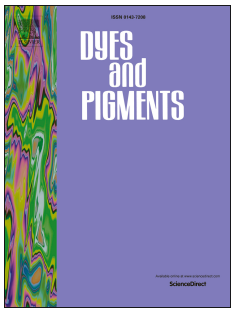
# Accepted Manuscript




Novel fluorescent probes for sequential detection of $Cu^{2+}$ and citrate anion and application in living cell imaging

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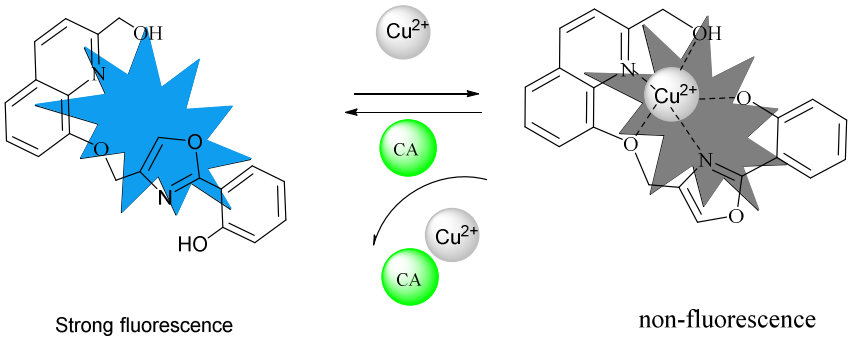


Strong fluorescence

non-fluorescence

In this study, we reported three novel probes L1, L2 and L3 for highly selectively and sensitivity detected $Cu^{2+}$ ion through "turn off" response in DMF/$H_2O$ solution (v/v=1/1, 0.01 M, Tris-HCl buffer, pH 7.30). Sequentially, the L1-$Cu^{2+}$, L2-$Cu^{2+}$ and L3-$Cu^{2+}$ complexes detected citrate anion through "turn on" response, which could be applying as molecular logic gate. Furthermore, the in vivo sensitivity experiments of $Cu^{2+}$ ion and citrate anion were demonstrated through fluorescence imaging in living cells.