Electronic Supplementary Information

A paper-based ratiometric fluorescence sensor based on carbon dots modified with Eu^{3+} for selective detection of tetracycline in seafood aquaculture water

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Contents:

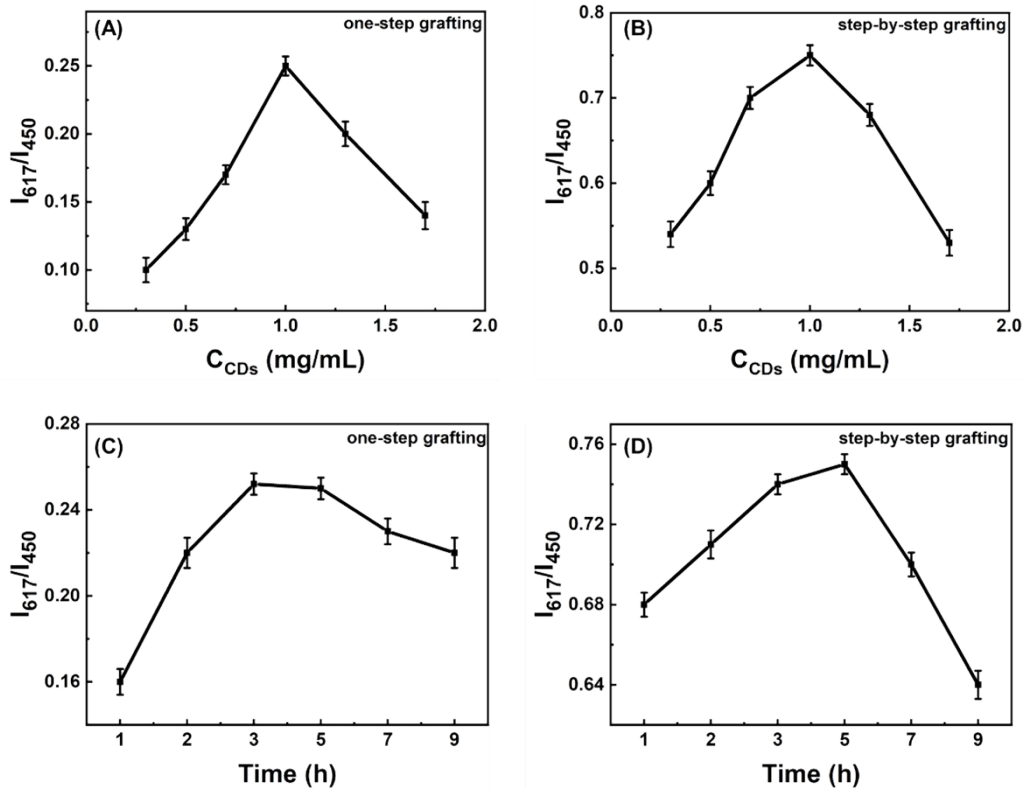

Fig. S1 Optimization of experimental conditions: Effect of CDs with different concentrations on (A) one-step grafting CDs-Eu@paper and (B) step-by-step grafting CDs@paper-Eu; Effect of reaction time of CDs and Eu^{3+} on (C) one-step grafting CDs-Eu@paper and (D) step-by-step grafting CDs@paper-Eu.

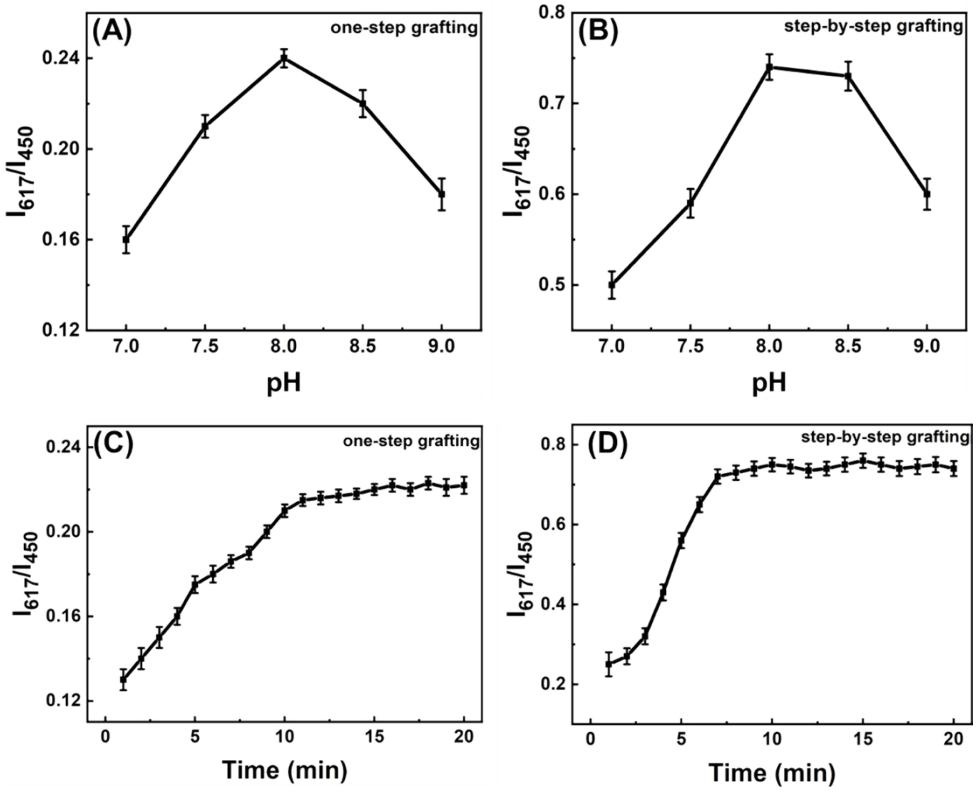

Fig. S2 Optimization of experimental conditions: Effect of pH on (A) one-step grafting CDs-Eu@paper and (B) step-by-step grafting CDs@paper-Eu; Effect of reaction time on (C) one-step grafting CDs-Eu@paper and (D) step-by-step grafting CDs@paper-Eu.

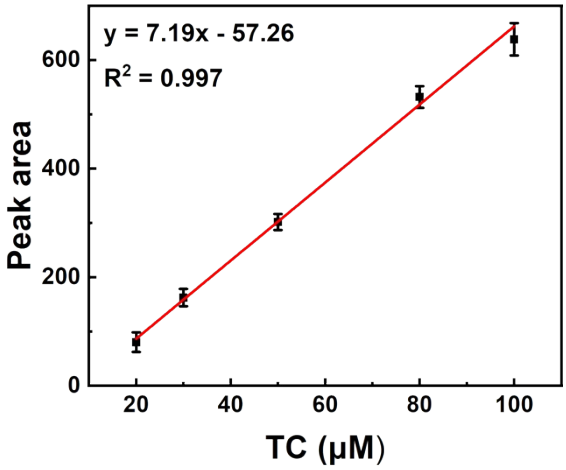

Fig. S3 Analysis of TC standard samples by HPLC.

Table S2 Determination of TC on CDs-Eu@paper in aquaculture water.

Sample	Blank (μM)	Added TC (μM)	Found TC (μM)	Recovery (%)	RSD (%)	HPLC
Aquaculture water (South America white shrimp)	0	20	22.6	102.7	3.62	23.04
		30	33.7	112.3	6.37	32.01
		50	47.4	94.8	5.48	52.43
Aquaculture water (Sea cucumbers)	0	20	22.3	111.5	6.85	22.8
		30	32.5	108.3	7.52	30.8
		50	52.5	105	4.27	48.9

Table S3 Determination of TC on CDs@paper-Eu in aquaculture water.

Sample	Blank (μM)	Added TC (μM)	Found TC (μM)	Recovery (%)	RSD (%)	HPLC
Aquaculture water (South America white shrimp)	0	20	22.4	112	7.89	23.04
		30	31.7	105.6	4.63	32.01
		50	48.4	96.8	3.24	52.43
Aquaculture water (Sea cucumbers)	0	20	23.2	116	5.37	22.8
		30	31.6	105.3	3.49	30.8
		50	51.2	102.4	2.84	48.9