

Orange emissive N,S-codoped carbon dots for label-free and sensitive fluorescence assay of vitamin B₁₂

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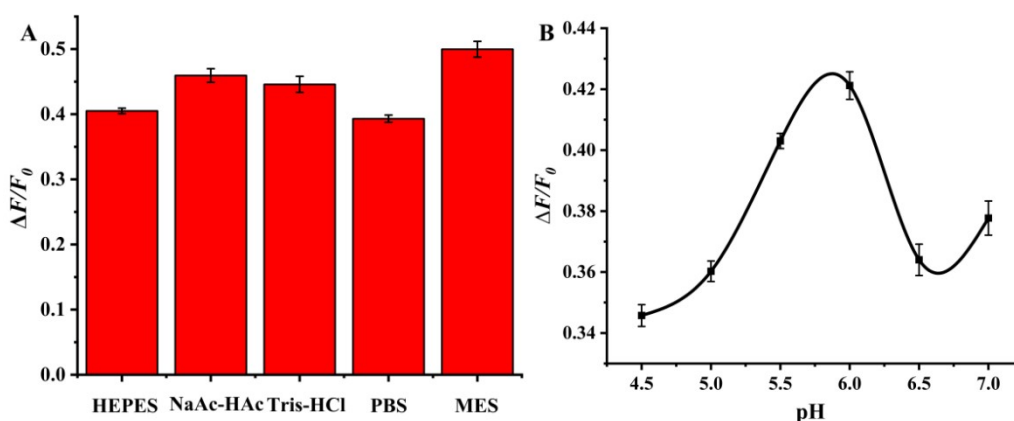


Fig. S1 Effect of types of buffers (A) and pH (B)

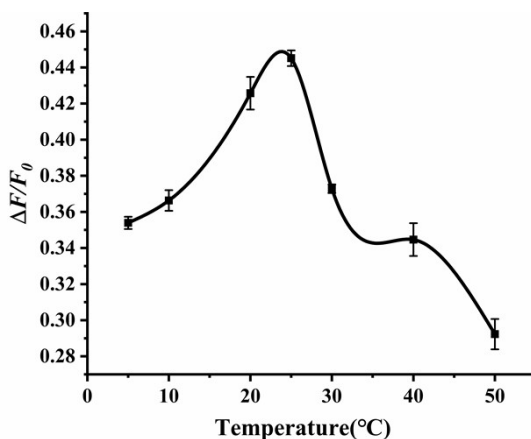


Fig. S2 The influence of temperature to the detection system

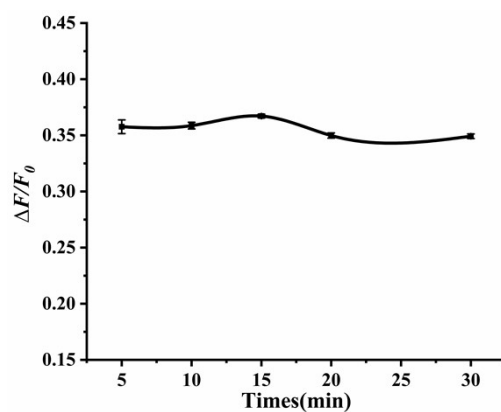


Fig. S3 effect of time on the detection system

Table S1 Comparison of other reported CDs-based sensors for VB₁₂

Materials ^a	Color	Linear range	LOD	Reference
BCQDs	blue	0.5 - 3 μ M	81 nM	[1]
CDs	blue	0 - 60 μ M	0.1 μ M	[2]
s-N-CDs	blue	10 - 100 μ M	2.19 μ M	[3]
PN-CQDs	blue	2.0 - 31 μ M	3.0 nM	[4]
O-CDs	orange	1 - 65 μ M, 70 - 140 μ M	0.62 μ M	[5]
N,S-CDs	orange	0.25 - 20 μ M	77.5 nM	This work

^a BCQDs = biomimetic carbon quantum dots; CDs = carbon dots; s-N-CDs = saccharomyces-derived N-doped carbon dots; PN-CQDs = Phosphorus and nitrogen dually-doped carbon quantum dots; O-CDs = orange emission fluorescent multifunctional carbon dots.

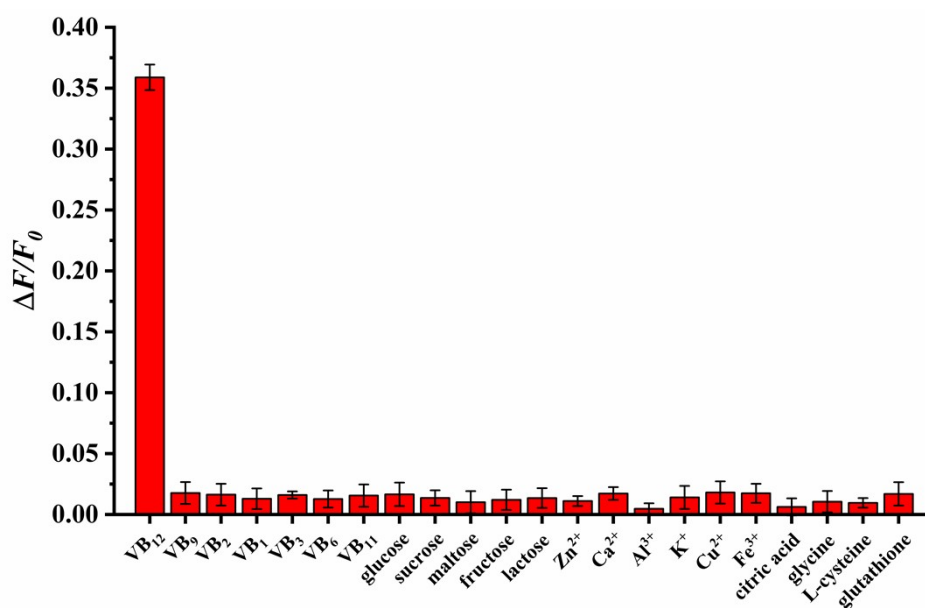


Fig. S4 The selectivity of N,S-CDs toward VB₁₂

Reference

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