Supporting Information

Novel anthracene and pyridine comprising schiff base probe for selective “OFF-ON” fluorescent determination of Cu$^{2+}$ ions towards live cell application

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Fig. S1 $^1$H NMR spectrum of AP in $d_6$-DMSO.
**Fig. S2** \(^{13}\)C NMR spectrum of AP in \(d_6\)-DMSO.
Fig. S3 Mass (ESI) spectrum of AP.
Fig. S4 (a) Cu$^{2+}$ selectivity in different solvents; Histograms on single and dual metal studies of AP (20 µM in CH$_3$CN) probe in (b) DMSO, (c) THF and (d) Methanol (Single metal studies: 30 µM of Cu$^{2+}$ and 150 µM of other metal ions were taken; Dual metal studies: 30 µM of Cu$^{2+}$ + 150 µM of other metal ions were taken; 180 µM of Cu$^{2+}$ ions were taken for its effect).
Fig. S5 HR-Mass spectrum of AP--Cu$^{2+}$ complex.
Fig. S6 FTIR Analysis (a) AP probe and (b) AP---Cu$^{2+}$.

Fig. S7 SEM Image (A) AP probe and (B) AP---Cu$^{2+}$.
Fig. S8 pH effect on AP and AP---Cu²⁺ sensor system.
Fig. S9 HOMOs and LUMOs of AP and AP---Cu$^{2+}$ complex.