# Electronic Supplementary Information

# A dansyl-based fluorescent probe for selectively detecting $Cu^{2+}$ and imaging in living cells

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## Contents

1. The UV response of **1** to metal ions

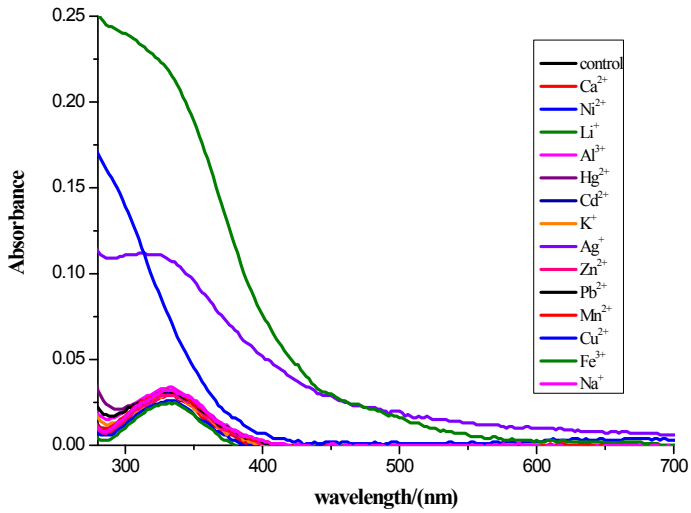



**Figure 1S.** UV-Vis spectra of **1** (10 μM) with various metal ions (100 μM) in HEPES buffer (0.02 M, pH=7.0)/DMSO (8/2, v/v).

2. The saturation curve of **1** with various concentration of $Cu^{2+}$

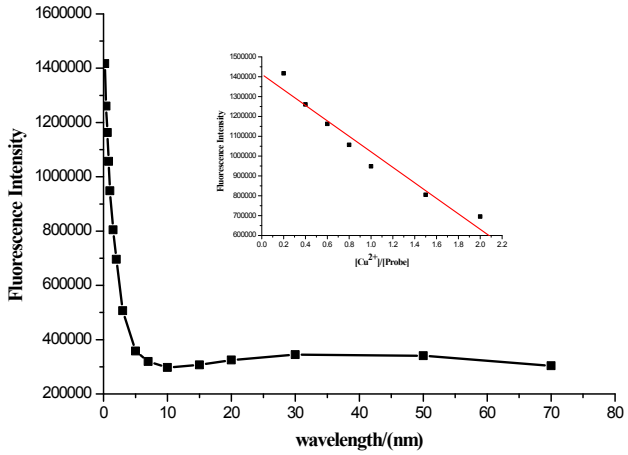



**Figure 2S.** The saturation curve of **1** with various concentration of $Cu^{2+}$ in HEPES buffer (0.02 M, pH=7.0)/DMSO (8/2, v/v) excited at 360 nm. The fluorescence intensity of **1** as a function of $Cu^{2+}$ concentration and the linear part (inset).

3. Job's plot of **1**-$Cu^{2+}$ complex

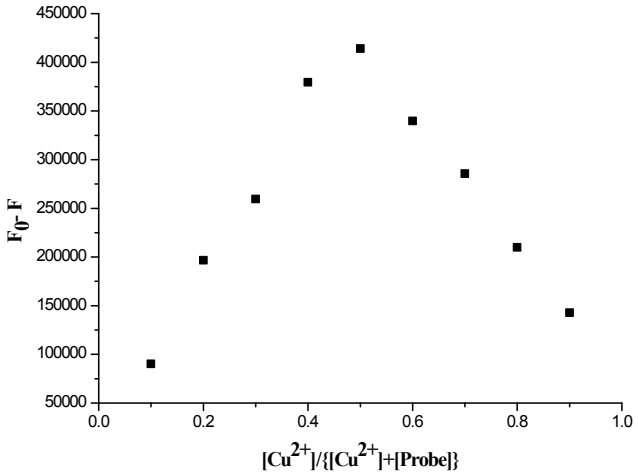
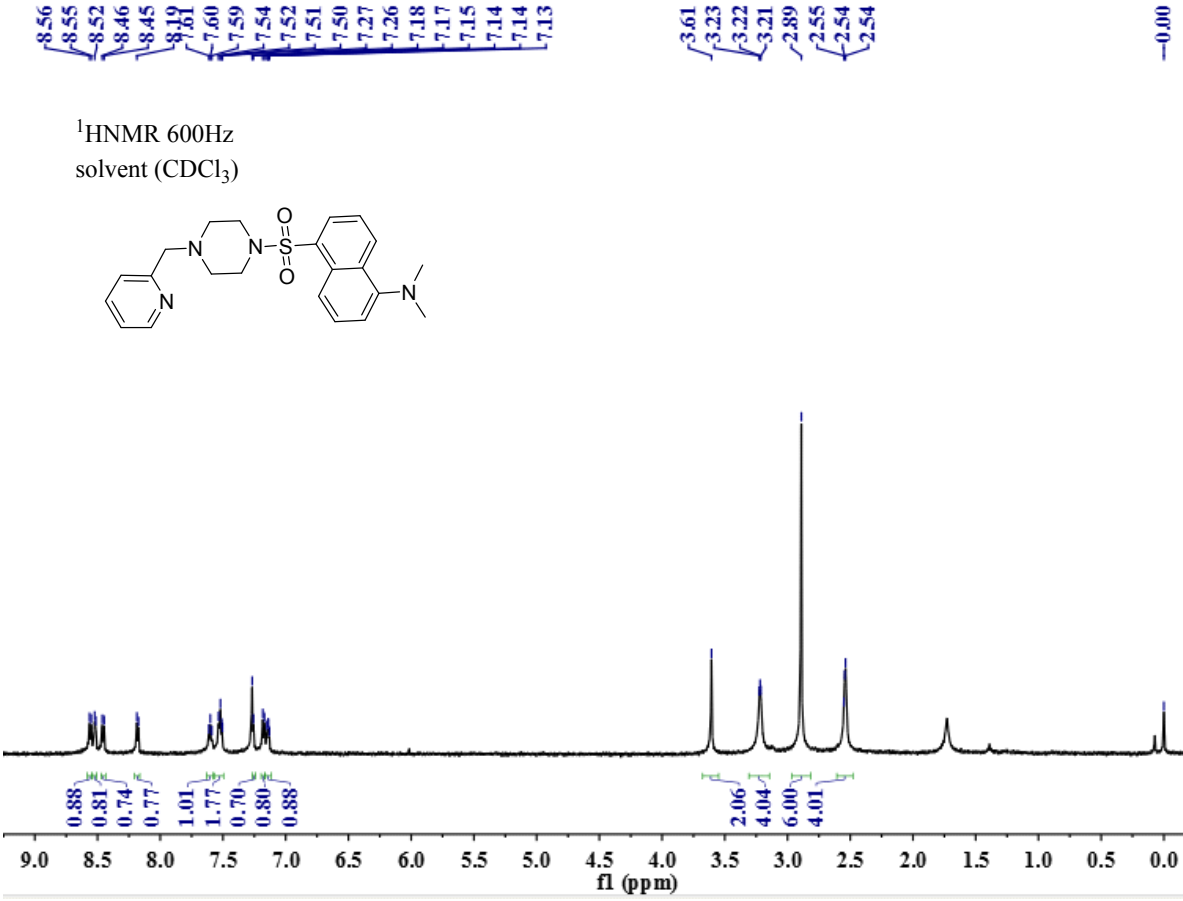


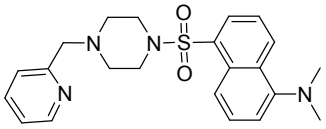

**Figure 3S.** Job's plot according to the method for continuous variations (the total concentration of **1** and $Cu^{2+}$ is 10 μM).

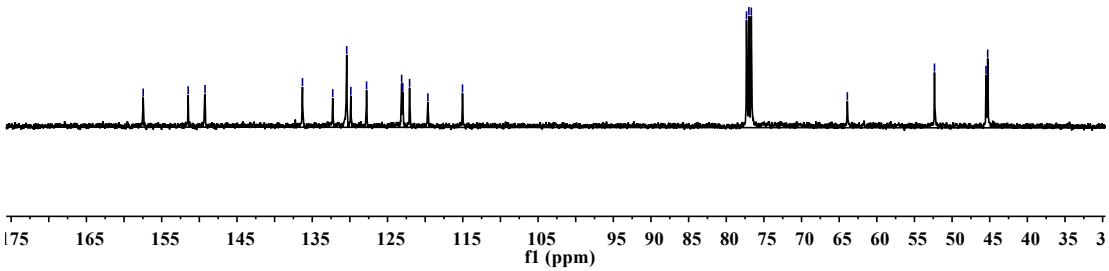
4. $^{1}$H NMR, $^{13}$C NMR and EI characterization of **1**

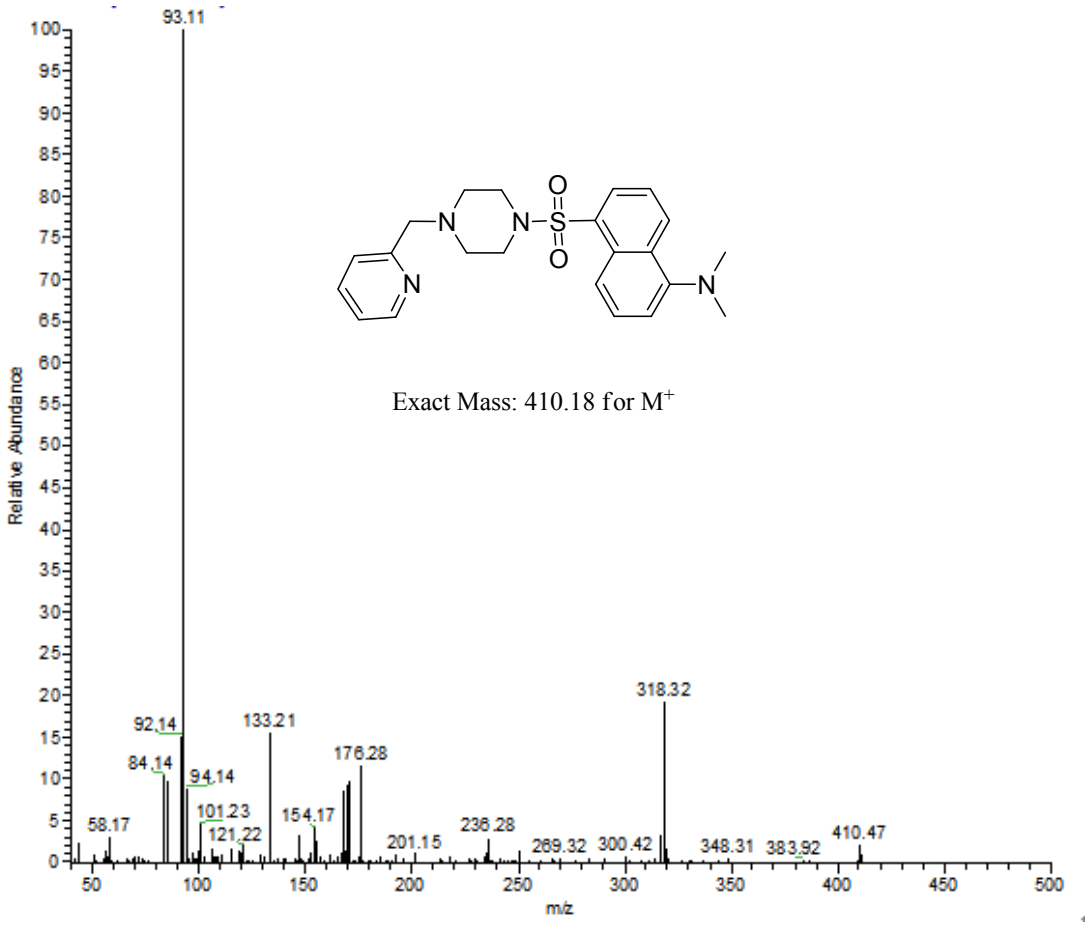


157.46
151.48
149.24
136.30
132.28
130.42
129.87
127.78
123.12
122.98
122.07
119.64
115.04
77.31
76.99
76.67
63.91
52.34
45.49
45.27

$^{13}$CNMR 100Hz
solvent ($CDCl_3$)








Exact Mass: 410.18 for $M^+$