Electronic Supplementary Material (ESI) for Analytical Methods.

Supplementary data

Table S1.K_{sv} values for different temperatures.

Temperature (^{0}C)	Stern–Volmer equation	K_{SV} value (μM^{-1})	R^2
25	$F_0/F = 1.0398+ 0.043[C]$	0.043	0.9938
30	$F_0/F = 1.0514+ 0.055[C]$	0.055	0.9936
37	$F_0/F = 1.0881+ 0.061[C]$	0.061	0.9916

Table S2. Determination results of ethion in real water samples (n = 3).

Sample	Added (μgL^{-1})	Found (μgL^{-1})	Recovery (%, n = 3)	RSD (%, n = 3)
Tap water	50	48.5	97	3.4
	100	94.6	94	1.9
River water	50	46.7	93	3.1
	100	93.6	93	4.4

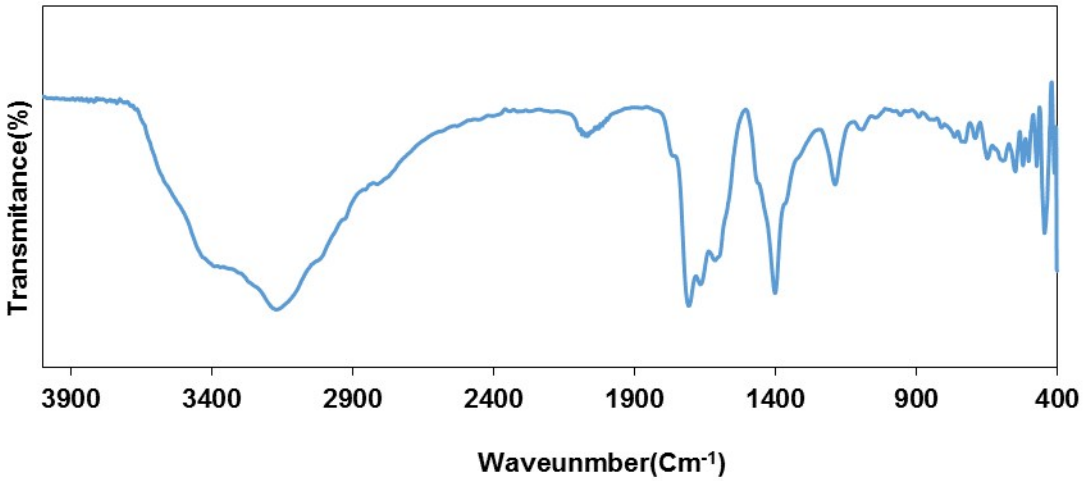

Fig. S1. FTIR spectrum of N,S-GQDs

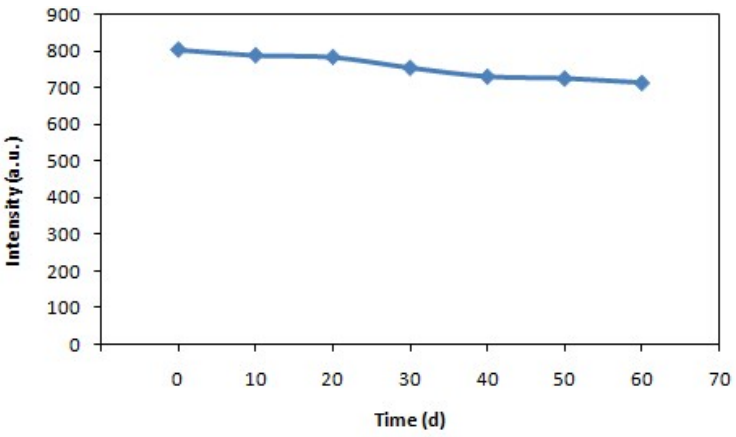

Fig. S2. Stability of fluorescence response of the N,S-GQDs solution with time

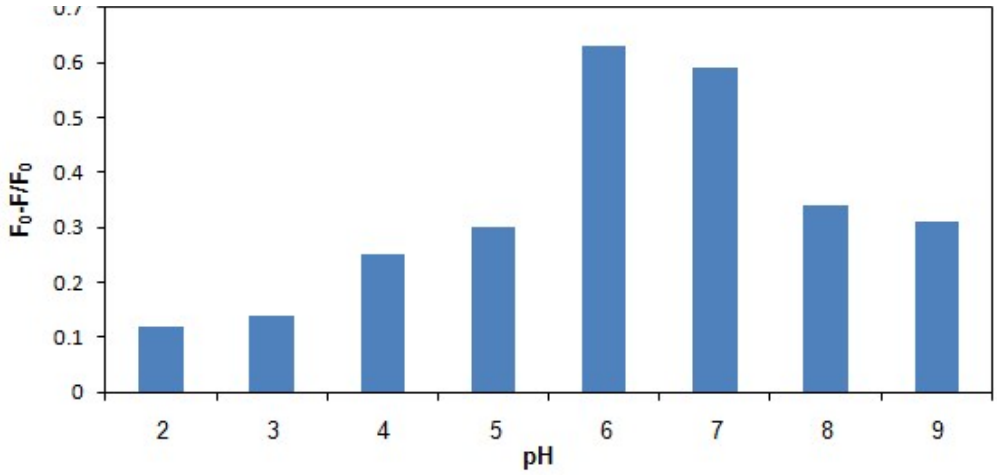

Fig. S3. Effect of pH on the quenching efficiency of Hg^{2+} ion.

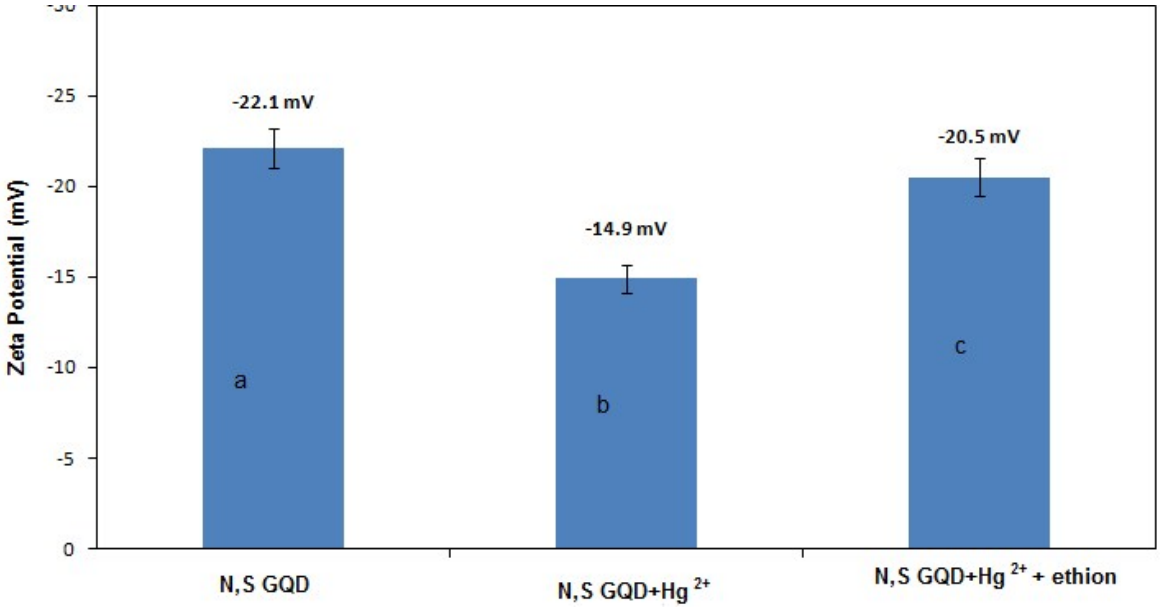

Fig. S4. Zeta potential of N,S GQDs (a), in the presence of Hg^{2+} (b), and in the presence of Hg^{2+} and ethion (c).

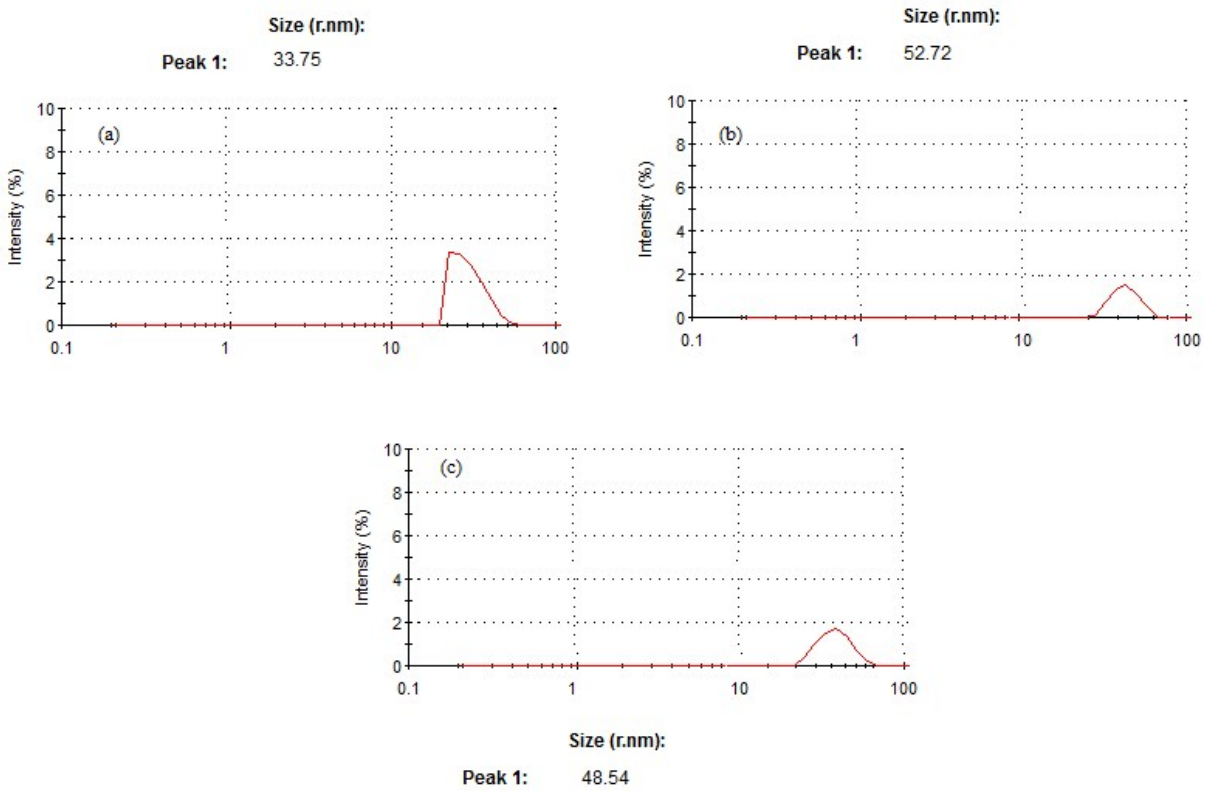

Fig. S5. The hydrodynamic size of N,S GQDs (a), in the presence of Hg^{2+} (b), and in the presence of Hg^{2+} and ethion (c).

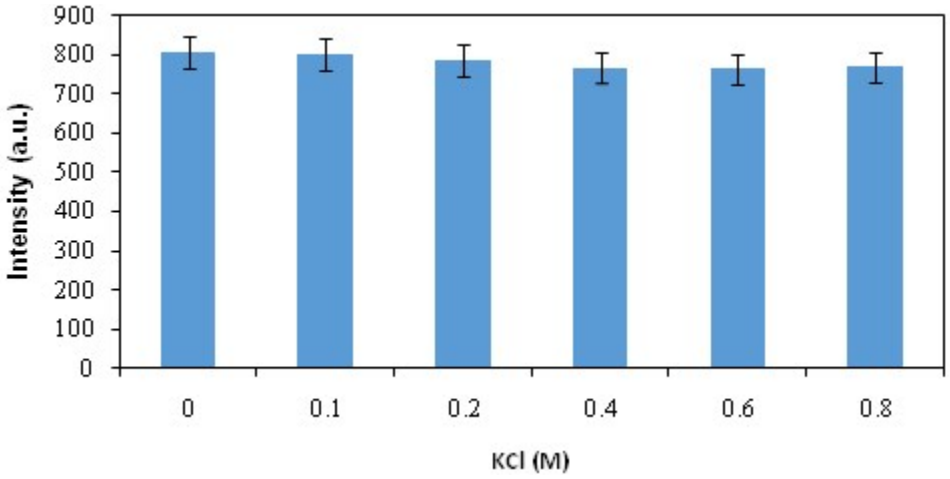

Fig. S6. Effect of kCl concentration on the fluorescence response N,S/GQDs