

Supplementary Material

Design and synthesis of two imidazole fluorescent probes for special recognition of HClO/NaHSO₃ and their applications

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1. ^1H NMR

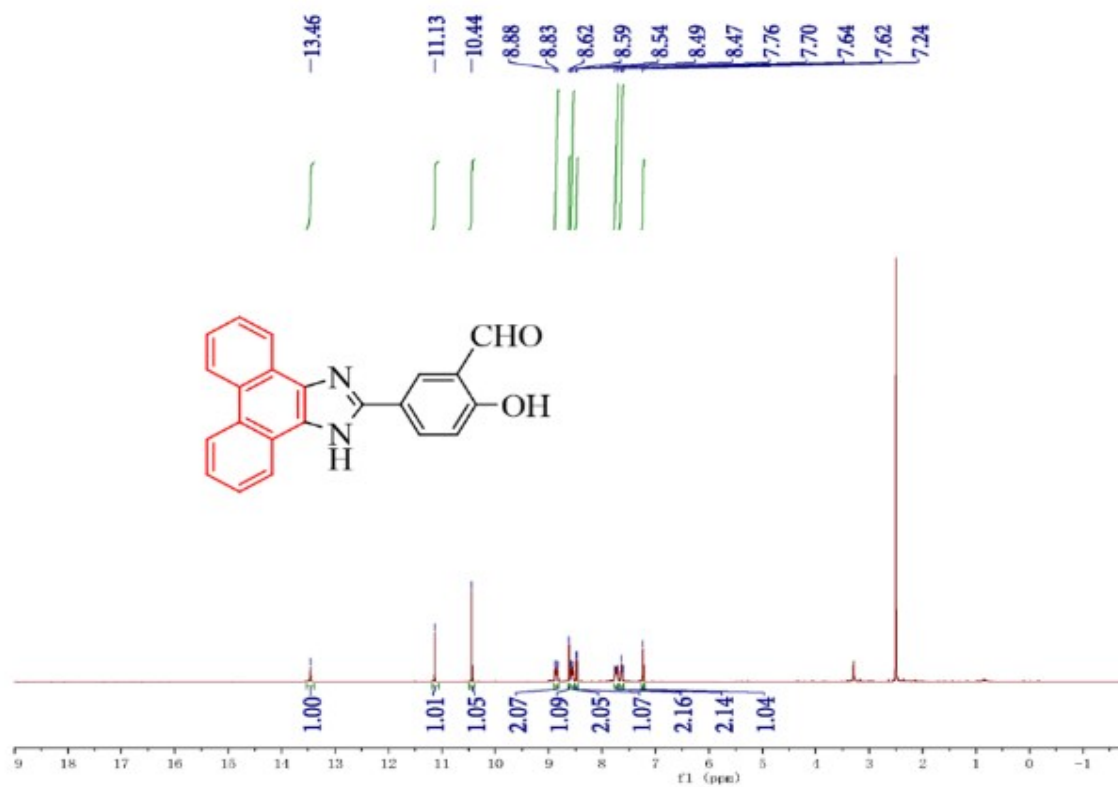


Fig. S1 ^1H NMR spectrum of compound L1

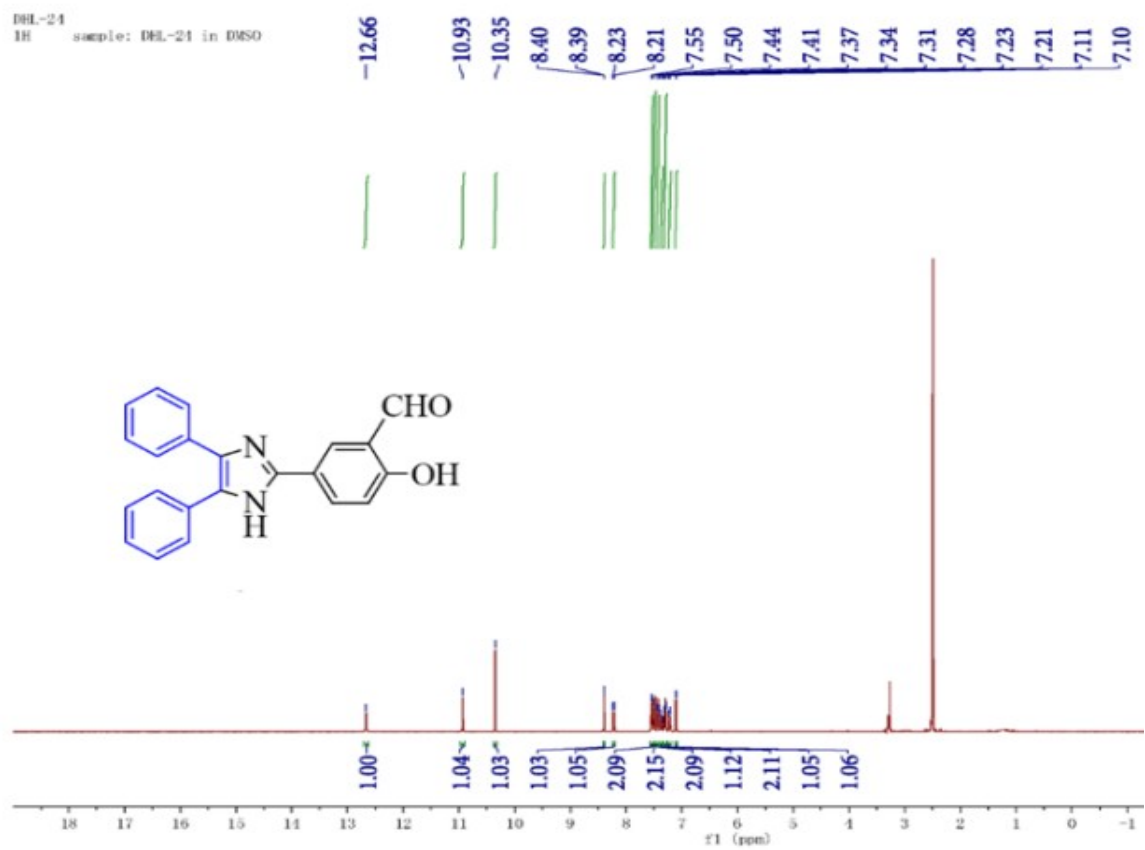


Fig. S2 ¹H NMR spectrum of compound L2

2. ^{13}C NMR

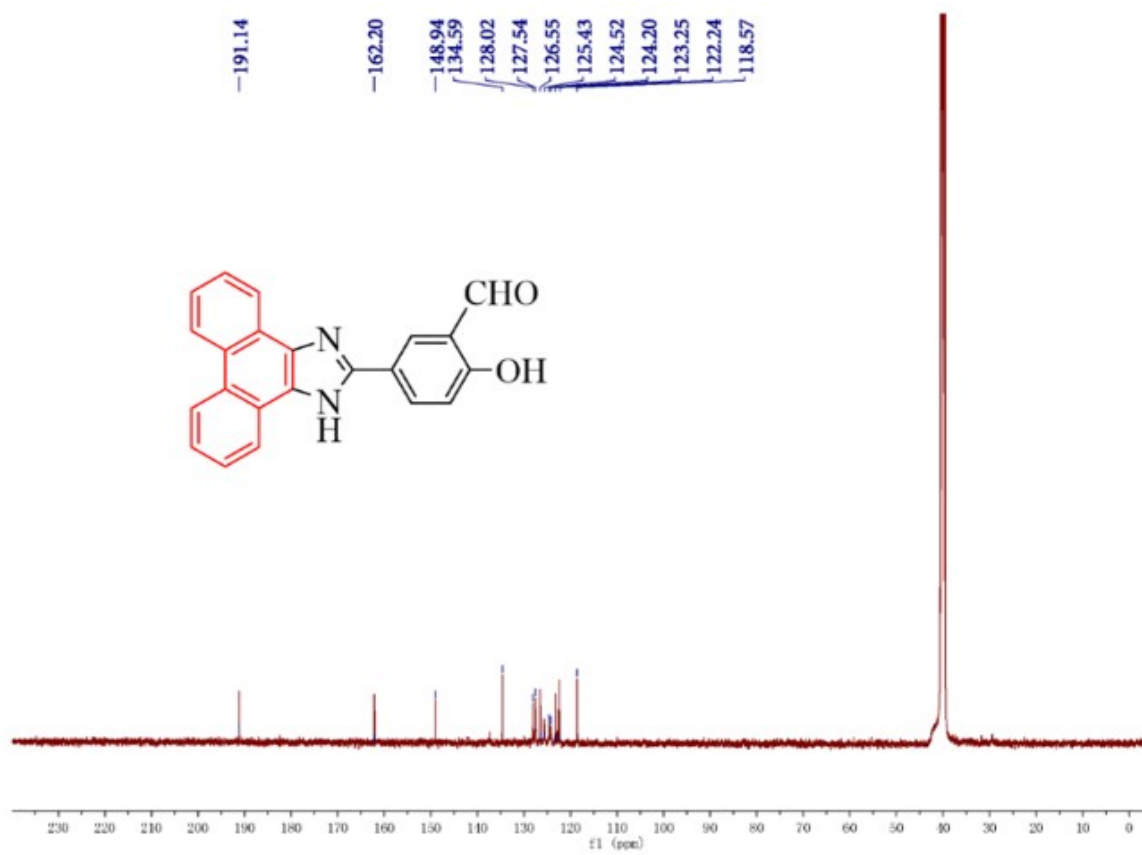


Fig. S3 ^{13}C NMR spectrum of compound **L1**

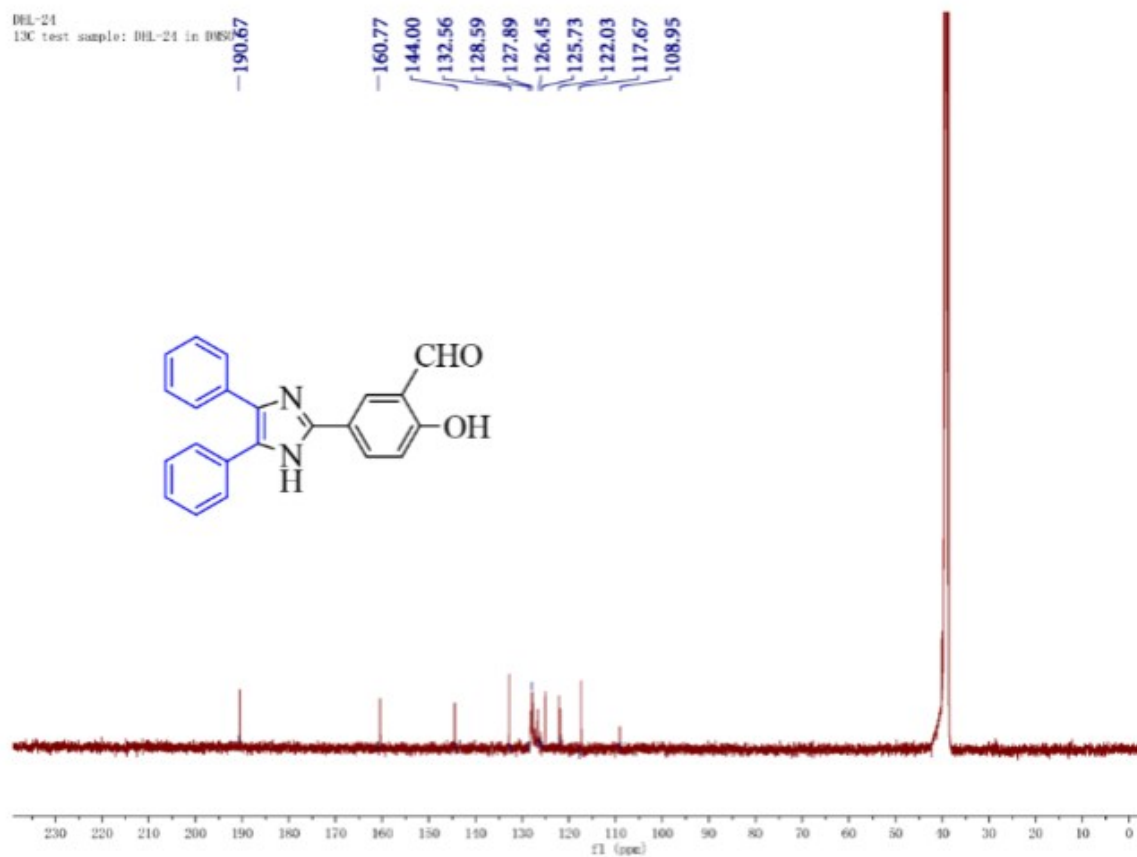


Fig. S4 ¹³C NMR spectrum of compound L₂

3. UV Absorption Spectroscopy

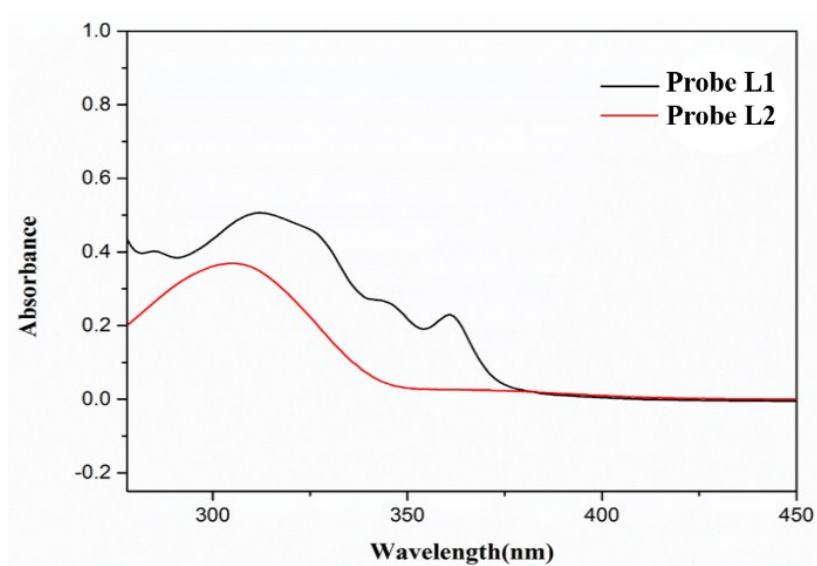
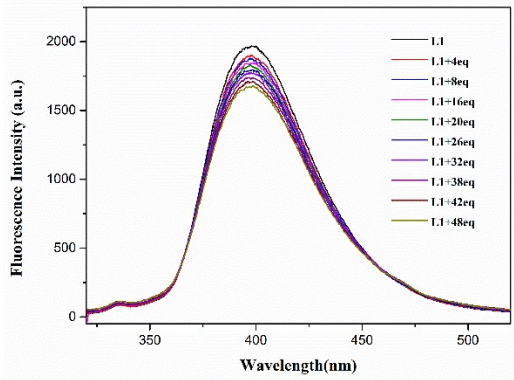
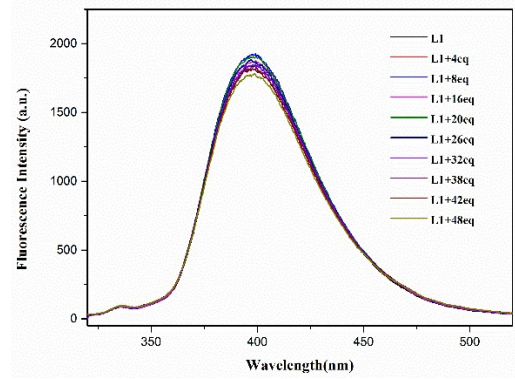


Fig. S5 UV absorption spectroscopy compound L₁, L₂ dispersed in PBS buffer (1.0 mM, pH = 7.4, 1% DMF)

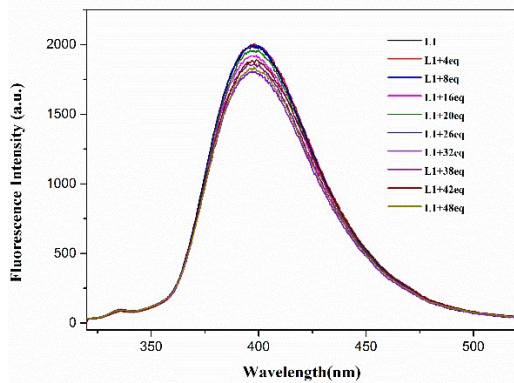
4. Fluorescence Spectroscopy



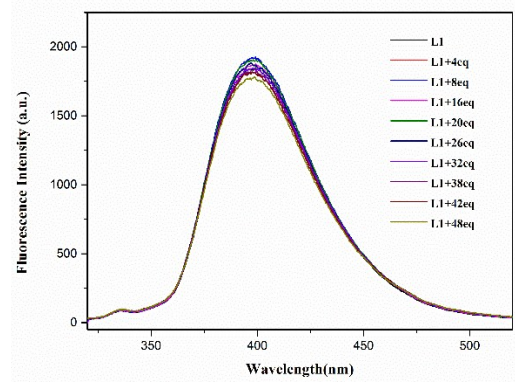
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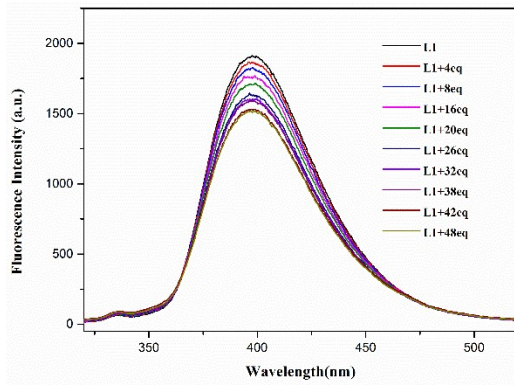
(e)



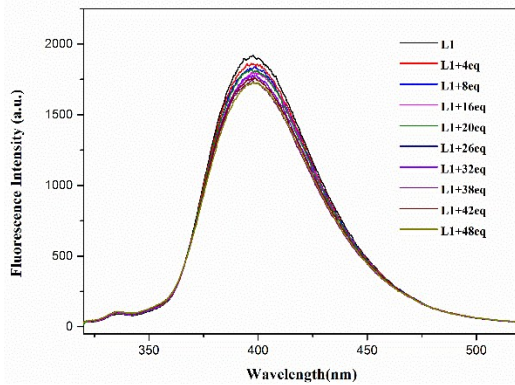
(b)



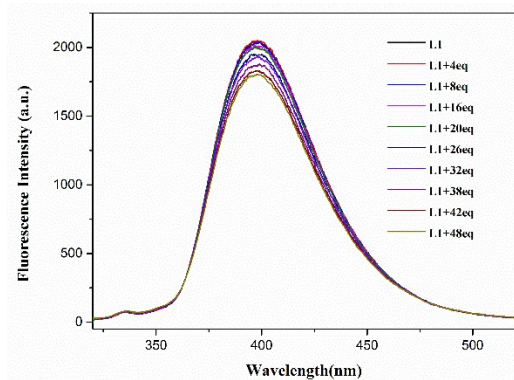
(f)



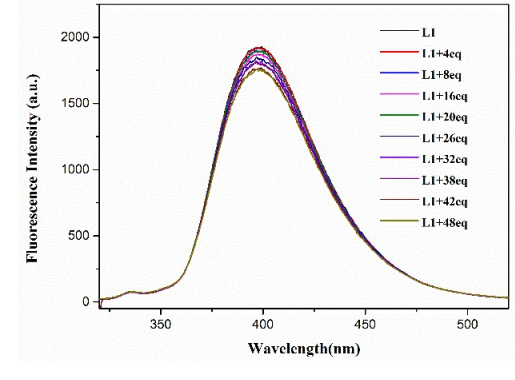
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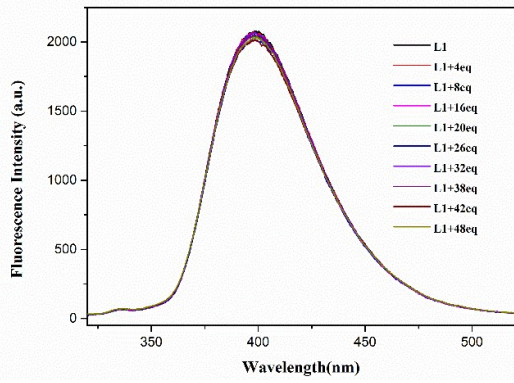
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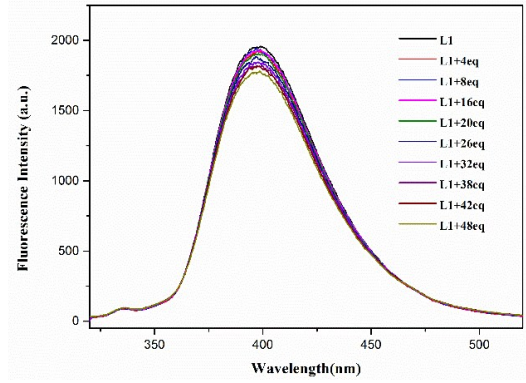
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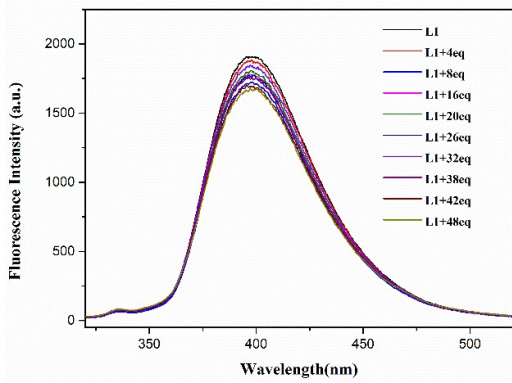
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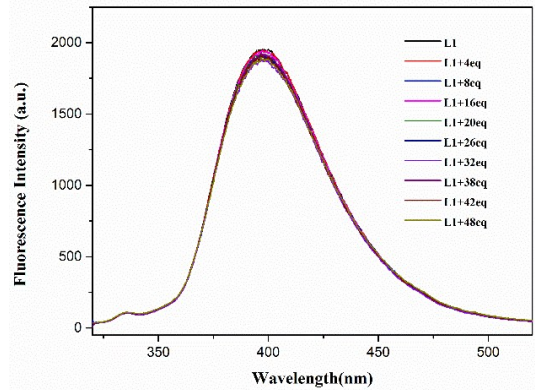
(i)



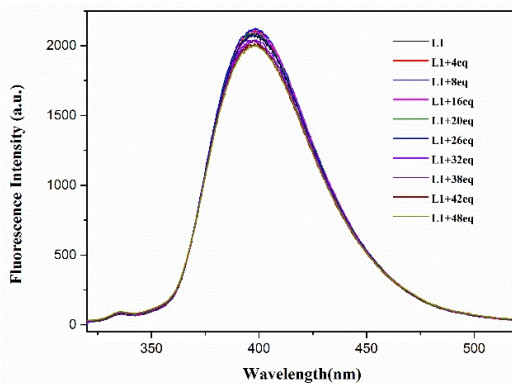
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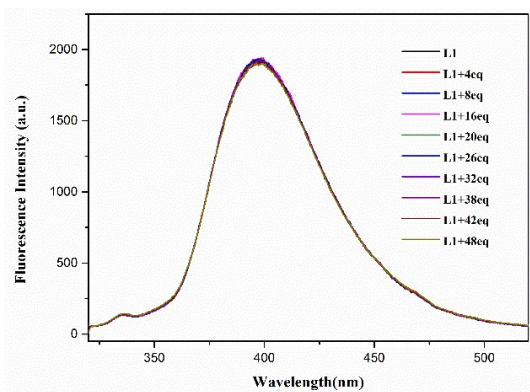
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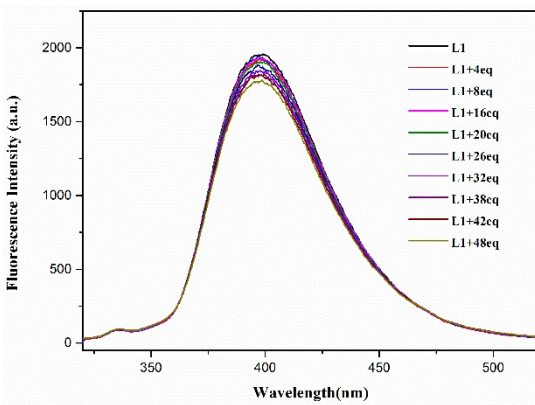
(n)



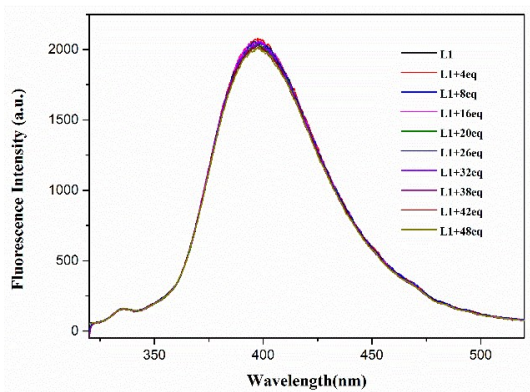
(k)



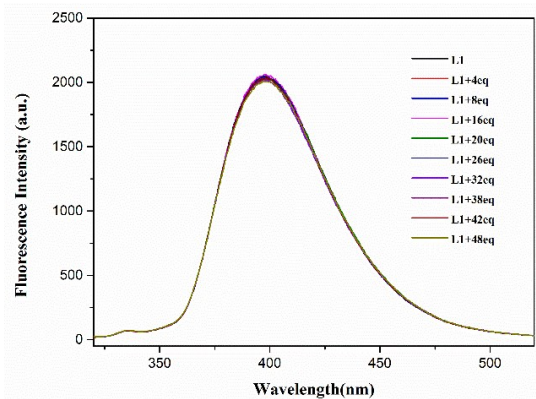
(o)



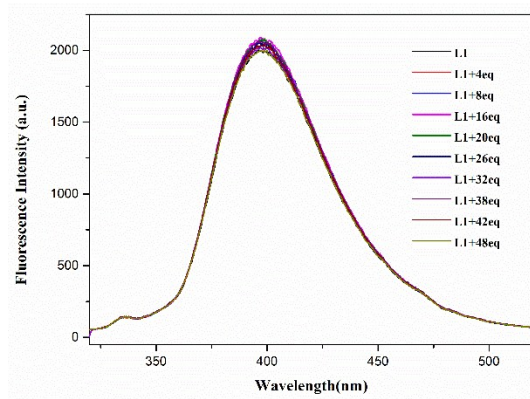
(l)



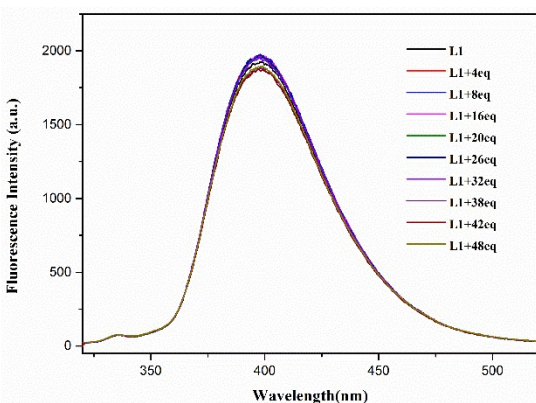
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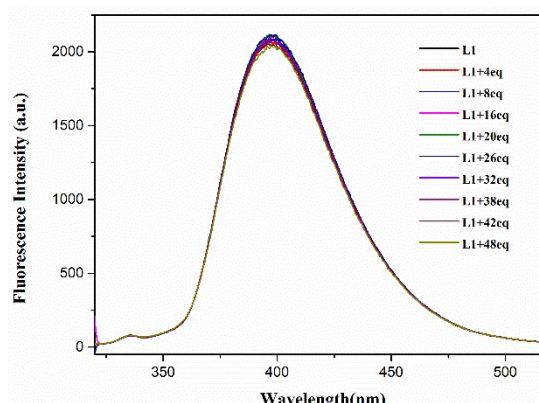
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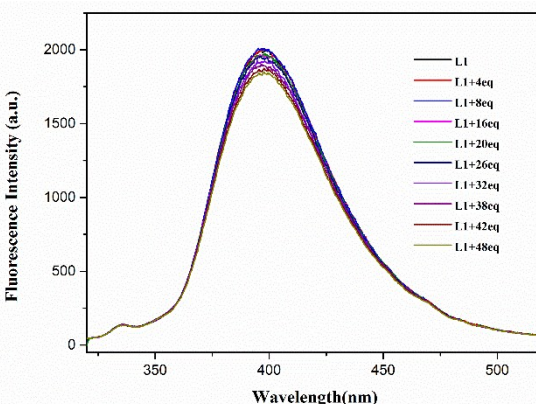
(u)



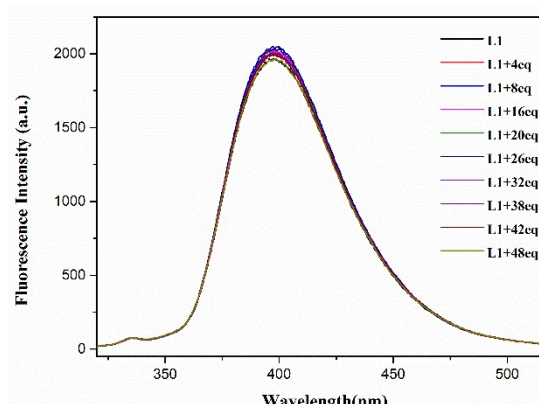
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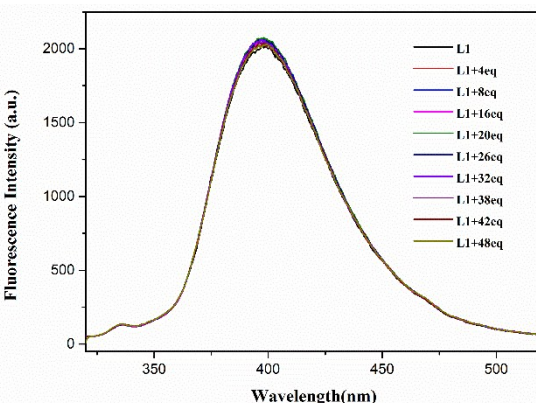
(v)



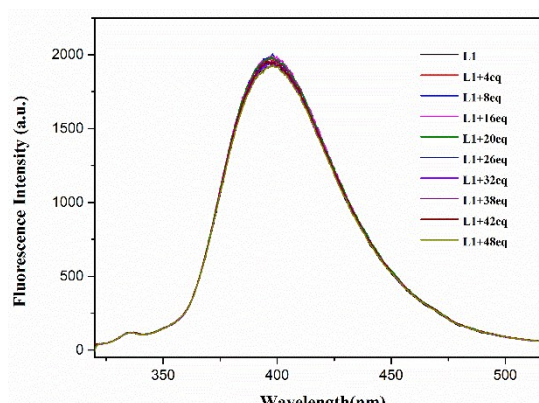
(s)



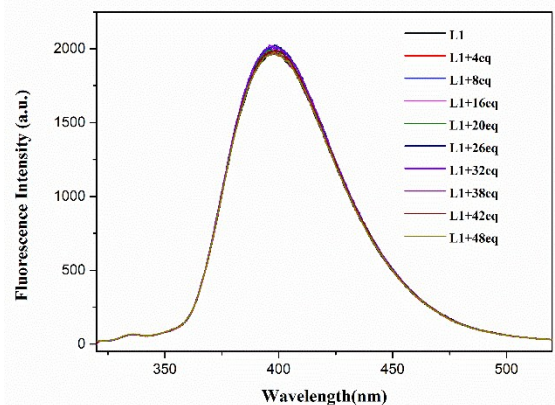
(w)



(t)



(x)



(y)

Fig. S6 Fluorescence quenching of sensor **L1** dispersed in PBS buffer (1.0 mM, pH = 7.4, 1% DMF) after the addition of different analytes: **(a)** Zn^{2+} , **(b)** Fe^{2+} , **(c)** F^- , **(d)** HPO_4^{2-} , **(e)** NO_3^- , **(f)** K^+ , **(g)** $ONOO^-$, **(h)** CO_3^{2-} , **(i)** SO_4^{2-} , **(j)** Hcy, **(k)** $H_2PO_4^-$, **(l)** Na^+ , **(m)** Cl^- , **(n)** SO_3^{2-} , **(o)** TBHP, **(p)** GSH, **(q)** Cys, **(r)** NO_2^- , **(s)** SCN^- , **(t)** $\cdot OH$ **(u)** 1O_2 , **(v)** HSO_3^- , **(w)** H_2O_2 , **(x)** ClO_4^- , **(y)** HCO_3^-