

Supporting Information

Highly selective and reversible water-soluble polymer based-colorimetric chemosensor for rapid detection of Cu²⁺ in pure aqueous solution

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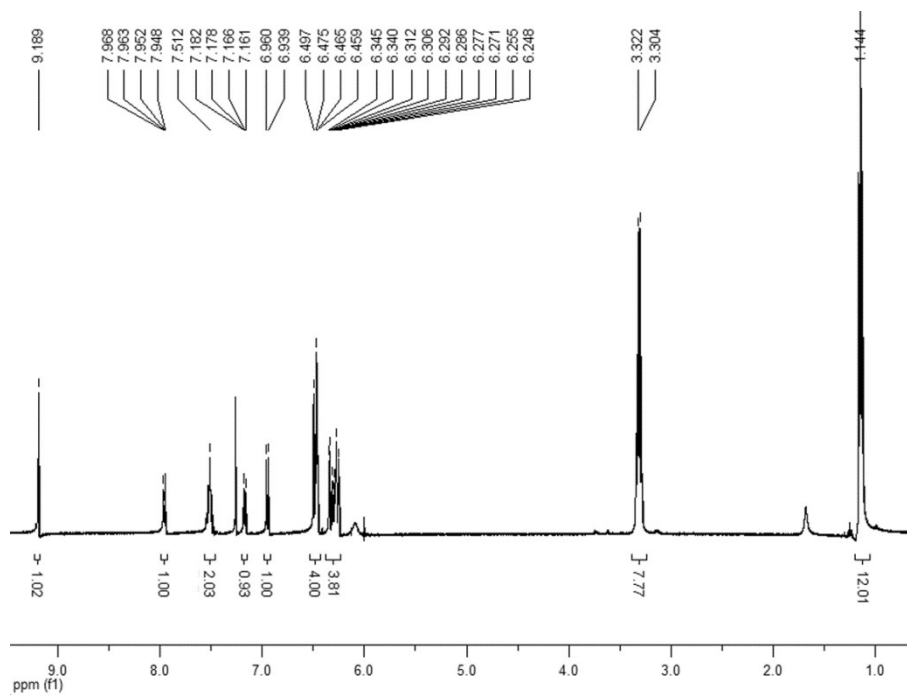


Fig. S1 ^1H NMR spectrum of RhBHB in CDCl_3 .

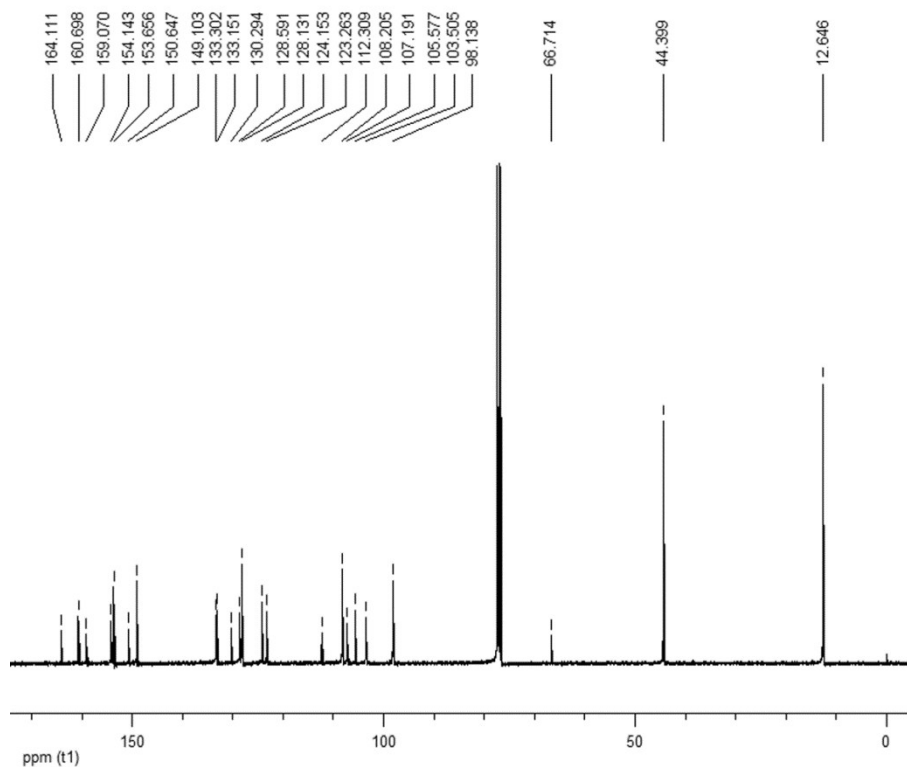


Fig. S2 ^{13}C NMR spectrum of RhBHB in CDCl_3 .

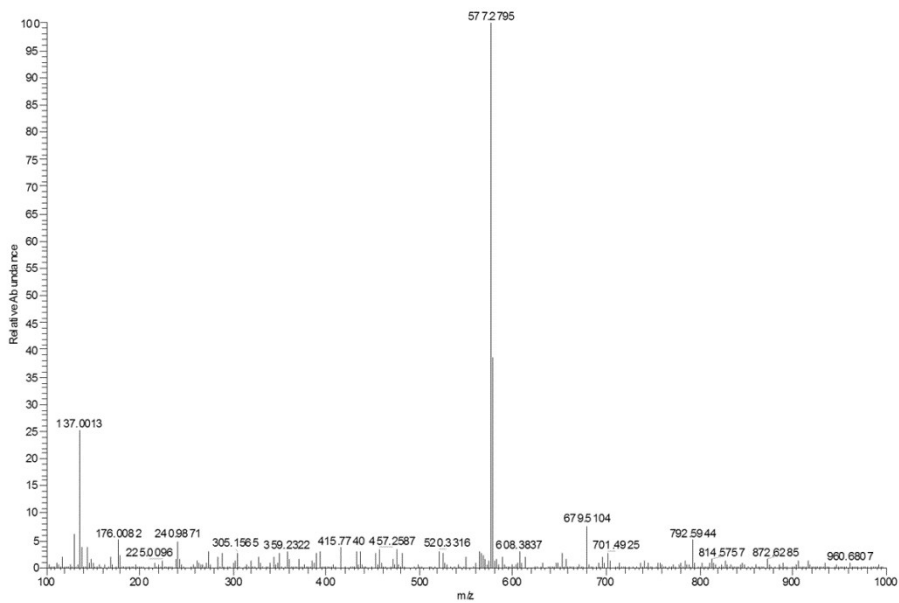


Fig. S3 HRMS of RhBHB.

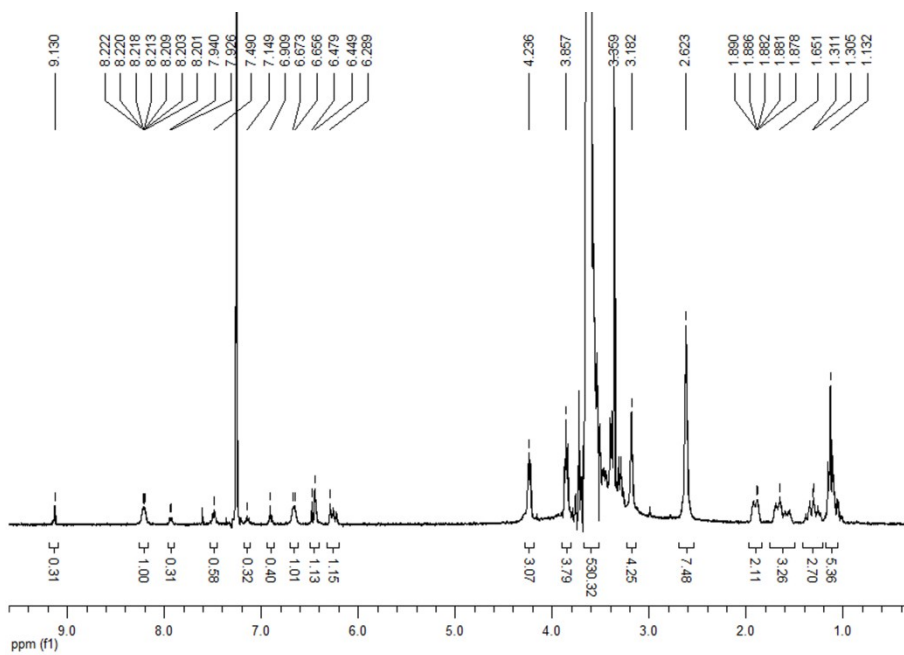


Fig. S4 ¹H NMR spectrum of PEGRh in CDCl₃.

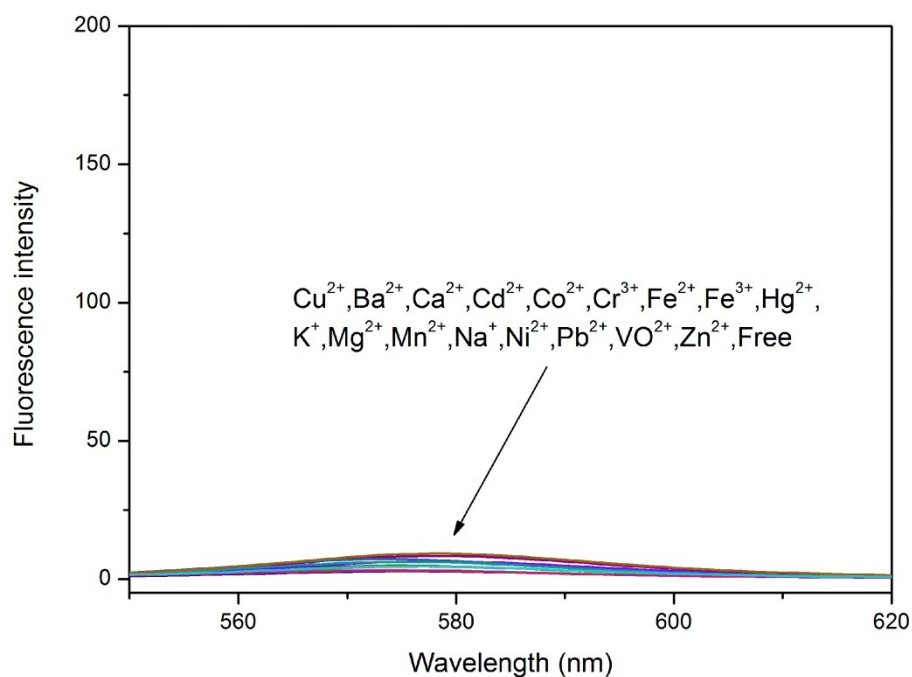


Fig. S5 Fluorescence spectra of PEGRh in aqueous solution (10 μM) upon addition of 5 equiv. of various metal ions. (Ex. 520 nm)



Fig. S6 Color changes of PEGRh in aqueous solution (10 μM) upon addition of varying quantities of Cu^{2+} ions (from left to right: 0, 0.05, 0.1, 0.25, 0.5, 1.0, 2.0 equiv.).

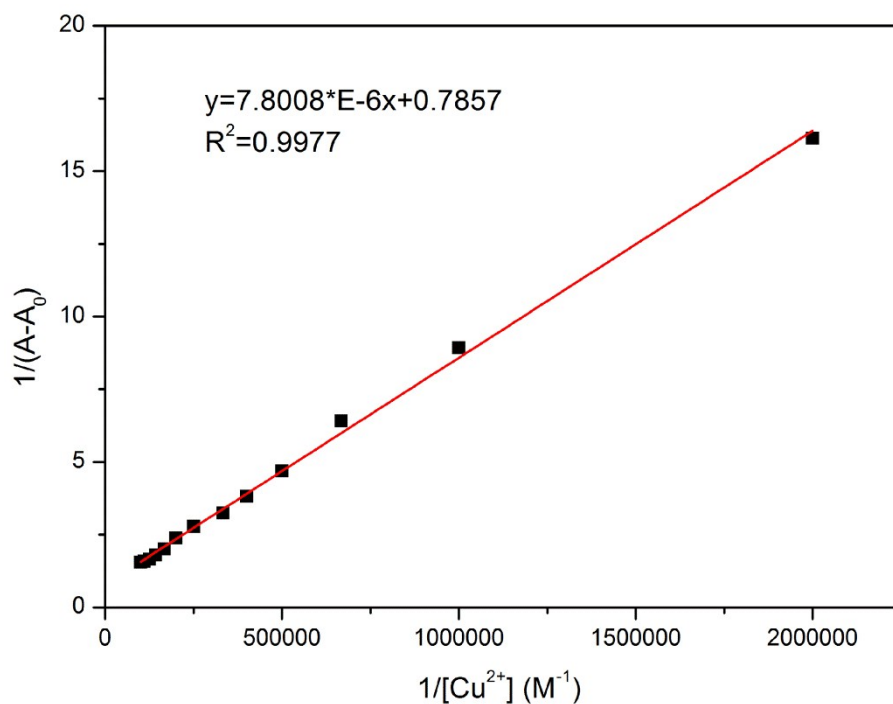


Fig. S7 Benesi-Hildebrand plot (absorbance at 561 nm) of PEGRh with Cu^{2+} .

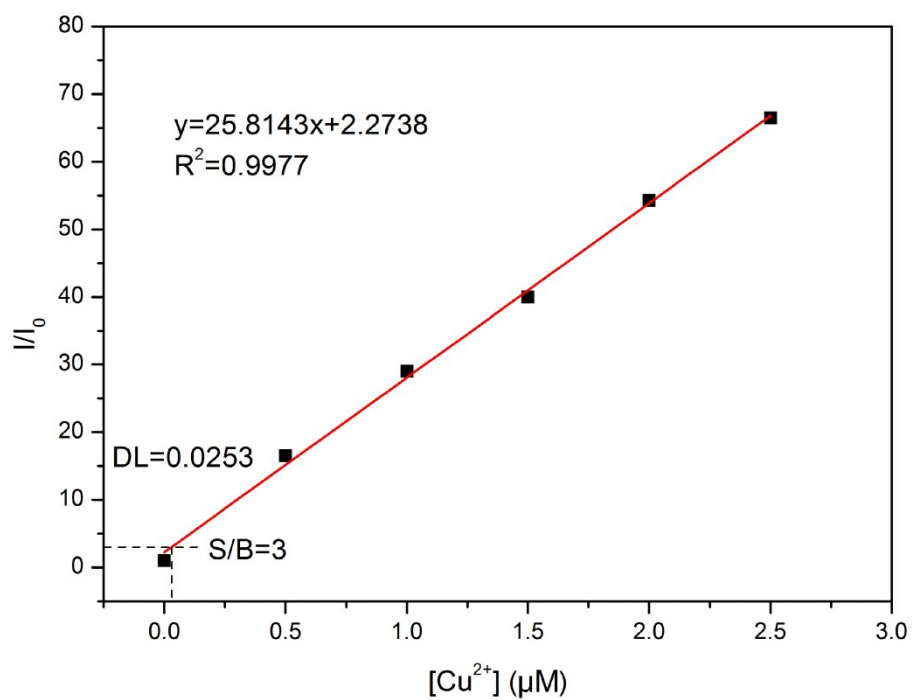


Fig. S8 Determination of the detection limit based on change in the ratio (absorbance at 561 nm) of PEGRh (10 μM) with Cu^{2+} .

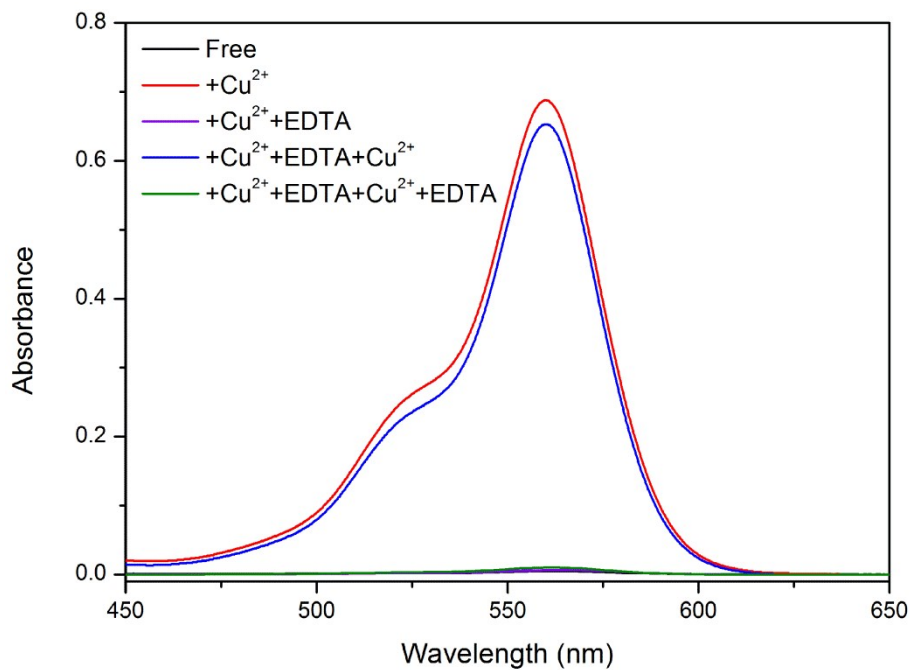


Fig. S9 UV-vis absorption spectra of PEGRh in aqueous solution (10 μM) upon alternate addition of 2 equiv. of Cu^{2+} and 2 equiv. of EDTA ions.

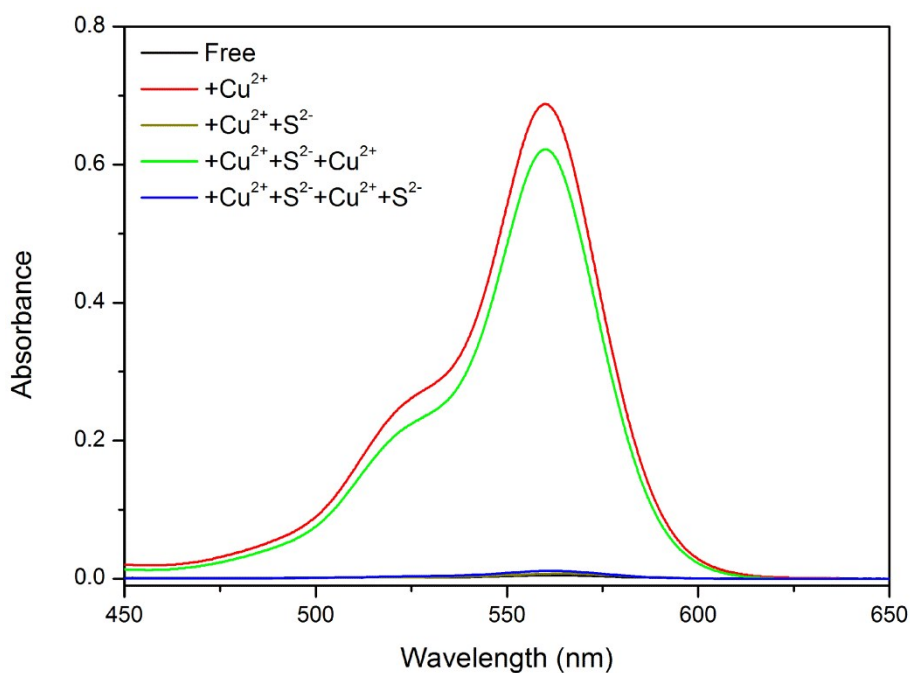


Fig. S10 UV-vis absorption spectra of PEGRh in aqueous solution (10 μM) upon alternate addition of 2 equiv. of Cu^{2+} and 2 equiv. of S^{2-} ions.