

Supporting Information

Fig. S1 The FT-IR spectra of the uncapped CdS precipitation (curve a) and Lys-CdS QDs (curve b).

Fig. S2 Fluorescence intensity of Lys-CdS QDs assay system after the addition of 2.5 $\mu\text{mol/L}$ TNP in different incubation time (10 mmol/L pH 9.0 Tris-HCl).

Fig. S3 Structure, full name and abbreviation of the analytes

Table S1 Comparison of different methods for the determination of TNP

Method	Linear range ($\mu\text{mol L}^{-1}$)	LOD ($\mu\text{mol L}^{-1}$)	Ref
Glucopyranosyl-1,4-dihydropyridine	0.00-45.00	0.94	33
g-C ₃ N ₄ nanosheets	0.00-25.60	0.20	34
Molybdenum Disulfide Quantum Dots	0.01-36.50	0.95	12
Nitrogen doped graphene quantum dots	1.00-60.00	0.30	35
A pyridine-based small-molecule receptor	0.00-2.50	1.75	36
Lys-CdS QDs	0.50-15.00	0.10	this work