

SUPPLEMENTARY MATERIALS

Self-assembly of Discrete Porphyrin/Calix[4]tube Complexes Promoted by Potassium Ion Encapsulation

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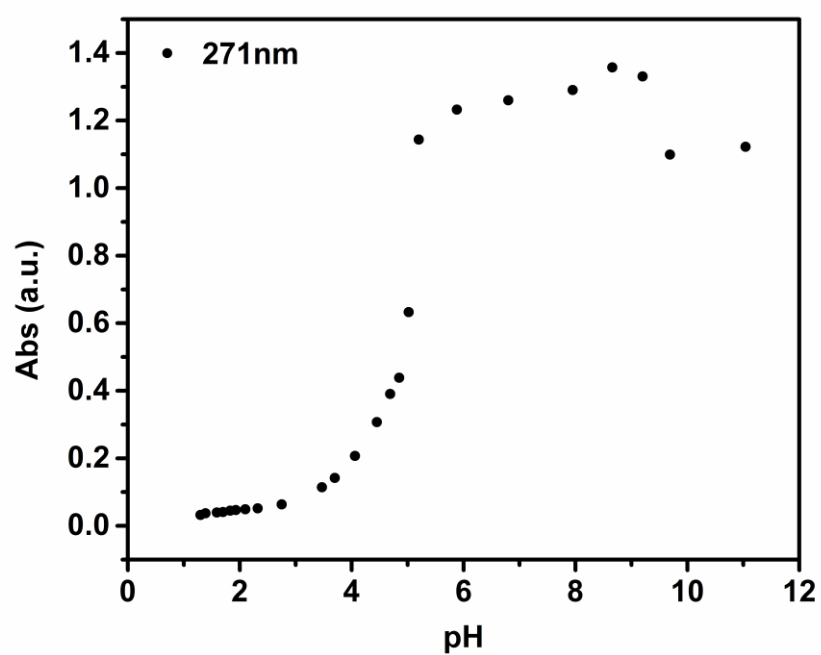


Figure S1. Absorbance variation (at 271 nm) *vs* pH of a 20 μ M water solution (pH = 3.0) of octa-amino calix[4]tube C4T.

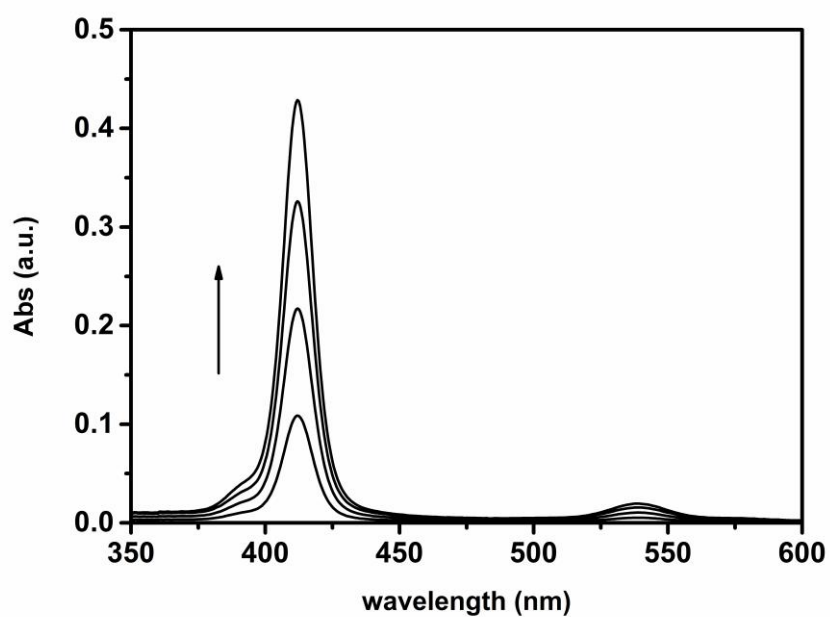


Figure S2. UV/vis absorption spectra of **CuTPPS** in aqueous solution at pH = 3.0 (**[CuTPPS]** ranged from 0.25 to 1 μM).

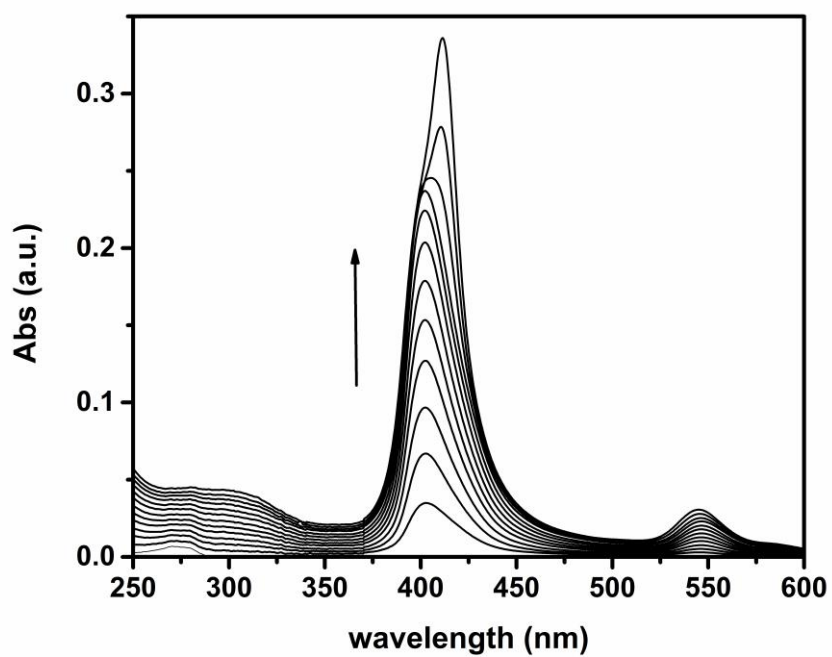


Figure S3. UV/vis absorption spectra recorded over the course of the titration of a 2 μM aqueous solution of **C4T** at pH 3.0 with successive aliquots of an aqueous solution of **CuTPPS** (**[CuTPPS]** ranged from 0.25 to 3.0 μM).

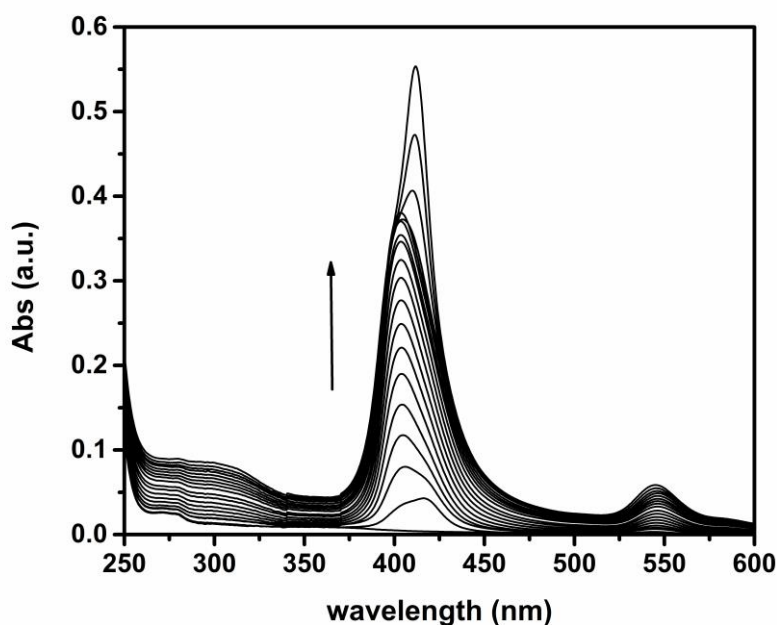


Figure S4. UV/vis absorption spectra recorded over the course of the titration of a 2 μM aqueous solution of **C4T@K⁺** at pH = 3 with successive aliquots of an aqueous solution of **CuTPPS** ($[\text{CuTPPS}]$ ranged from 0.25 to 4.5 μM).

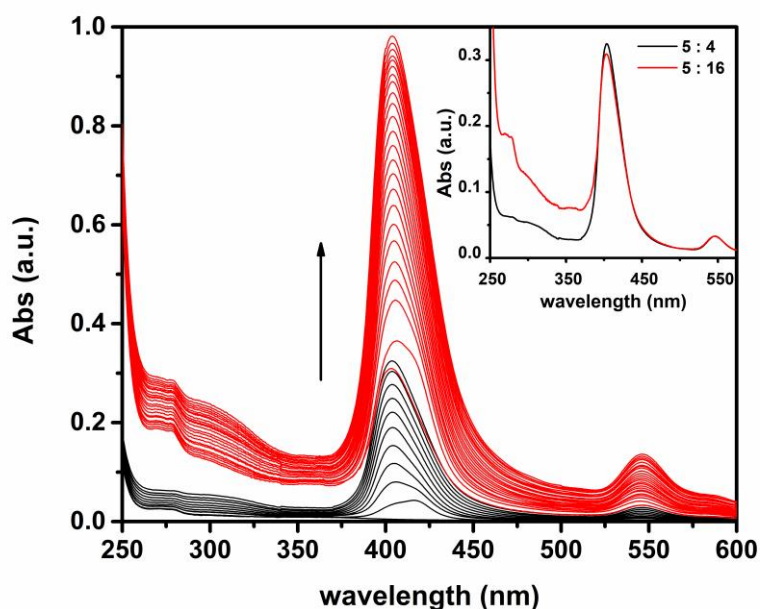


Figure S5. UV/vis absorption spectra ($\lambda_{\text{max}} = 412 \text{ nm}$) recorded over the course of the titration of a 2 μM aqueous solution of **C4T@K⁺** at pH = 3 with: *i*) successive aliquots of an aqueous solution of **CuTPPS** ($[\text{CuTPPS}]$ ranged from 0.25 to 2.5 μM) (black traces) and *ii*) successive aliquots of **CuTPPS** ($[\text{CuTPPS}]$ ranged from 2.5 to 8.5 μM) after increasing the concentration of **C4T@K⁺** to 8 μM . The inset shows the spectra of the 5:4-(**CuTPPS**/**C4T@K⁺**) and the 5:16-(**CuTPPS**/**C4T@K⁺**) assemblies (black and red traces respectively).

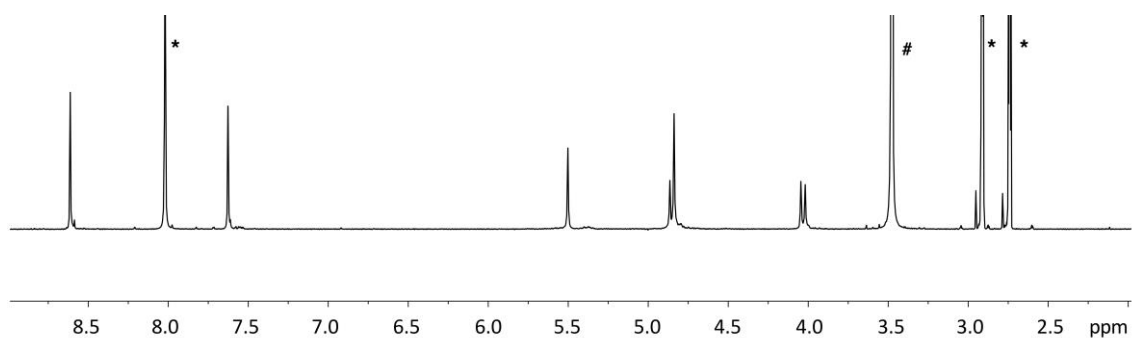


Figure S6. ^1H NMR ($\text{DMF-}d_7$, 298 K) of octa-nitro calix[4]tube **2**. The hashtag and the asterisks indicate the H_2O and the residual solvent peaks respectively.

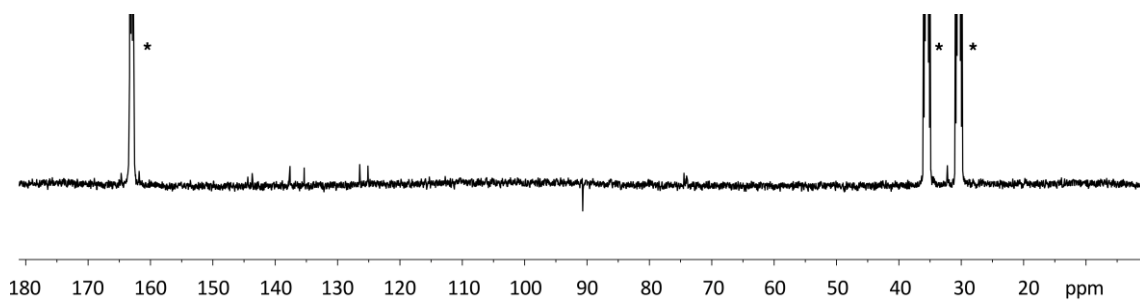


Figure S7. ^{13}C NMR ($\text{DMF-}d_7$, 298 K) of octa nitro calix[4]tube **2**. Asterisks indicate the residual solvent peaks.

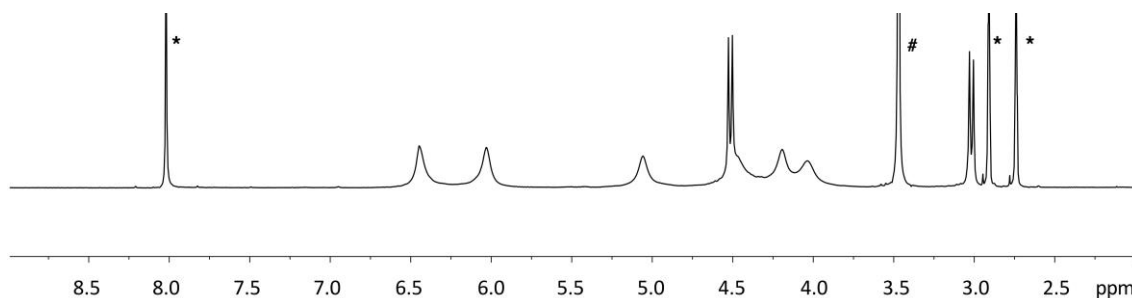


Figure S8. ^1H NMR ($\text{DMF-}d_7$, 298 K) of octa-amino calix[4]tube **C4T**. The hashtag and the asterisks indicate the H_2O and the residual solvent peaks respectively.

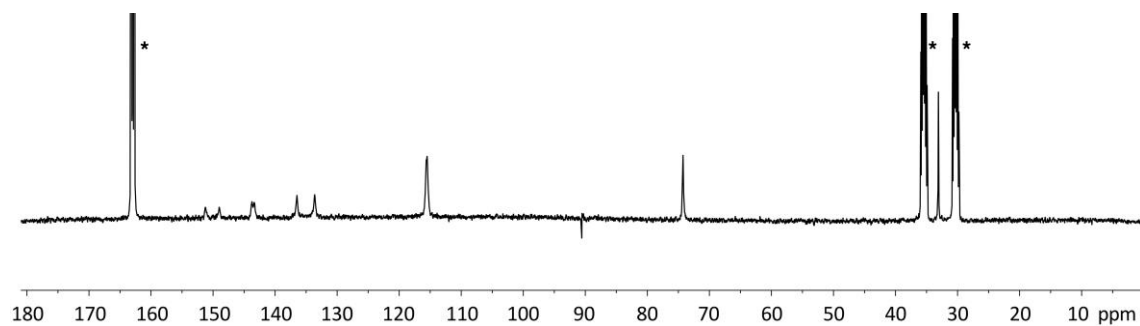


Figure S9. ^{13}C NMR ($\text{DMF-}d_7$, 298 K) of octa-amino calix[4]tube **C4T**. Asterisks indicate the residual solvent peaks.

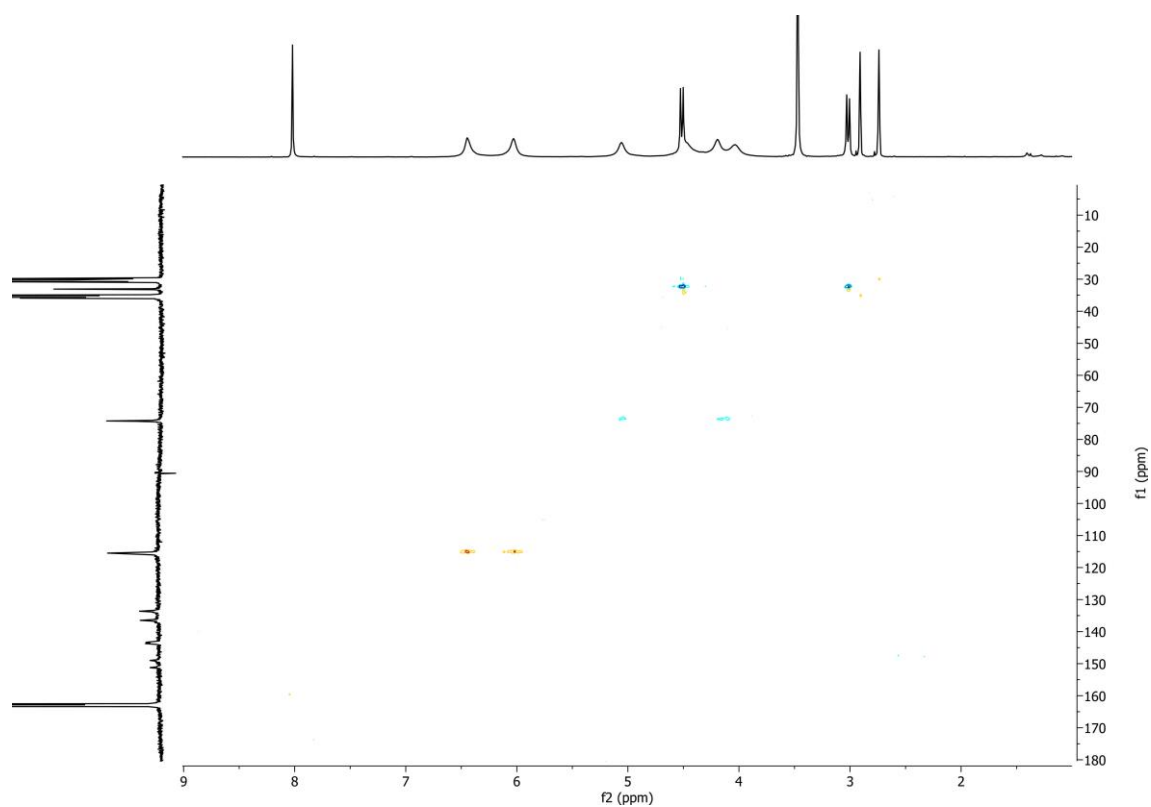


Figure S10. HMQC NMR (DMF-*d*₇, 298 K) of octa-amino calix[4]tube **C4T**.

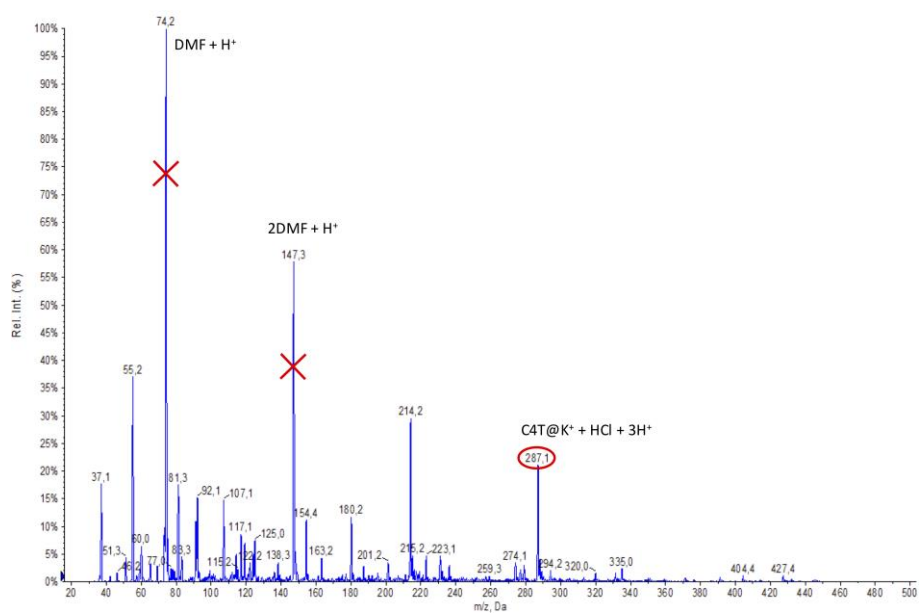


Figure S11. ESI(+)-MS spectrum of the potassium complex of octa-ammonium calix[4]tube **C4T@K⁺**.