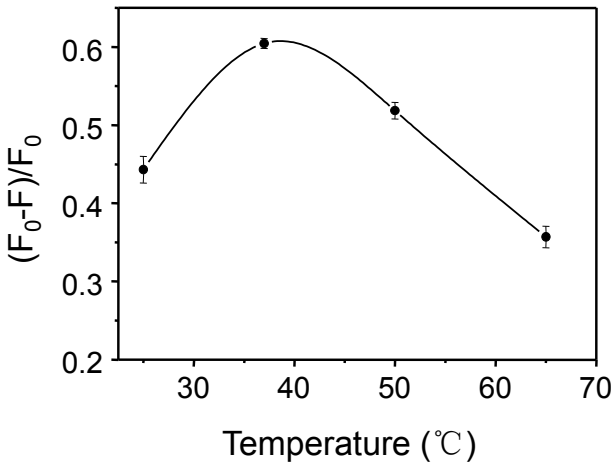

Fig. S8. The quenching efficiency of the bioprobe (15 μg/mL) upon the addition of dopamine (10 μM) under different temperatures.

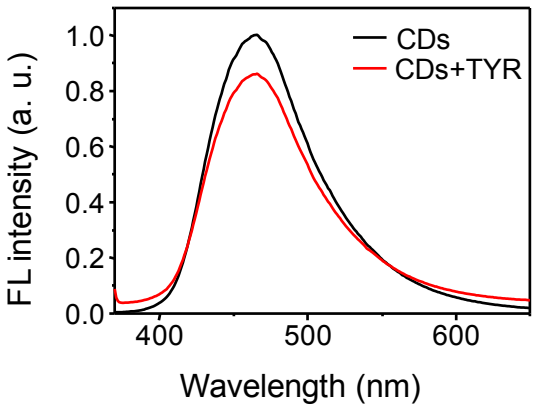

Fig. S9. Fluorescence emission spectra of CDs (10 μg) in the absence (black line) and presence (red line) of TYR (5 μg).

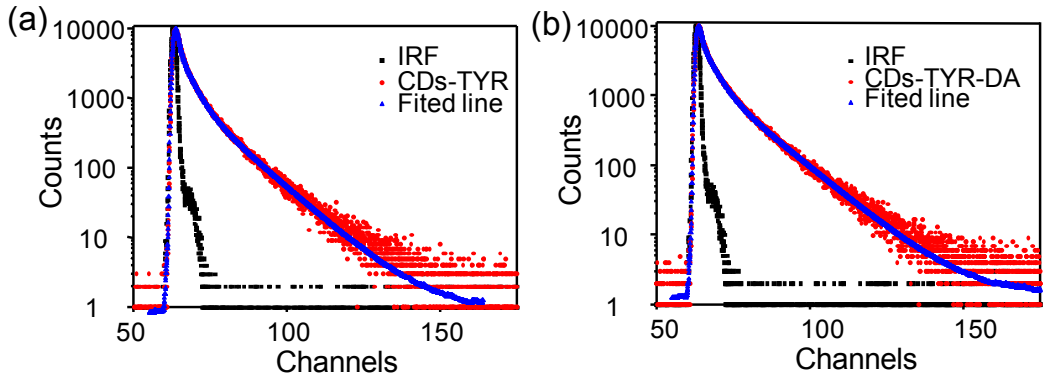

Fig. S10. Fluorescence decay profiles of the bioprobe (i.e. CDs-TYR, 15 μg/mL) at λ_{em}= 465 nm without (a), and with (b) the addition of dopamine (10 μM) under the excitation at 350 nm.

Table S1. Results of dopamine detection in human serum samples.

No	Added (μM)	Found (μM)	Recovery (%)	RSD (n=3)
1	2.0	1.89	94.5	6.5%
2	3.0	3.10	103.3	7.0%
3	4.0	3.65	91.3	1.5%
4	5.0	5.20	104.0	2.4%