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Supporting Information

Figure S1 – Job plot analysis at 503 nm for lucigenin (LCG) with (a) SC6 or (b) SC8. The total concentration was 3.0 μM in both cases. Excitation was performed at 368 nm.
Figure S2 – Variation of the fluorescence intensity at 503 nm (a) acquired upon addition of increasing concentrations of LiClO₄ in a solution containing 1.0 μM of SC6 and 0.5 μM of lucigenin; and (b) upon increasing the concentration of SC6 in solution containing LiClO₄ 0.1M and lucigenin 0.50 μM. The line represents theoretical curve obtained upon global fitting of the experimental data points to a binding model that considers the formation of 1:1 and 1:2 host:guest complexes of SC6 with both lucigenin and Li⁺ along with the 1:1:1 heteroternary complex.
Figure S3 – Variation of the fluorescence intensity at 503 nm (a) acquired upon addition of increasing concentrations of KClO₄ in a solution containing 0.5 μM of SC6 and 1.0 μM of lucigenin; and (b) upon increasing the concentration of SC6 in solution containing KClO₄ 0.05M and lucigenin 0.50 μM. The line represents theoretical curve obtained upon global fitting of the experimental data points to a binding model that considers the formation of 1:1 and 1:2 host:guest complexes of SC6 with both lucigenin and K⁺ along with the 1:1:1 heteroternary complex.
Figure S4 – Variation of the fluorescence intensity at 503 nm (a) acquired upon addition of increasing concentrations of CsClO$_4$ in a solution containing 0.5 μM of SC6 and 1.0 μM of lucigenin; and (b) upon increasing the concentration of SC6 in solution containing CsClO$_4$ 0.05M and lucigenin 0.50 μM. The line represents theoretical curve obtained upon global fitting of the experimental data points to a binding model that considers the formation of 1:1 and 1:2 host:guest complexes of SC6 with both lucigenin and Cs$^+$ along with the 1:1:1 heteroternary complex.
Figure S5 – Variation of the fluorescence intensity at 503 nm (a) acquired upon addition of increasing concentrations of LiClO₄ in a solution containing 0.5 µM of SC8 and 1.0 µM of lucigenin; and (b) upon increasing the concentration of SC8 in solution containing LiClO₄ 0.1M and lucigenin 0.50 µM. The line represents theoretical curve obtained upon global fitting of the experimental data points to a binding model that considers the formation of 1:1 and 1:2 host:guest complexes of SC8 with both lucigenin and Li⁺ along with the 1:1:1 heteroternary complex.
**Figure S6** – Variation of the fluorescence intensity at 503 nm (a) acquired upon addition of increasing concentrations of KClO$_4$ in a solution containing 0.5 µM of SC8 and 1.0 µM of lucigenin; and (b) upon increasing the concentration of SC8 in solution containing KClO$_4$ 0.1M and lucigenin 0.50 µM. The line represents theoretical curve obtained upon global fitting of the experimental data points to a binding model that considers the formation of 1:1 and 1:2 host:guest complexes of SC8 with both lucigenin and K$^+$ along with the 1:1:1 heteroternary complex.
Figure S7 – Variation of the fluorescence intensity at 503 nm (a) acquired upon addition of increasing concentrations of CsClO$_4$ in a solution containing 0.5 μM of SC8 and 1.0 μM of lucigenin; and (b) upon increasing the concentration of SC8 in solution containing CsClO$_4$ 0.05M and lucigenin 0.50 μM. The line represents theoretical curve obtained upon global fitting of the experimental data points to a binding model that considers the formation of 1:1 and 1:2 host:guest complexes of SC8 with both lucigenin and Cs$^+$ along with the 1:1:1 heteroternary complex.
Figure S8 – Mole fraction distribution of SC8:lucigenin complexes (a) in the absence of added NaClO₄ and (b) in the presence of 0.1 M of NaClO₄. In both cases the sodium counterions are also considered. The simulation was carry out assuming a constant concentration of lucigenin [LCG] = 0.5 µM.
Figure S9 – NOESY spectrum obtained for a solution of lucigenin 1.37 mM with SC6 0.4 mM in D$_2$O at 5°C. Mixing time 400 ms.