Electronic Supporting Information for

High selectivity and sensitivity fluorescent sensing melamine based on the combination of fluorescent chemosensor with molecularly imprinted polymers

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The adsorption capacity Q (μmol/g) was calculated according to the following formula:

$$Q = \frac{(C_0 - C_e)V}{m} \quad (1)$$

Where, C_0 (mmol/L) and C_e (mmol/L) were the initial and final concentrations，respectively, V (mL) was the total volume of the solution, m (mg) was the mass of MIPs or NIPs, and Q (μmol/g) was the mass of target adsorbed through per gram of polymer.

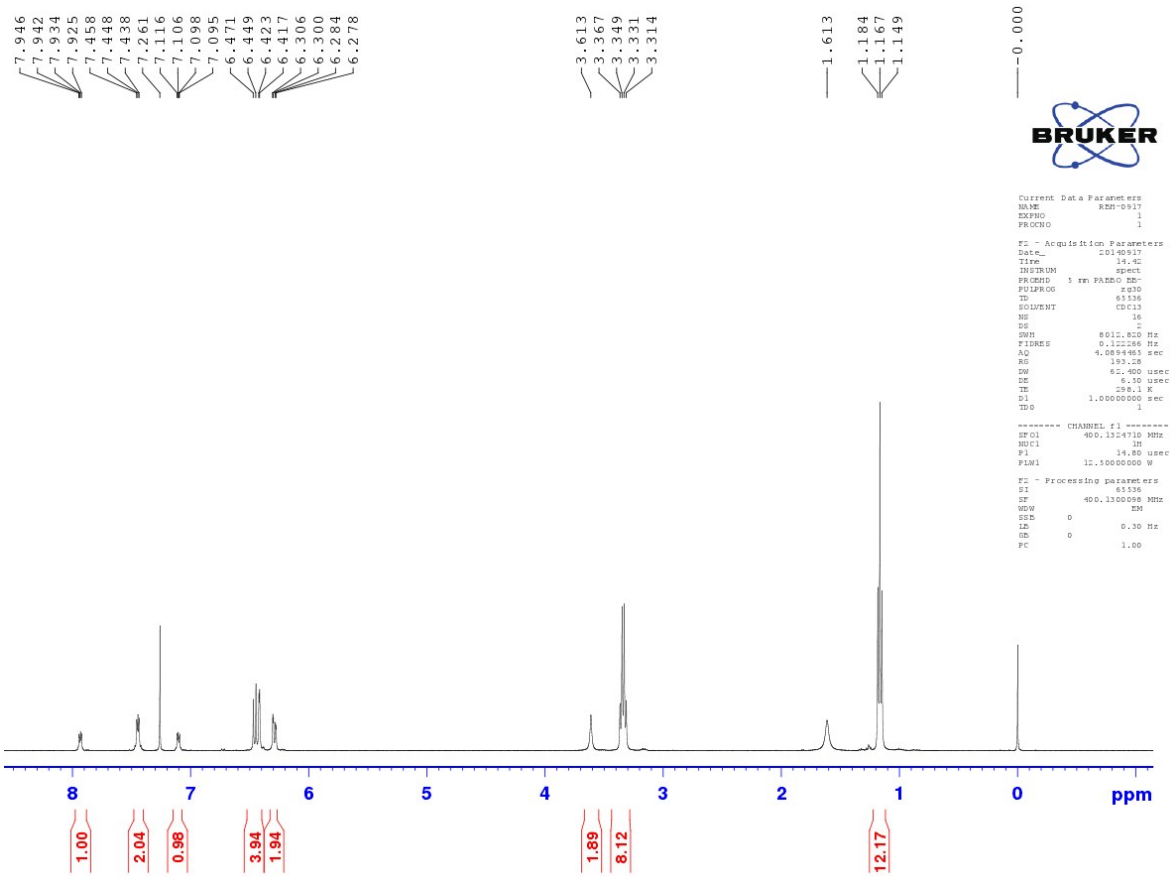
The Scatchard analysis was calculated according to the following formula:

$$\frac{Q}{C_e} = \frac{Q_{max} - Q_e}{K_d} = -\frac{1}{K_d}Q_e + \frac{Q_{max}}{K_d} \quad (2)$$

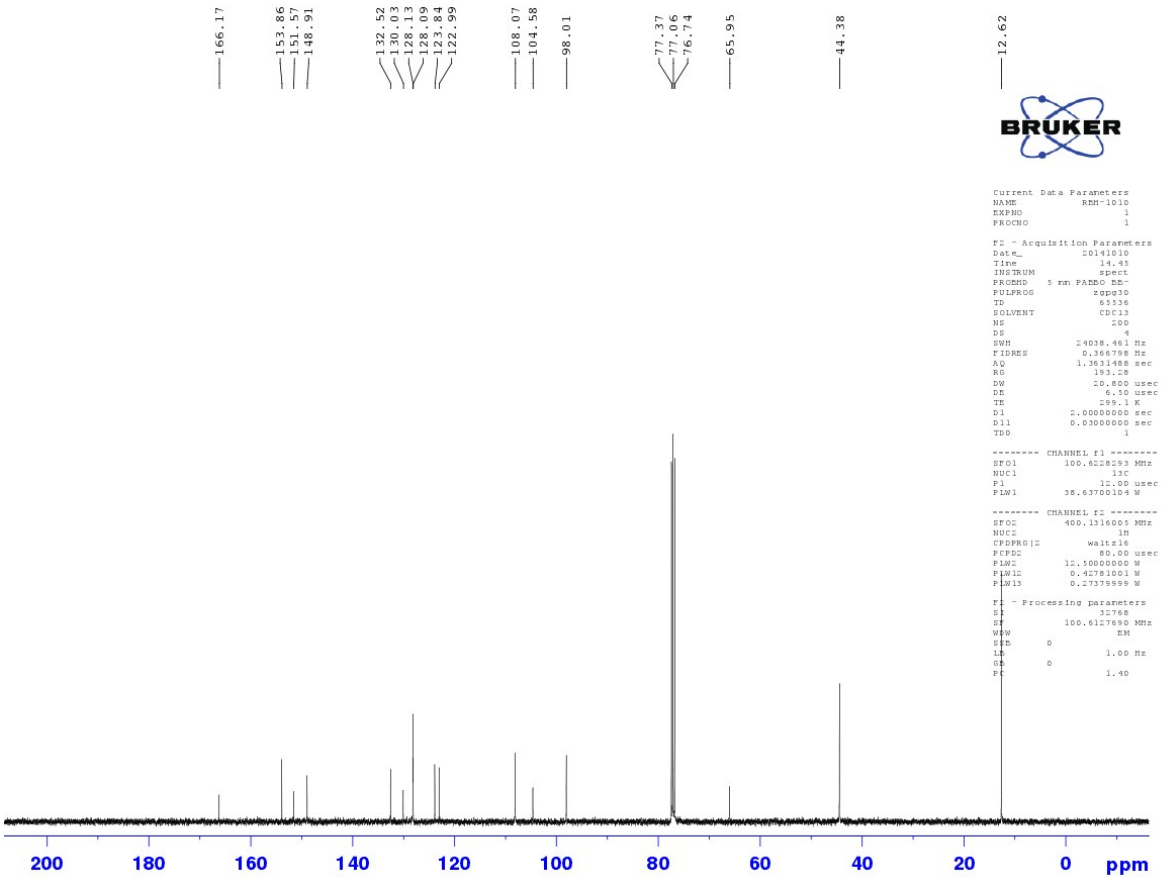
Where Q and Q_{max} (μmol/g) were equilibrium and maximum adsorption capacities respectively, C_e (mmol/L) was the free concentration of analyte in solution, and K_d was the dissociation constant.

Figure S1. ^{1}H NMR , ^{13}C NMR and LC-MS spectroscopy of RBH.

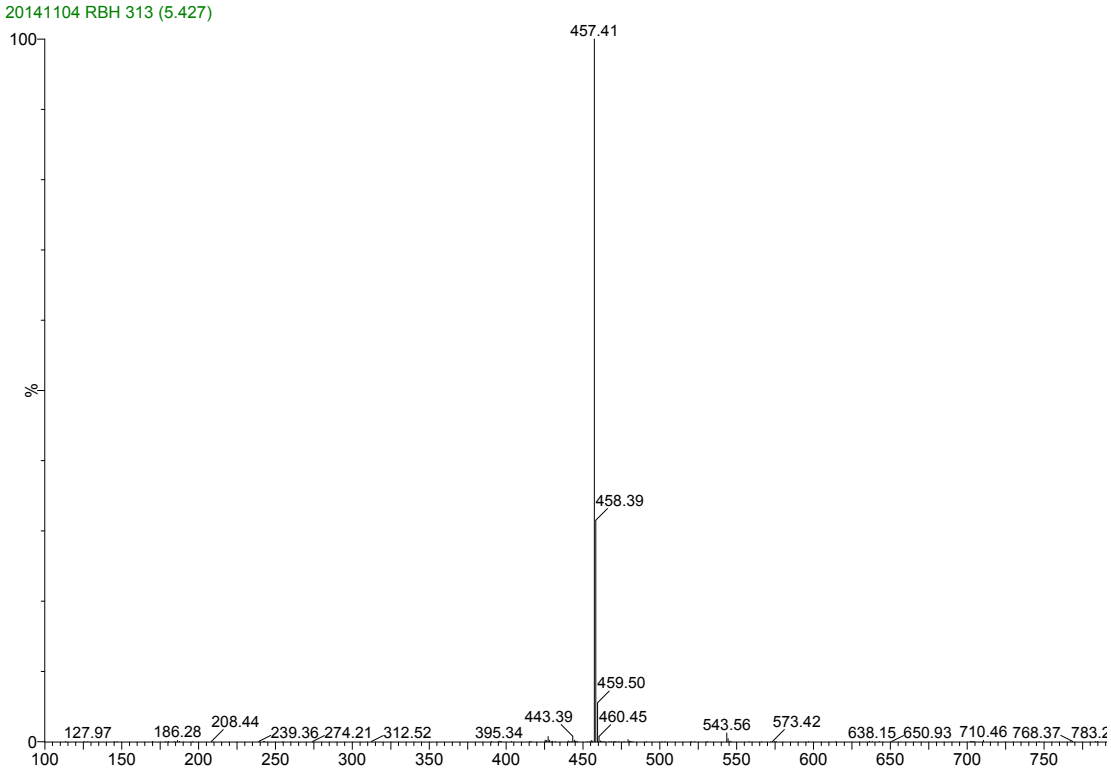
RBH: ^{1}H NMR (400 MHz, $CDCl_3$-D_1) δ (ppm): 7.925-7.946 (1H, m, Ar-H), 7.438–7.458 (2H, m, Ar-H), 7.095-7.116 (1H, m, Ar-H), 6.417-6.471 (4H, m, Xanthene-H), 6.278-6.306 (2H, m, Xanthene-H), 3.613 (2H, s, NH_2), 3.314-3.367 (8H, m, NCH_2CH_3), 1.149-1.184 (12H, t, NCH_2CH_3). ^{13}C NMR (400 MHz, $CDCl_3$-D_1) δ (ppm): 166.17, 153.86, 151.57, 148.91, 132.52, 130.03, 128.13, 128.09, 123.84, 122.99, 108.07, 104.58, 98.01, 65.95, 44.38, 12.61. LC-MS $[M+H]^+$ *m/z* $C_{28}H_{32}N_4O_2$ calcd. 456.58, found $[M+H^+]$ 457.41.



^{1}H NMR spectroscopy of RBH.



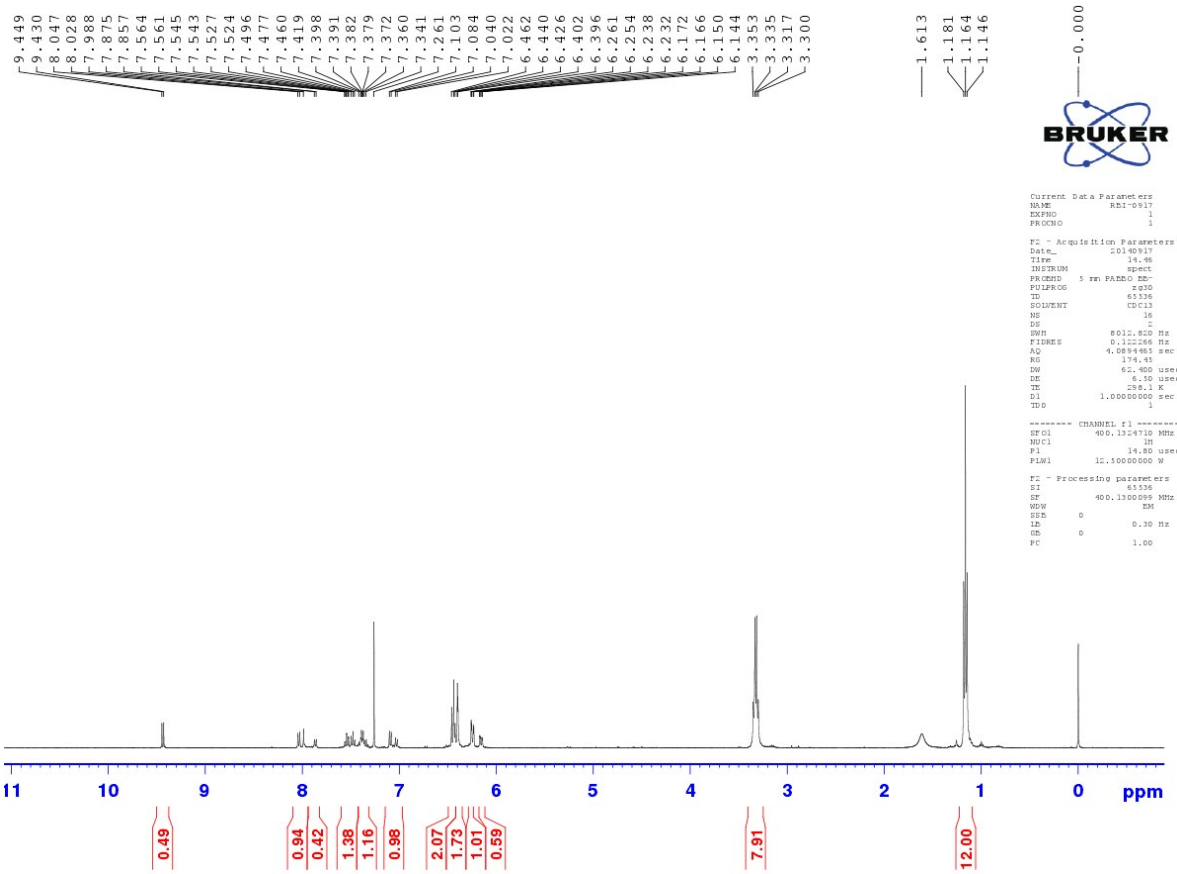
^{13}C NMR spectroscopy of RBH.



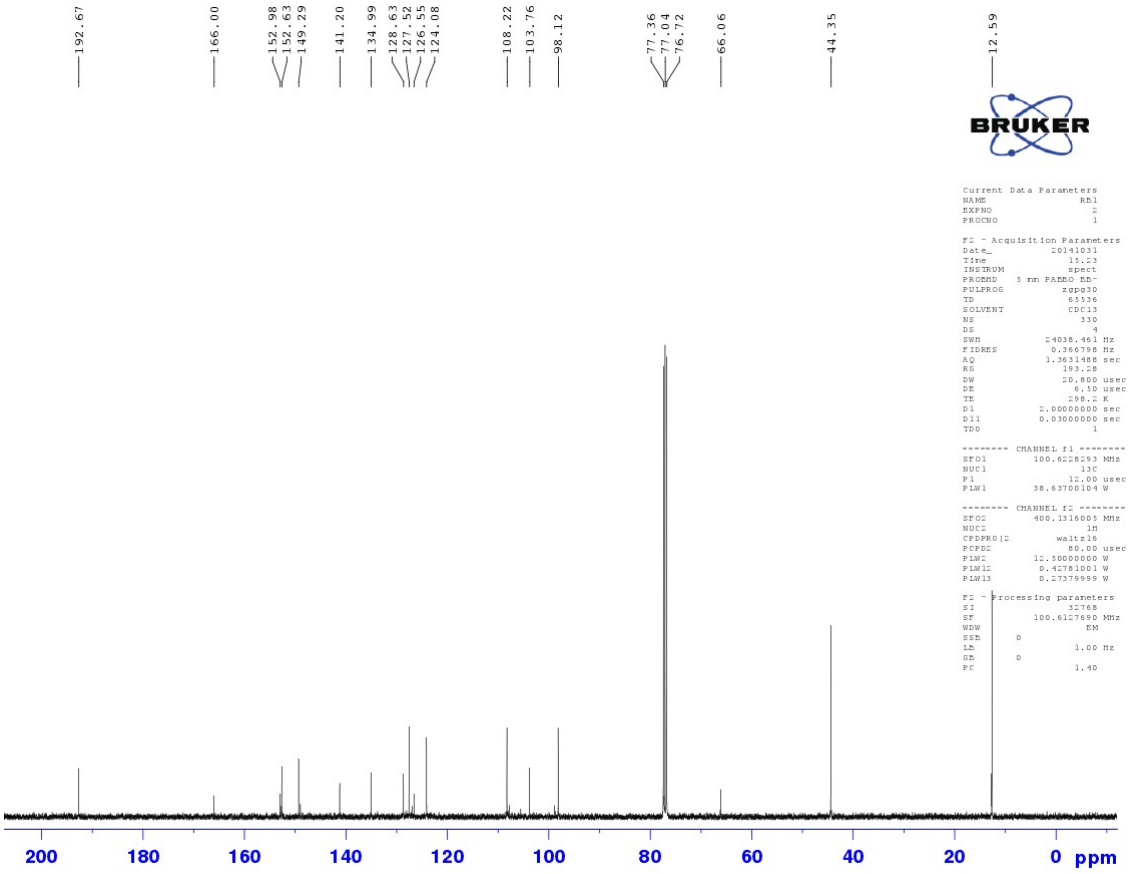
LC-MS spectrometry of RBH

Figure S2. ^{1}H NMR , ^{13}C NMR and LC-MS spectroscopy of RB1.

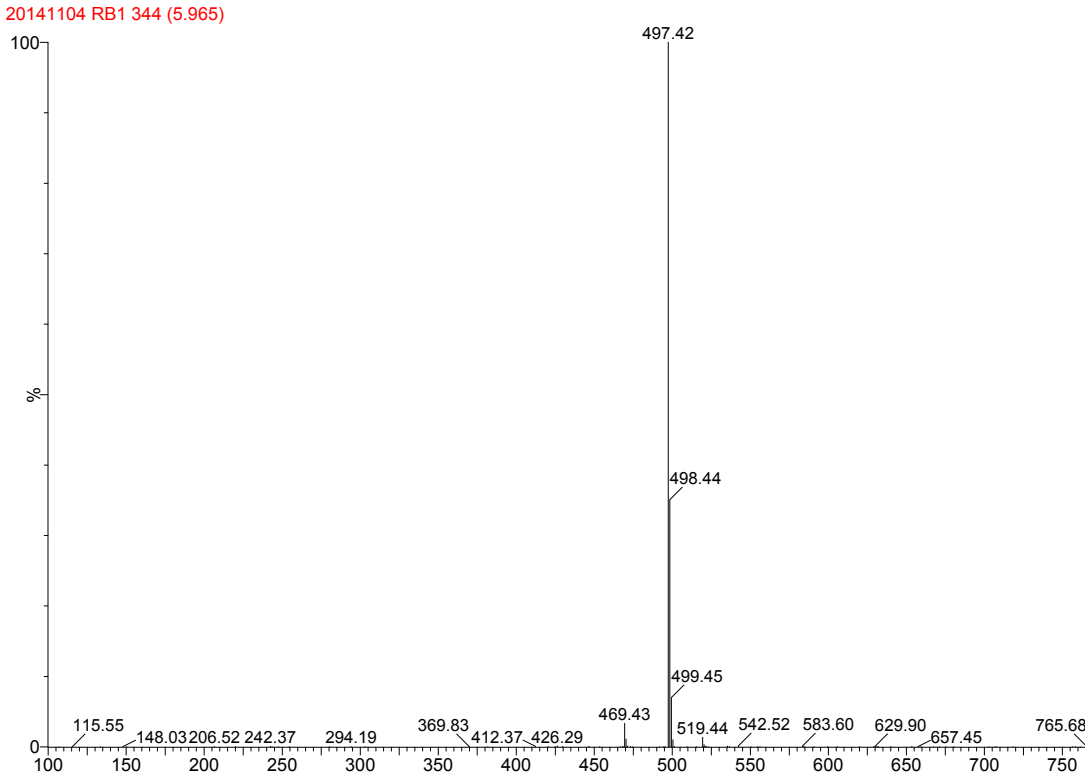
RB1: ^{1}H NMR (400 MHz, $CDCl_3$-D_1) δ (ppm): 9.430-9.449 (1H, s, -CHO), 8.028-8.047 (1H, m, N=C-H), 7.875-7.988 (1H, t, Ar-H), 7.419-7,564 (1H, m, Ar-H), 7.341-7.398 (1H, m, Ar-H), 7.022-7.103 (1H, m, Ar-H), 6.426-6.462 (2H, m, Xanthene-H), 6.396-6.402 (2H, d, Xanthene-H), 6.232-6.261 (1H, m, Xanthene-H), 6.144-6.172 (1H, m, Xanthene-H), 3.325-3.337 (8H, m, NCH_2CH_3), 1.170-1.206 (12H, t, NCH_2CH_3). ^{13}C NMR (100 MHz, $CDCl_3$-D_1) δ (ppm): 192.67, 166.00, 152.98, 152.63, 149.29, 141.20, 134.99, 128.63, 127.52, 126.55, 124.08, 108.22, 103.76, 98.12, 66.06, 44.35, 12.59. LC-MS [M+H]+ *m/z* $C_{30}H_{32}N_4O_3$ calcd. 496.60, found [M+H$^+$] 497.42.



^{1}H NMR spectroscopy of RB1.



^{13}C NMR spectroscopy of RB1.



LC-MS spectrometry of RB1