Supplementary Material

Figure S1. Labelling chart for L1.
Figure S2. $^1$H NMR spectra of compound L1 recorded at different pH values.
Figure S3. Depth-cued stick molecular model for receptor L1 in order to calculate distances within the macrocyclic cavity. Calculation was carried out using HyperChem 7.5 program with MM+ parameters.
Figure S4. Plot of the variation of the fluorescence intensity with respect to the added concentration of Zn$^{2+}$. Experiment performed in 0.15 mol·dm$^{-3}$ NaCl at 298.1 ± 0.1 K in ethanol/water 30/70 v/v for [L1] = 1×10$^{-5}$ M, $\lambda_{exc}$ = 280 nm. The black line represents the linear regression calculated by the least squared method (R-squared = 0.998). Detection limit is calculated as the amount of zinc(II) required to overcome three times the standard deviation of the blank.
Figure S5. Fluorescence emission titration curves of L1 in the presence of Cd$^{2+}$, Co$^{2+}$, Hg$^{2+}$, Mn$^{2+}$ and Zn$^{2+}$ performed in 0.15 mol·dm$^{-3}$ NaCl at 298.1 ± 0.1 K in water/ethanol 70/30 v/v for $[\text{L1}] = 1 \times 10^{-5}$ M, $\lambda_{\text{exc}} = 280$ nm) (A) 1:1 M:L molar ratio and (B) 2:1 M:L molar ratio.
Figure S6. Fluorescence quenching efficiency of $\text{L1}$ in the presence of $\text{Cu}^{2+}$ performed in 0.15 mol·dm$^{-3}$ NaCl at 298.1 ± 0.1 K in water/ethanol 70/30 v/v at pH 4.0, $[\text{L1}] = 1\times10^{-5}$ M, $\lambda_{\text{exc}} = 280$ nm) in 1:1 and 2:1 M:L molar ratio.
Figure S7. Plot of the variation of the fluorescence intensity with respect to the added concentration of Zn\(^{2+}\) in a solution containing a ten-fold excess of Cu\(^{2+}\) and Fe\(^{2+}\) with respect to the detection limit. Experiment performed in 0.15 mol·dm\(^{-3}\) NaCl at 298.1 ± 0.1 K in ethanol/water 30/70 v/v for [L1] = 1×10\(^{-5}\) M, \(\lambda_{\text{exc}} = 280\) nm. The black line represents the linear regression calculated by the least squared method (R-squared = 0.98).