ELECTRONIC SUPPLEMENTARY INFORMATION

A new cucurbit[8]uril-based fluorescent receptor for indole derivatives

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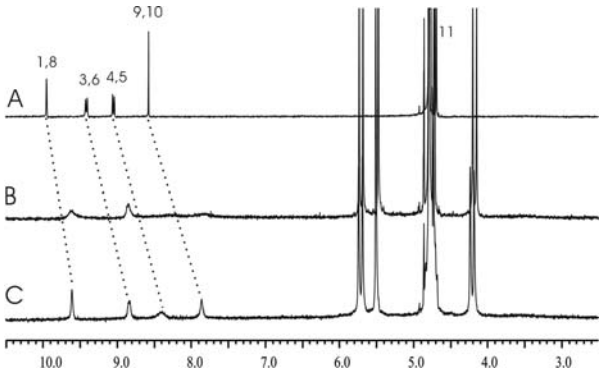

Figure SI-1. ^{1}H NMR spectrum (0.1MNaCl/D_2O, 300MHz) of 1.0 mM DPT^{2+} in the presence of 0 equiv (A), 0.5 equiv (B) and 1.0 equiv CB8.

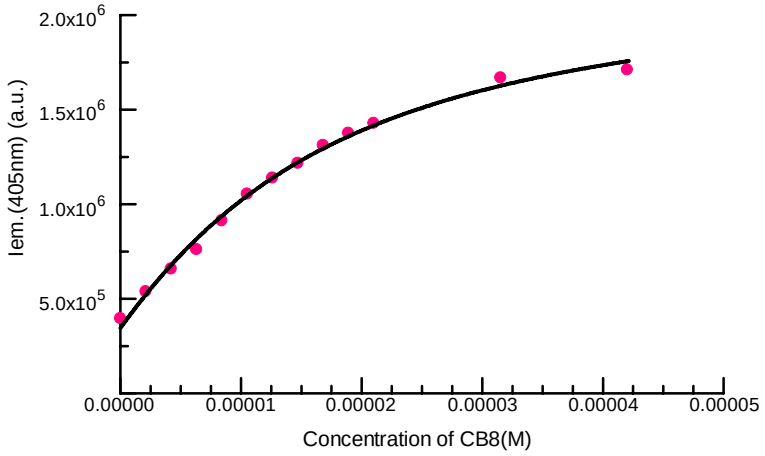

Figure SI-2. Fluorescence intensity at 405nm from a solution of 10 μM DPT^{2+} as a function of the added CB8 concentration. The data is best fitted to 1:1 binding model to obtain the equilibrium constant $K = 7.8 \times 10^4\ M^{-1}$.

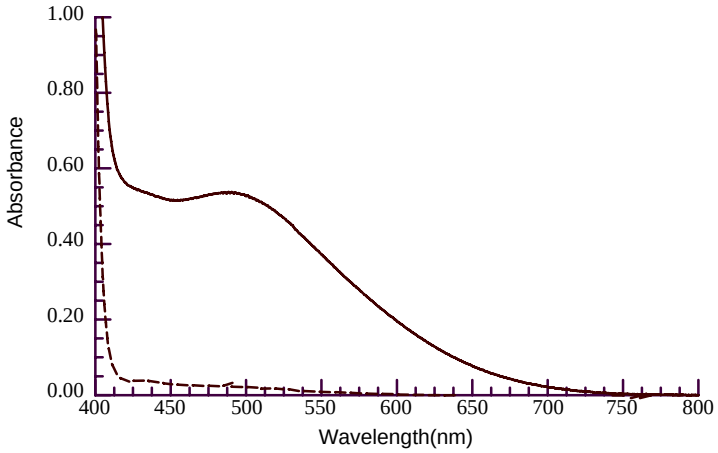

Figure SI-3. Electronic absorption spectra obtained in H_2O for a mixture of 0.52 mM DPT^{2+} and 1.05 mM serotonin (dashed line), and 0.52mM CB8 ,0.54mM DPT^{2+} and 1.05mM serotonin mixture (solid line)

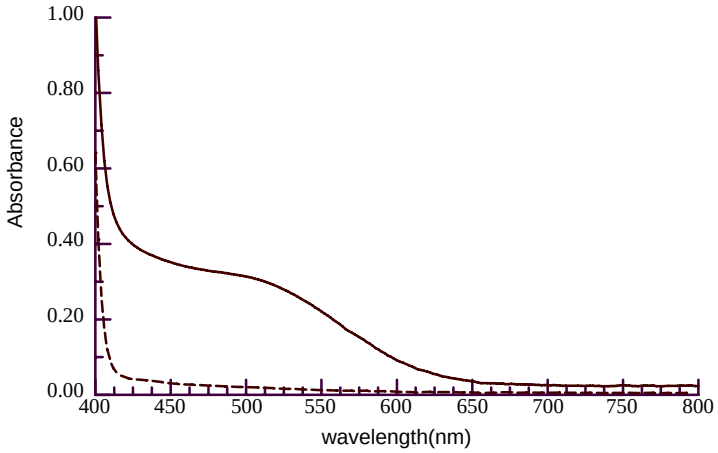

Figure SI-4. Electronic absorption spectra obtained in H_2O for a mixture of 0.5 mM DPT^{2+} and 1.73 mM tryptophan (dashed line), and 0.5 mM CB8 ,0.5 mM DPT^{2+} and 1.73mM tryptophan (solid line)

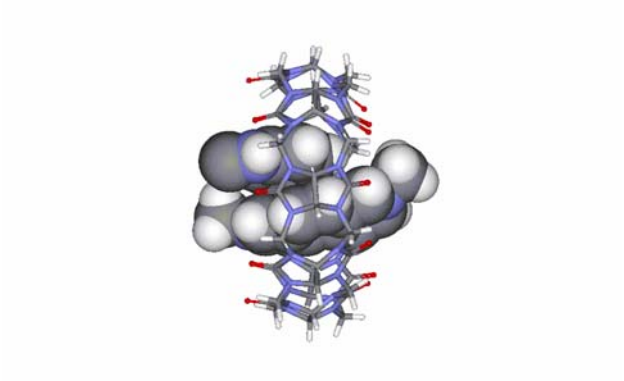

Figure SI-5. Energy- minimized structure of the I•DPT^{2+}@CB8 ternary complex (PM3)

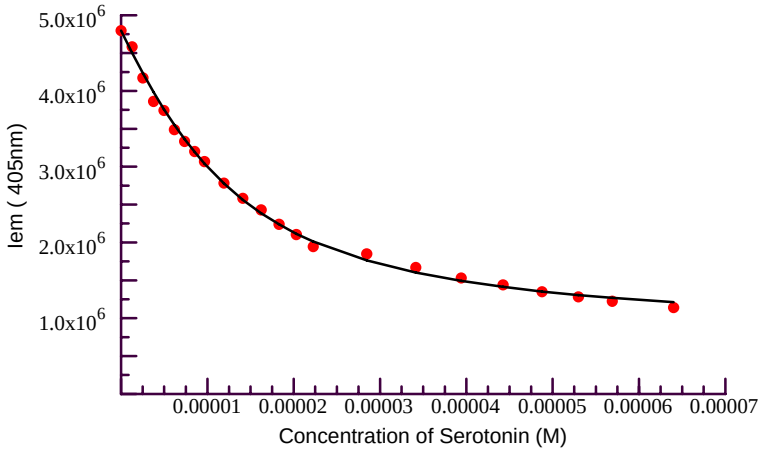

Figure SI-6. Fluorescence intensity at 405nm from a solution of 10 μM DPT^{2+} and 10 μM CB8 as a function of the added serontonin concentration. The data is best fitted to 1:1 binding model to obtain the equilibrium constant K=1.45× 10^5 M^{-1}.

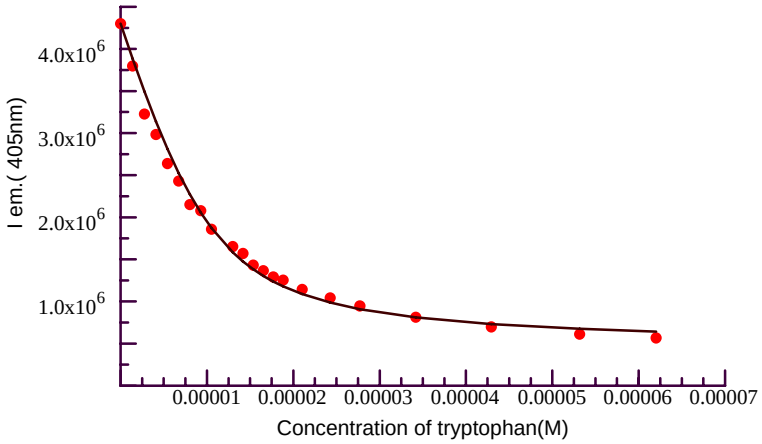

Figure SI-7. Fluorescence intensity at 405nm from a solution of 10 μM DPT^{2+} and 10 μM CB8 as a function of the added tryptophan concentration. The data is best fitted to 1:1 binding model to obtain the equilibrium constant K= 4.16× 10^5 M^{-1}.