

A diarylethene-based “on-off-on” fluorescence sensor for the sequential recognition of Mercury and Cysteine

Gang Li, Lele Ma, Gang Liu*, Congbin Fan, Shouzhi Pu*

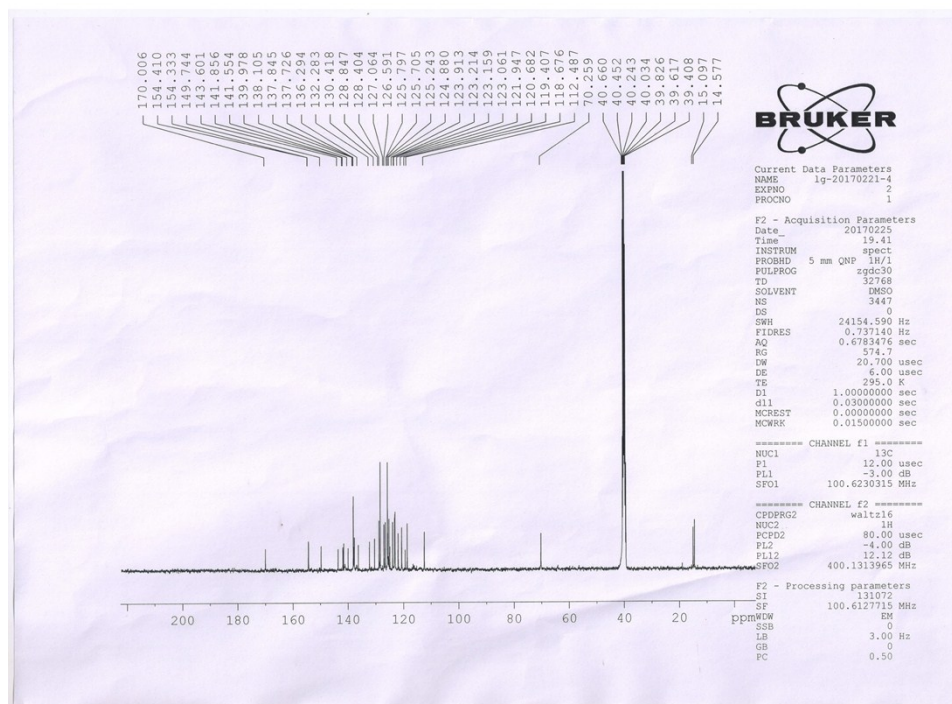
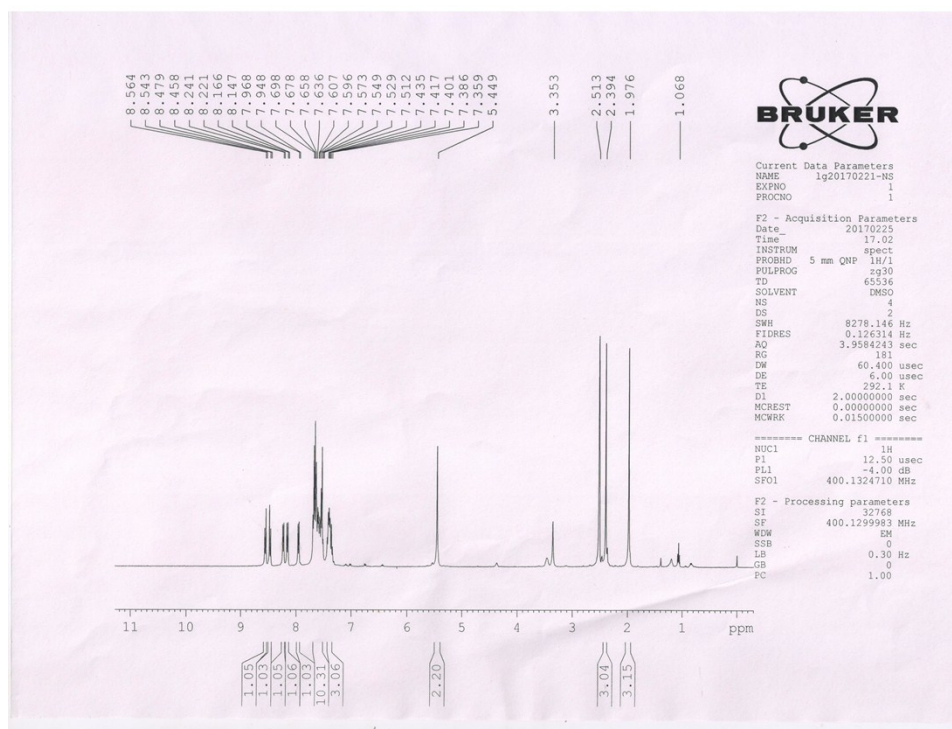
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Nanchang 330013, PR China*

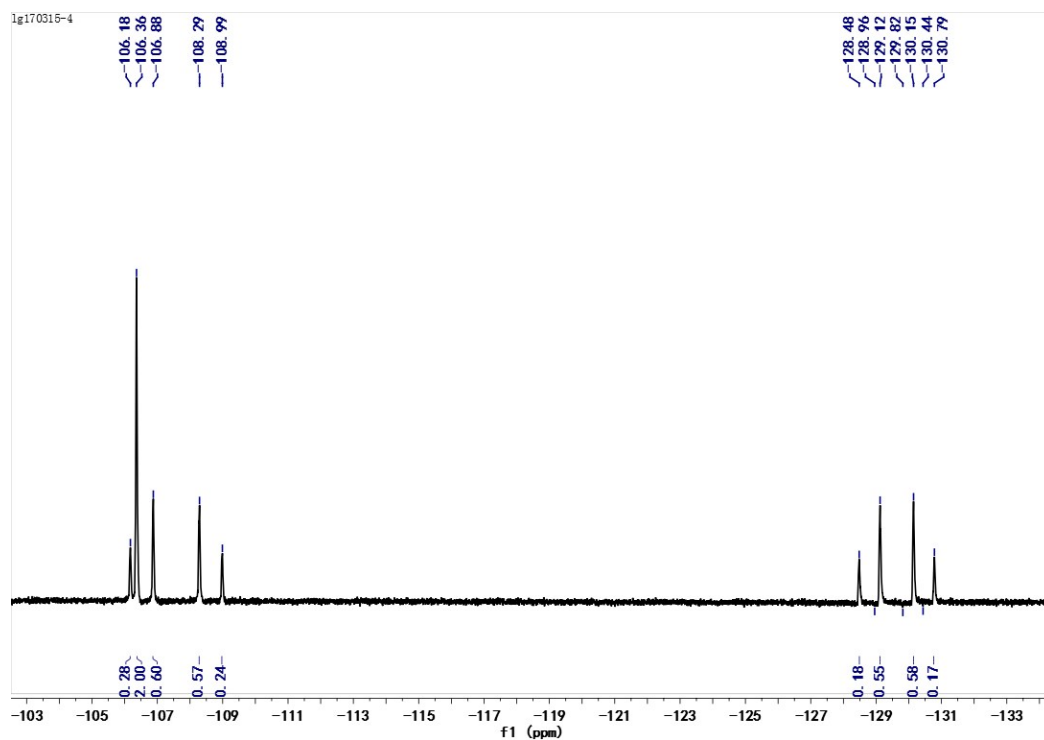
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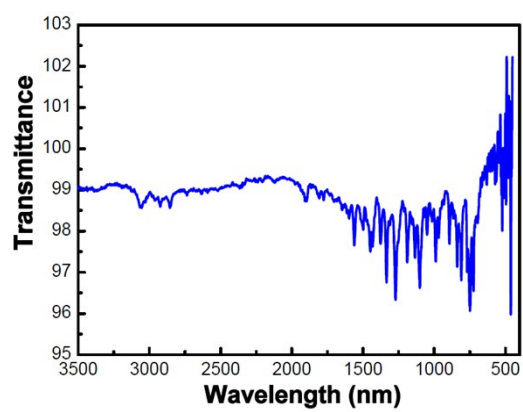
1. ^1H NMR, ^{13}C NMR and ^{19}F NMR copies of **10**
2. The IR spectra of **10**
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4. The binding constant and the limit of detection (LOD) of **10** with Hg^{2+}
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9. The ESI-MS spectra of **10** and **10'**
10. The binding constant and the limit of detection (LOD) of **10'** with Cys

1. ^1H NMR, ^{13}C NMR and ^{19}F NMR copies of **10**

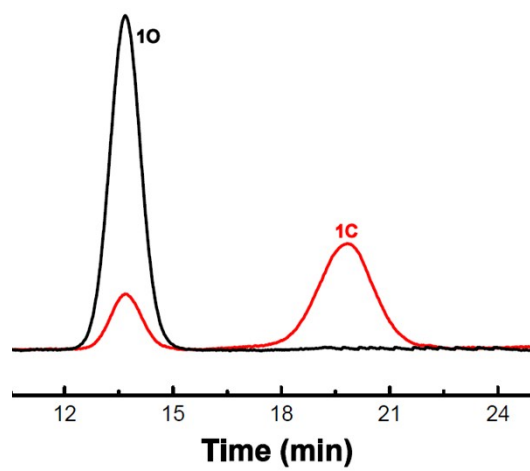




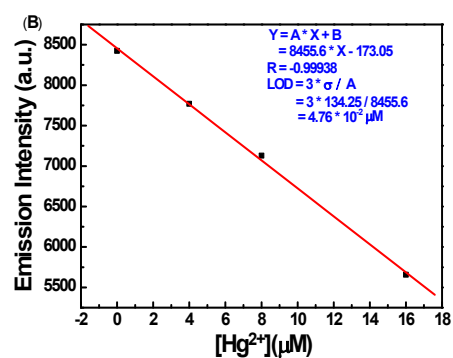
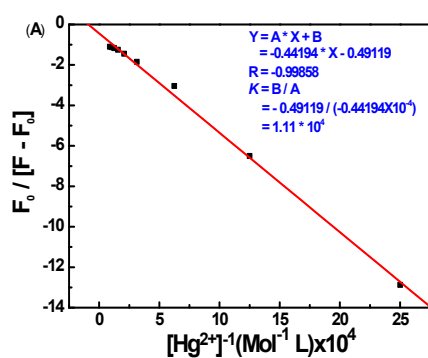
2. The FTIR spectra of **10**



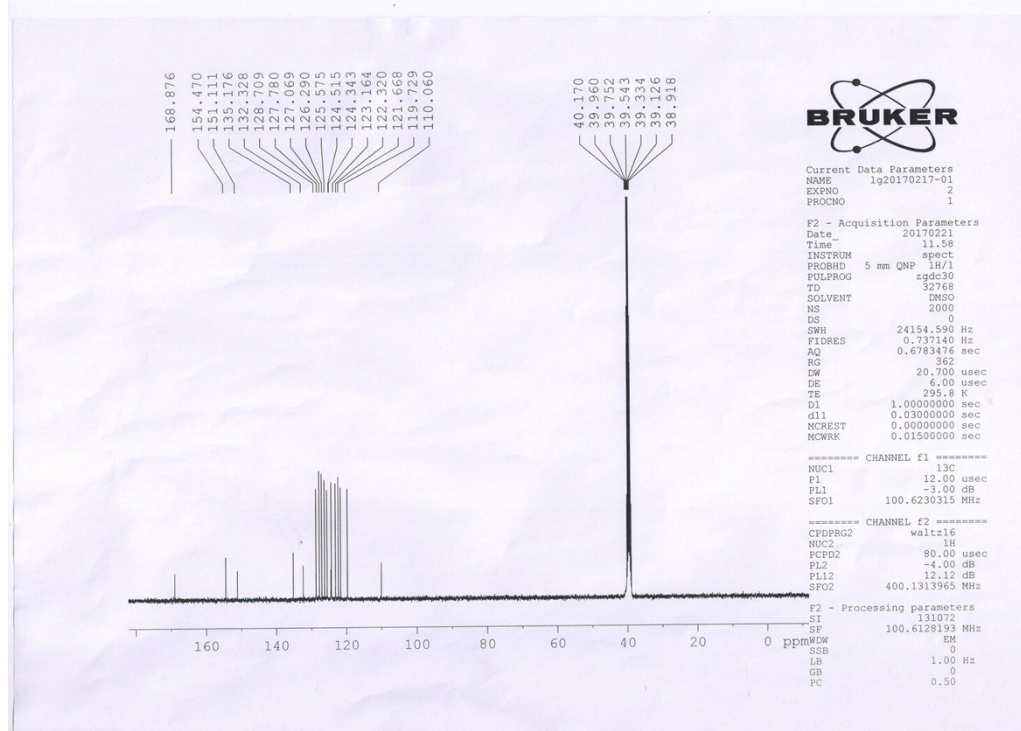
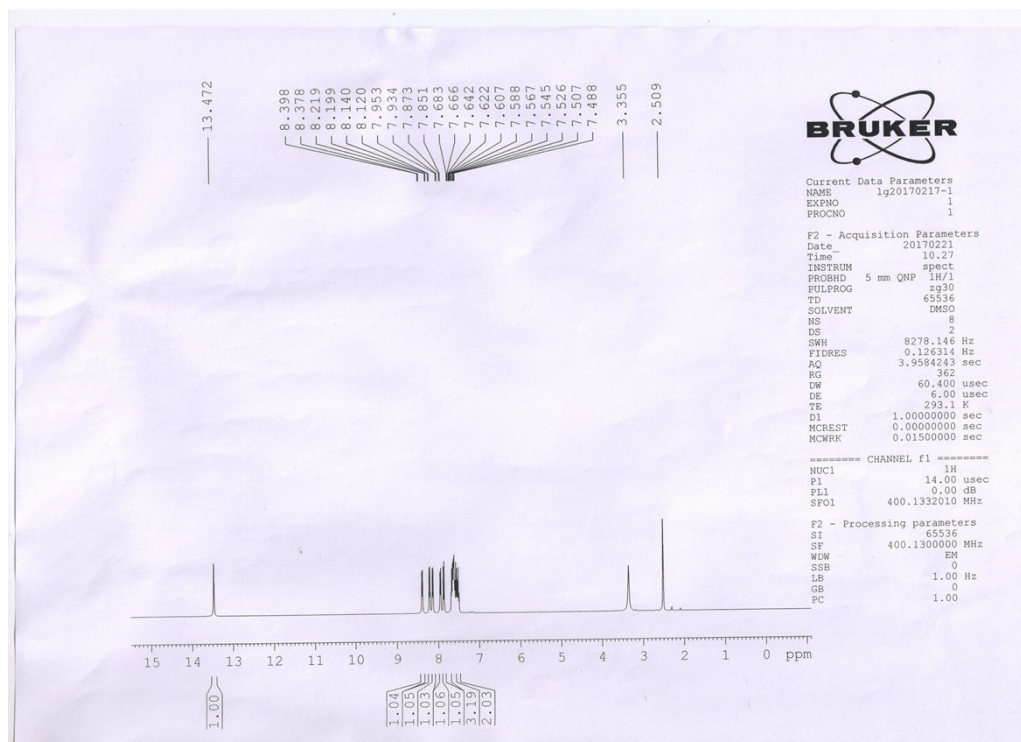
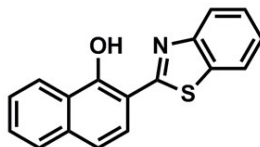
3. The photoconversion ratios of diarylethene **1**



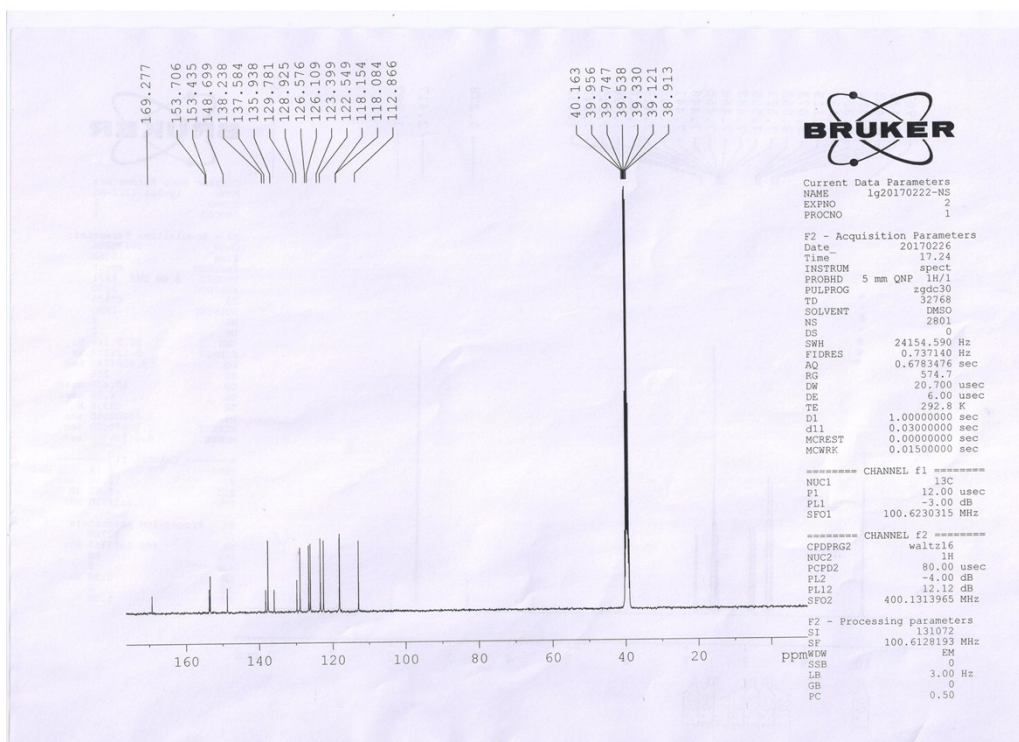
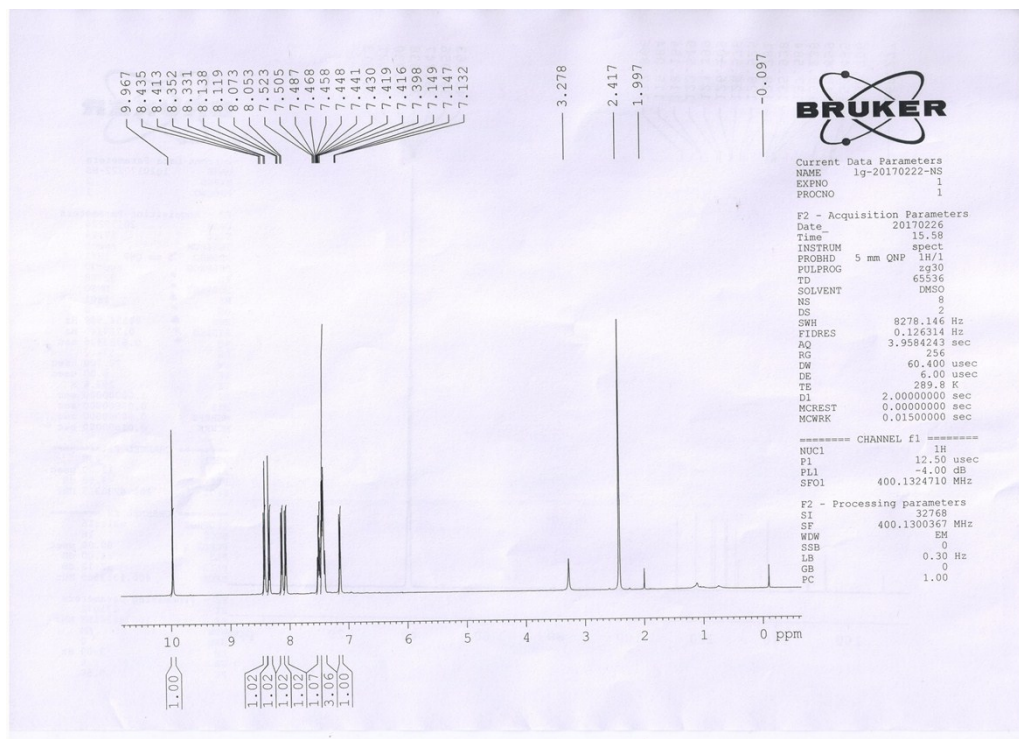
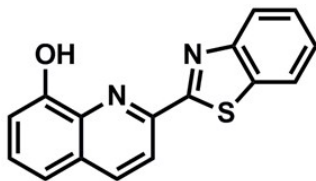
4. The binding constant and the limit of detection (LOD) of **10** with Hg^{2+}



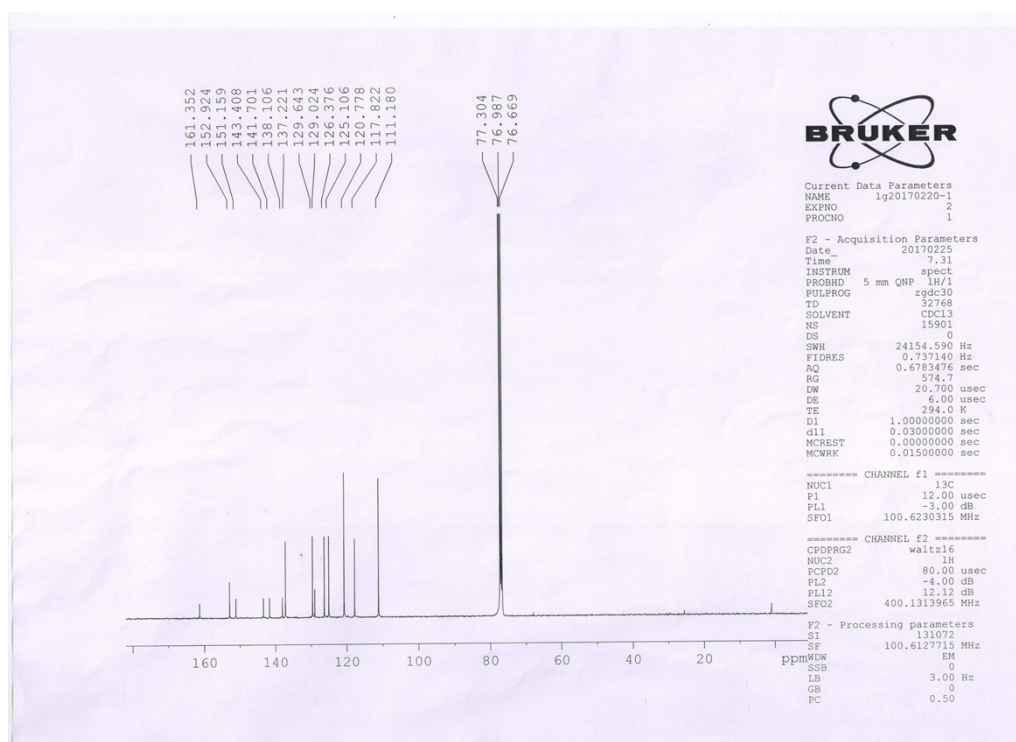
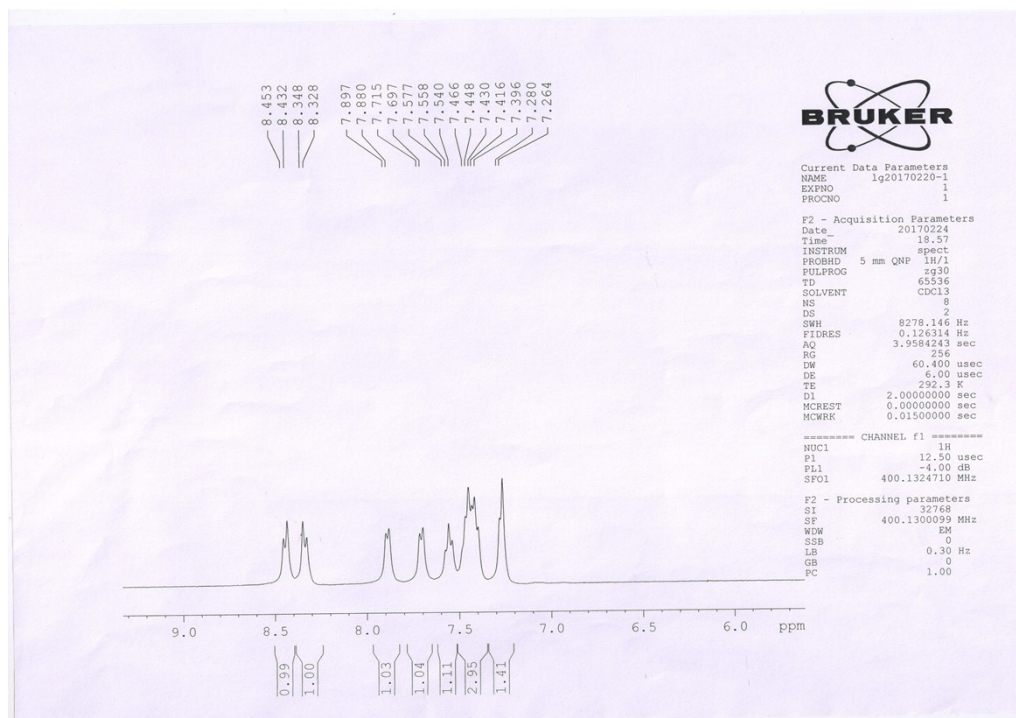
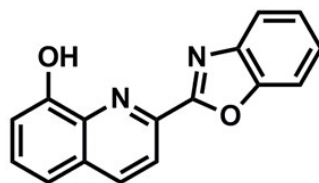
5. ^1H NMR and ^{13}C NMR copies of **NBTZ**, **QBOZ** and **QBTZ**



The ^1H NMR, ^{13}C NMR of naphthol-benzothiazole moiety(**NBTZ**)

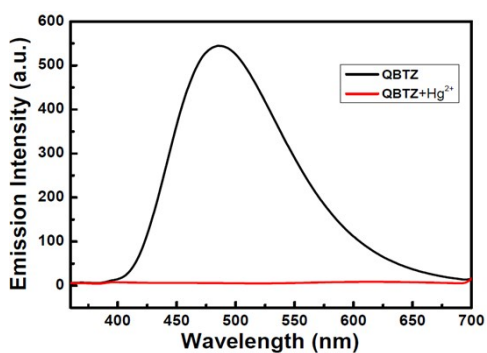
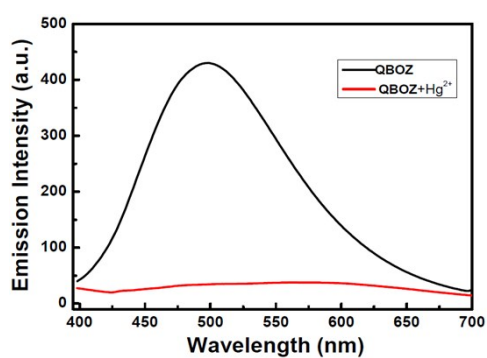
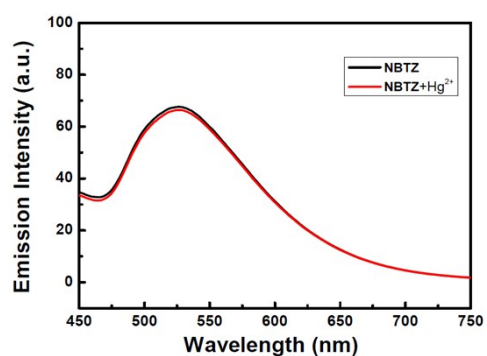
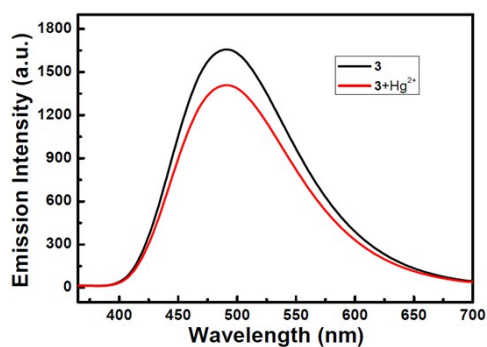


The ^1H NMR, ^{13}C NMR of quinolinol-benzothiazole(QBTZ)

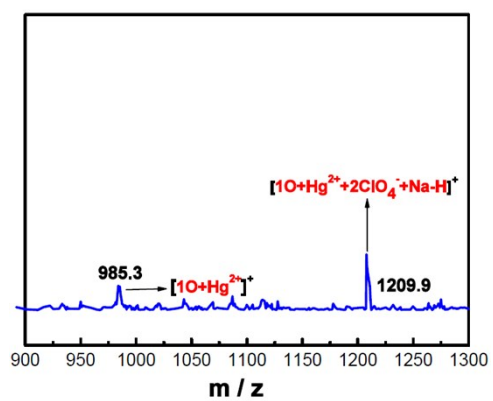
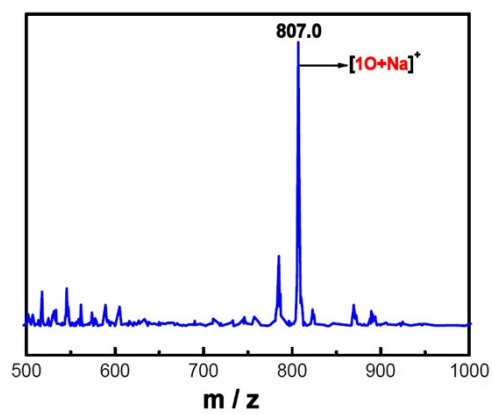


The ^1H NMR, ^{13}C NMR of quinolinol-benzoxazole moiety (QBOZ)

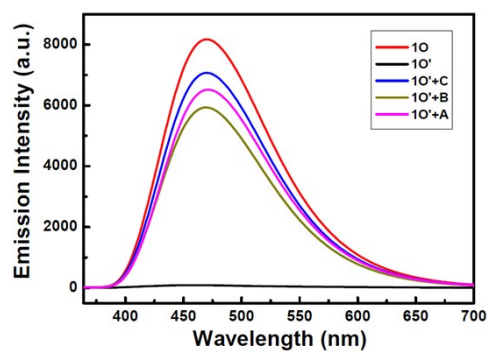
6. The fluorescence spectrum of the precursor **3**, **NBTZ**, **QBOZ** and **QBTZ** effected by Hg^{2+}



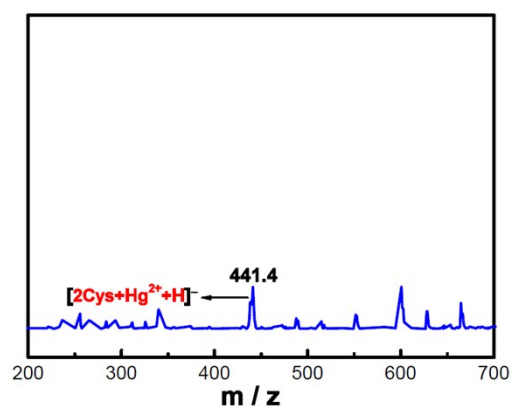
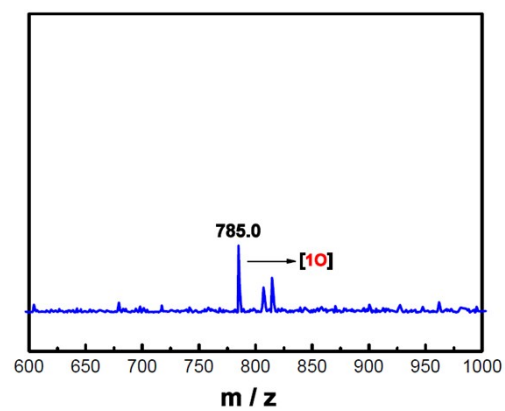
7. The ESI-MS spectra of **1O** and **1O'**



8. The fluorescence spectrum of the other organic thiol compounds effected by **10'** (Ethylene Mercaptan(A), 2-Aminothiophenol (B) and 2-Aminoethanethiol (C))



9. The ESI-MS spectra of **10'** + Cys



10. The binding constant and the limit of detection (LOD) of **10'** with Cys

