Supplementary data

A bis(rhodamine)-Based Highly Sensitive and Selective Fluorescent Chemosensor for Hg(II) in Aqueous Media

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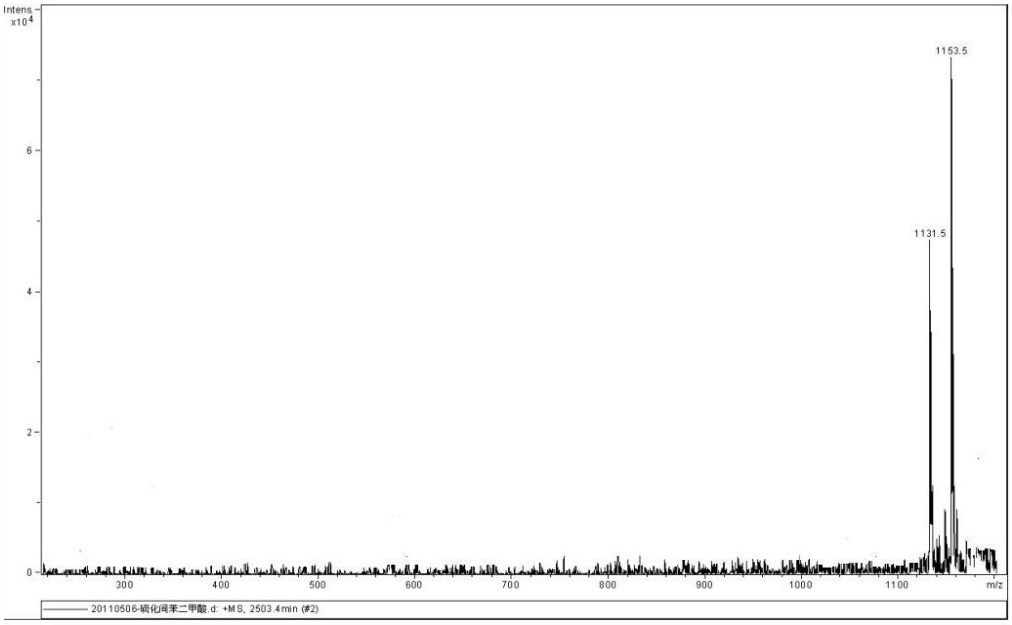

Fig. S1. ESI-Mass spectra of **3**.

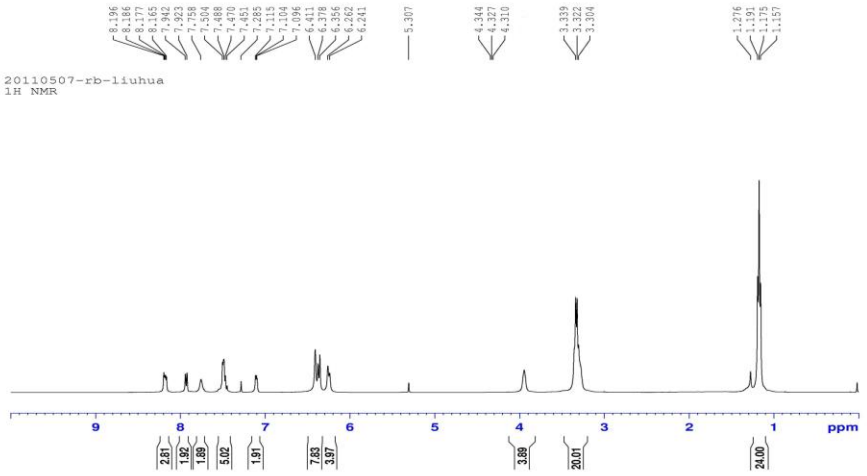

Fig. S2. ^{1}H NMR spectrum of **3** in $CDCl_3$.

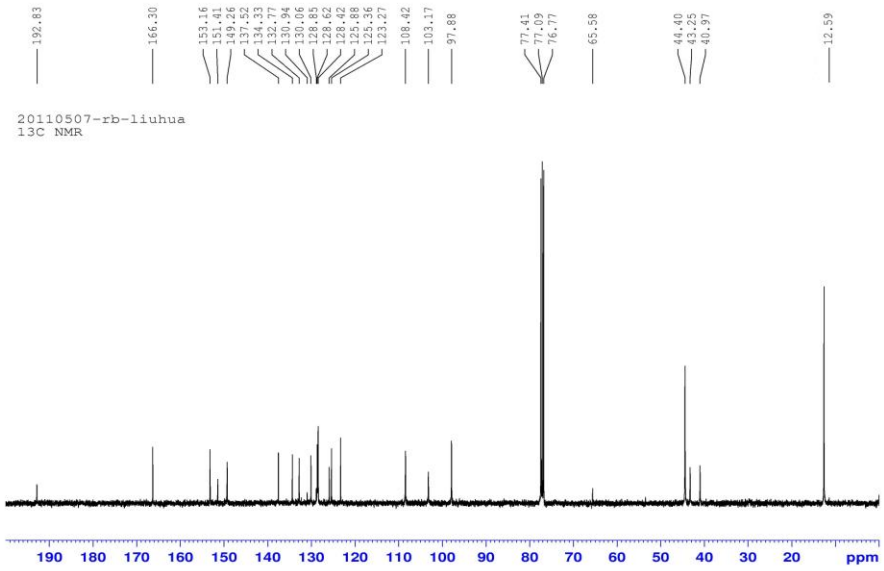

Fig. S3 . ^{13}C NMR spectrum of **3** in $CDCl_3$.

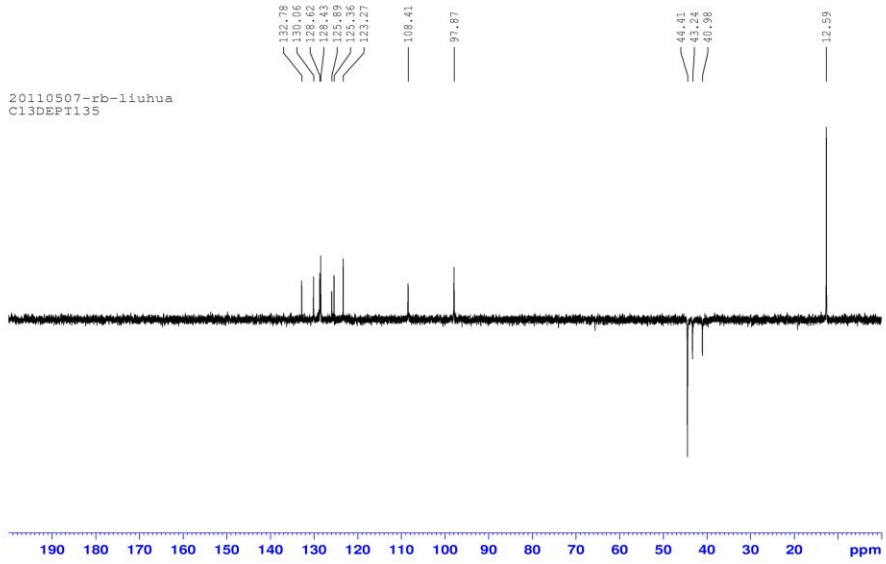

Fig. S4. ^{13}C DEPT NMR spectrum of **3** in $CDCl_3$.

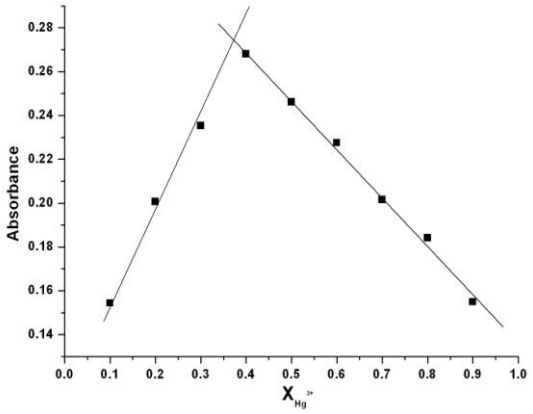

Fig. S5 Plots according to the method for continuous variations, indicating the 1:2 stoichiometry for 3 –Hg^{2+}(the total concentration of 3 and Hg^{2+} is 100 μm). $X_{Hg2+}=C_{Hg2+}/C_{Hg2+}+C_3$

Fig.S6 Color change of the ethanol/water (4:1) solution of **3 (**10μm**)** in the presence of metal ions (20 eq)

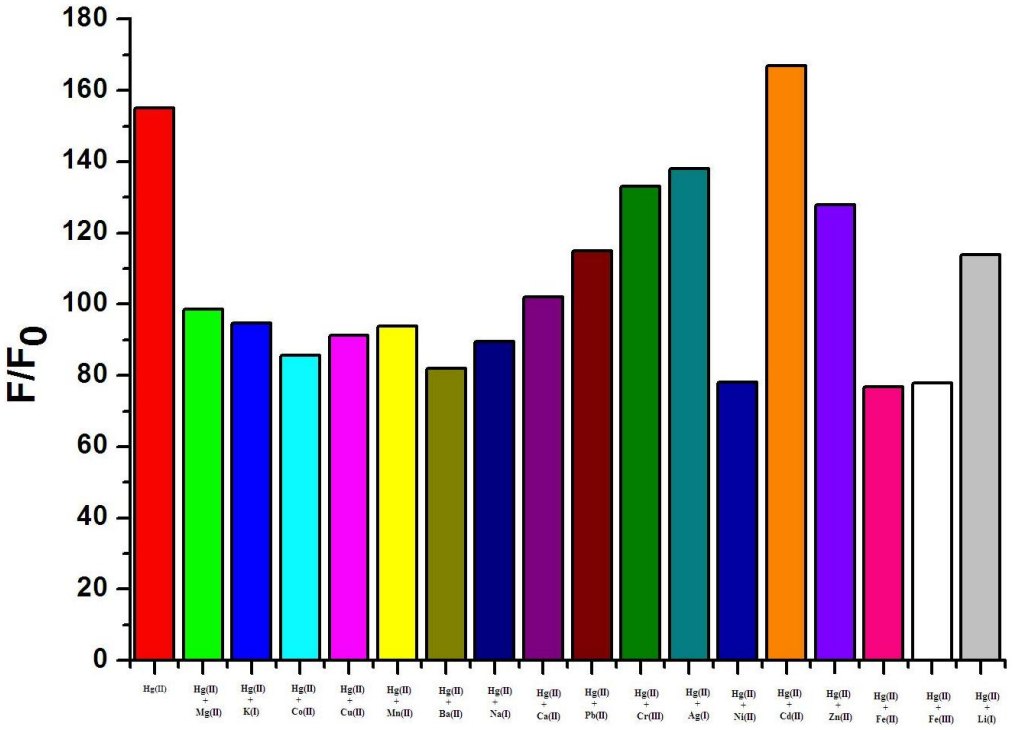

Fig. S7 Fluorescence response of **3** (10 μM) to 10 eq of Hg^{2+} in EtOH–water solution (4/1, v/v) containing 10 eq of various metal ions. λex = 530 nm, λem = 582 nm.

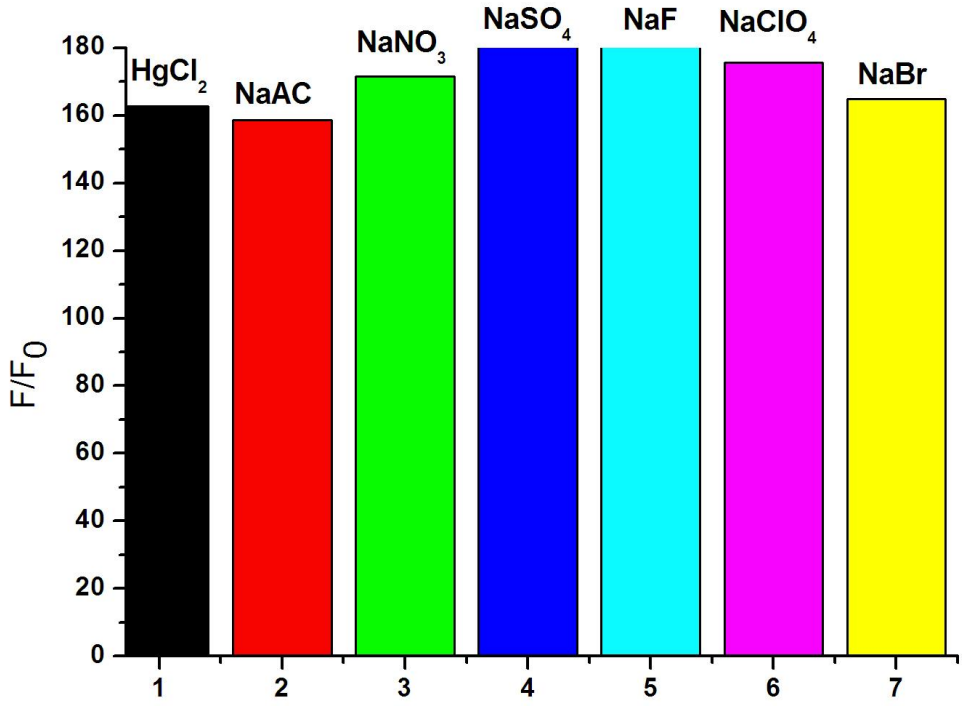

Fig. S8 Anion-dependent enhancement in the fluorescent emission spectrum of 3 (10μM) for different anions (10 eq.) in water–ethanol solution (water/ethanol=1/4, v/v). 1: 3+Hg; 2-7: 3+Hg+different anions

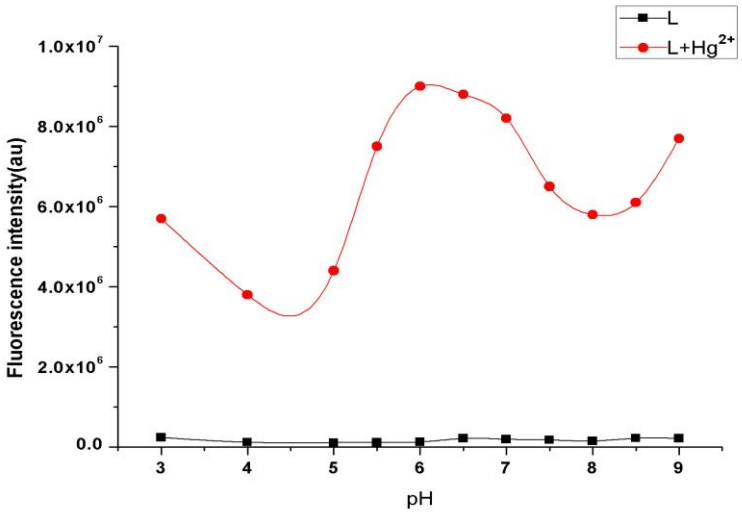

Fig. S9 Fluorescence spectra （black）of compound 3(10μM) in ethanol Tris-HCl buffer (1 : 1,**v/v**) solution various pH values（3—9）em:580 ex:560 slit:5; Fluorescence spectra（red） of 3 (10μM) and 1eq Hg^{2+} in ethanol Tris-HCl buffer (1 : 1,v/v) solution various pH values（3—9） em:580 ex:560 slit:5

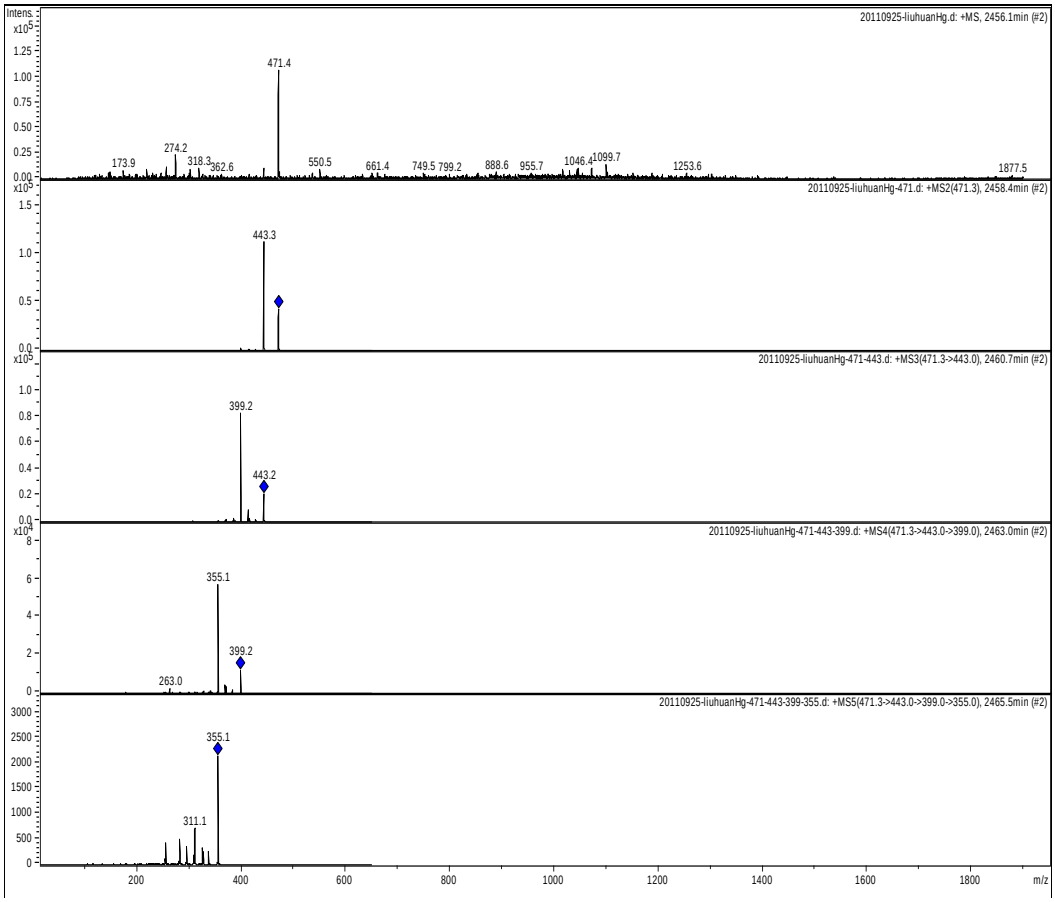

Fig. S10. ESI-MS^n spectrum of **3+Hg^{2+}**.

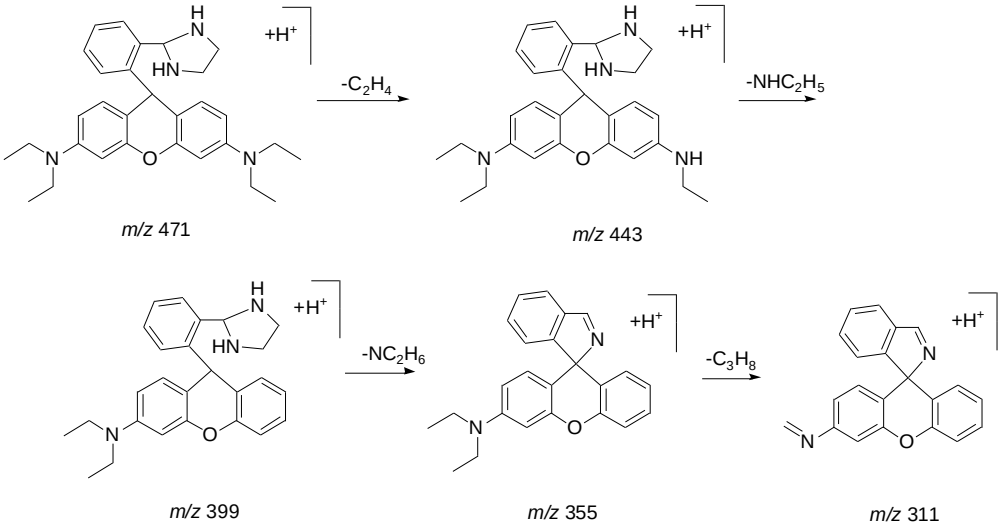

Fig. S11. Fragmentation pathway of the compound of **3**+**Hg**$^{2+}$.