

Electronic Supplementary Information

Binding studies and anion-selective electrodes with neutral isophthalamide-based receptors†

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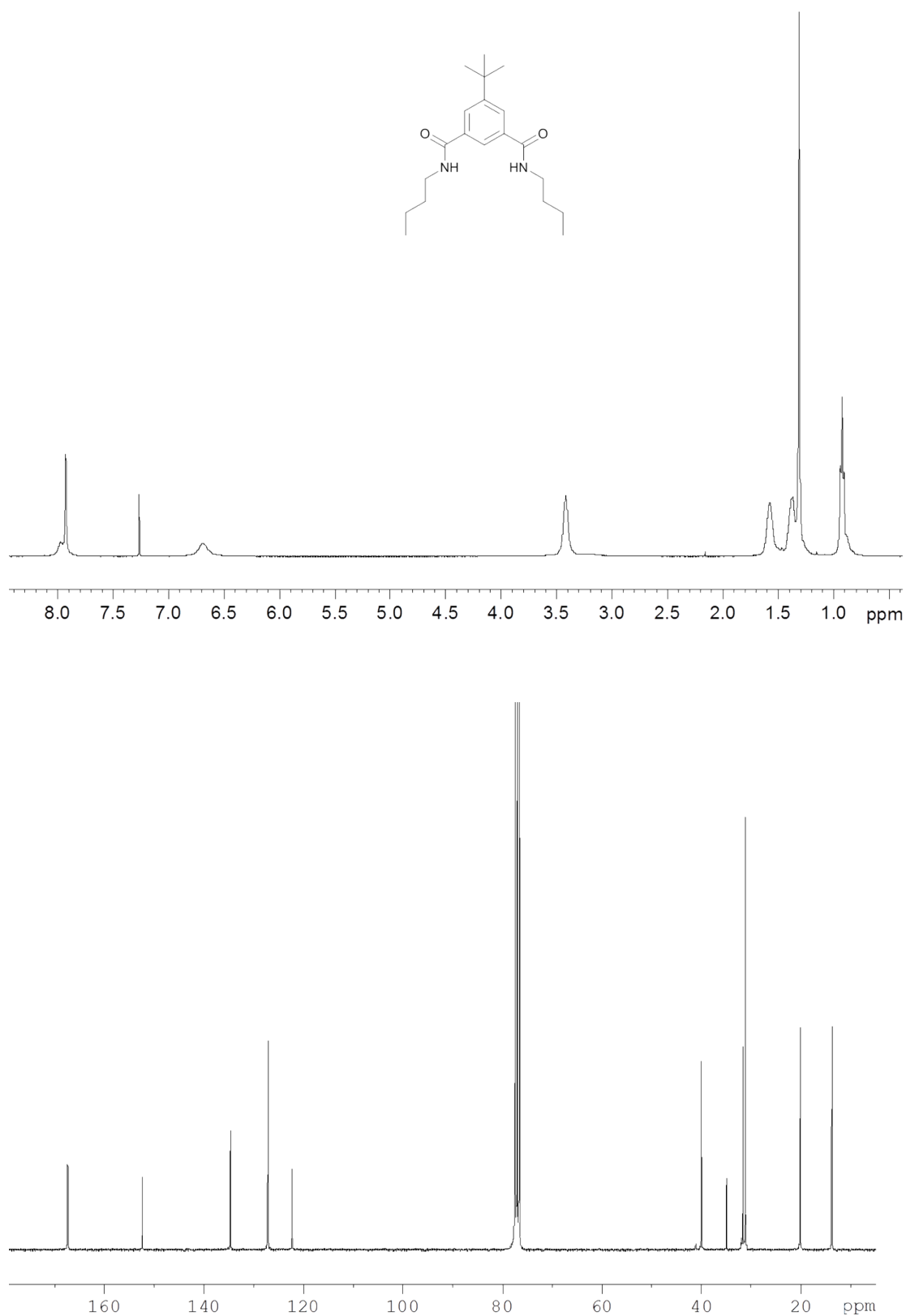


Figure 1. ^1H -NMR and ^{13}C -NMR spectra of compound 1.

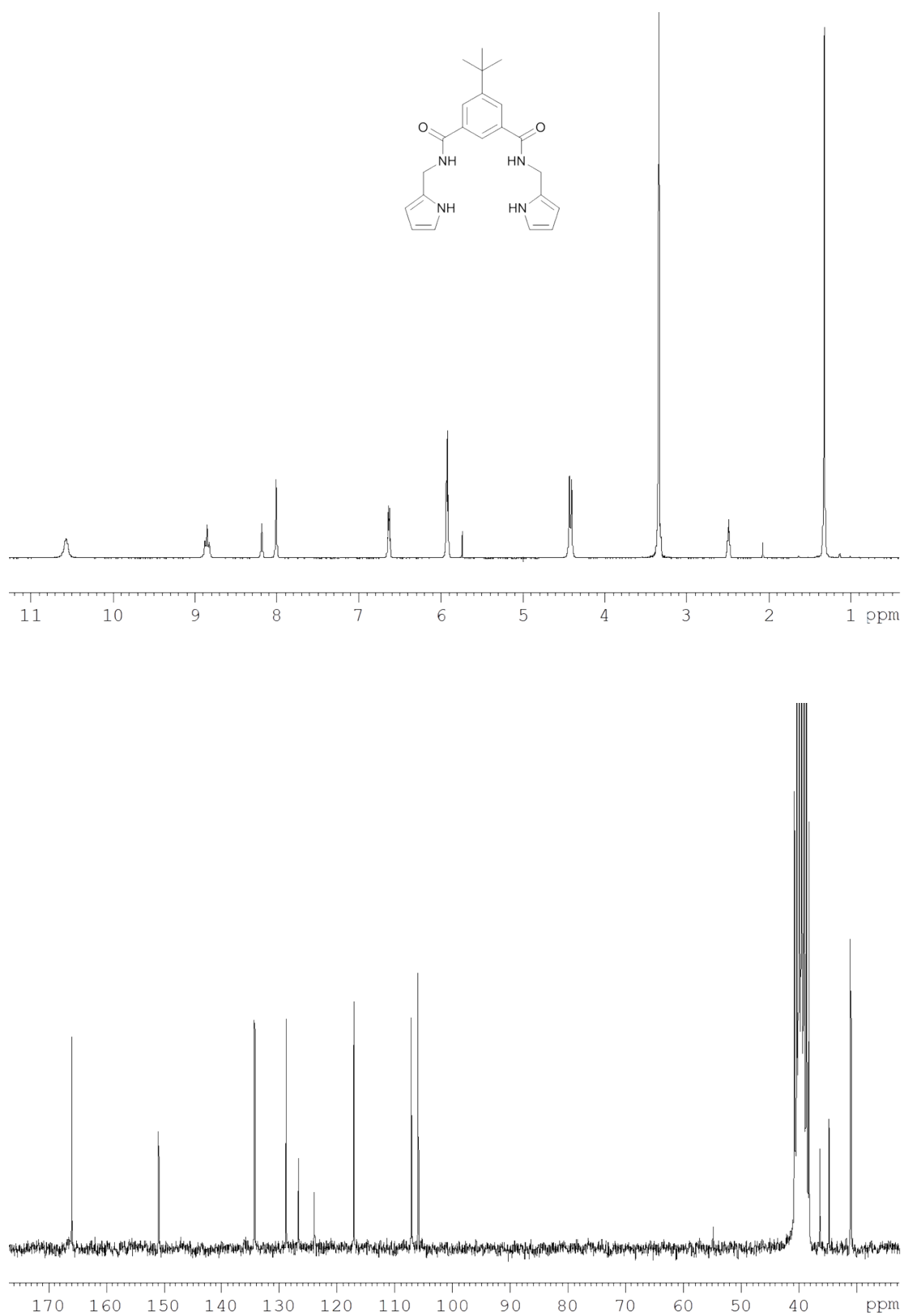


Figure 2. ^1H -NMR and ^{13}C -NMR spectra of compound 2.

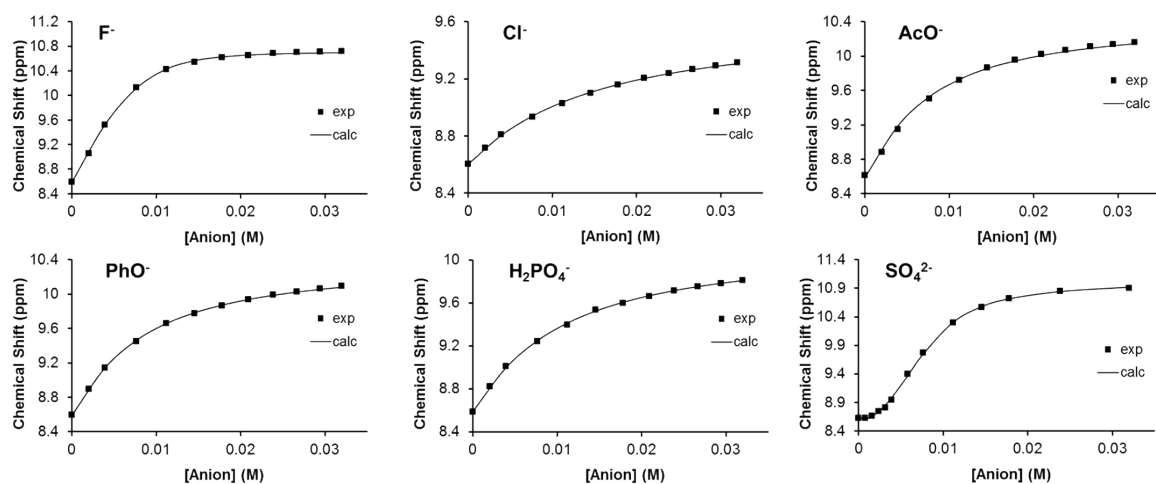


Figure 3. Fit plots for the ^1H -NMR titration experiments of **1** in $\text{DMF-}d_7$ following the NH_{amide} .

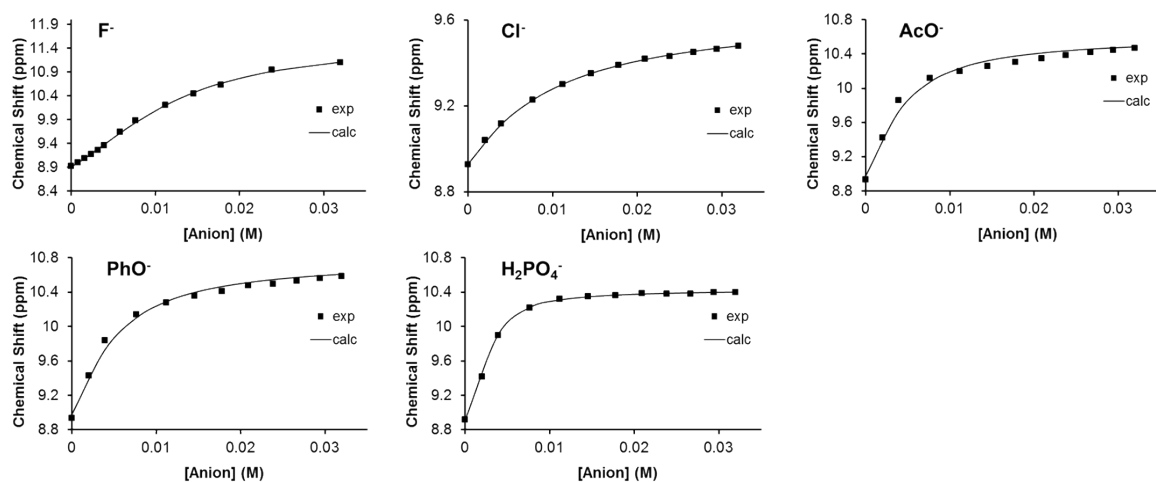


Figure 4. Fit plots for the ^1H -NMR titration experiments of **2** in $\text{DMF-}d_7$ following the NH_{amide} .

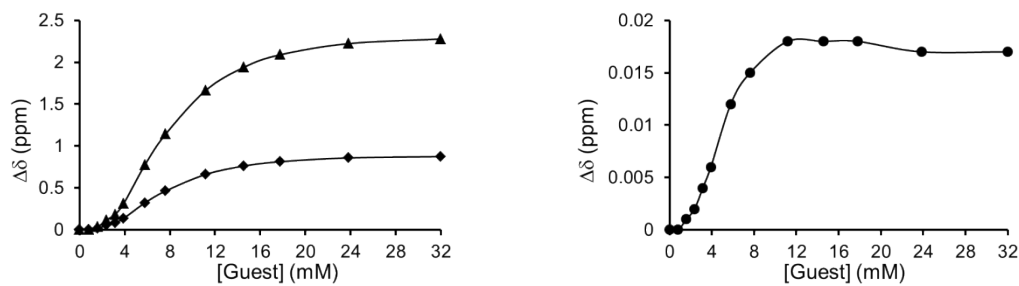


Figure 5. TBA_2SO_4 titration isotherms of **1**. $\square$ NH_{amide} , $\blacklozenge$ CH-2, $\bullet$ CH-4&6.

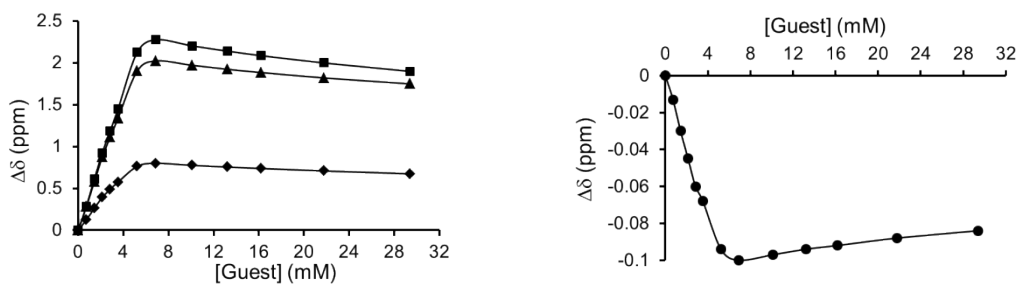


Figure 6. TBA₂SO₄ titration isotherms of **2**. ■ NH_{pyrrole}, □ NH_{amide}, ◆ CH-2, ● CH-4&6.

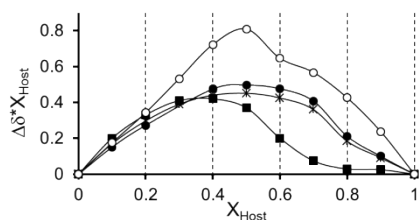


Figure 7. Job plots of compound **2** following the NH_{amide}. ■ F⁻, ○ PhCOO⁻, ● H₂PO₄⁻, ○ SO₄²⁻.

Table S1. Logarithmic selectivity coefficients calculated by the separate solution method.

Anion	Membrane B (blank membrane)	Membrane D (with receptor 1)	Membrane F (with receptor 2)
Perchlorate	5.3	3.2	3.5
Salicylate	4.9	2.7	3.1
Thiocyanate	3.8	2.1	2.6
Nitrate	3.6	0.9	1.7
Iodide	3.2	2.1	2.6
Bromide	1.9	0.3	1.7
Dihydrogenphosphate	-1.9	-2.2	-1.1
Sulfate	-2.2	-2.3	0.1
Fluoride	-2.9	-0.3	-0.1

Standard deviation < 0.1

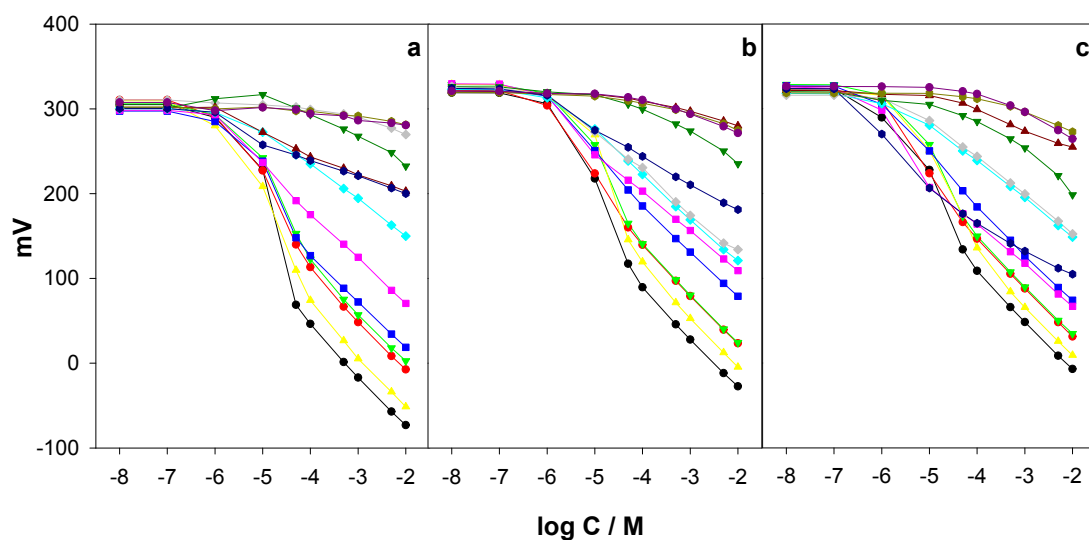


Figure 8. Calibration plots for (a) membrane B (blank membrane), (b) membrane D (receptor 1) and (c) membrane F (receptor 2). ● ClO_4^- , ▲ Salicylate, ● SCN^- , □ I^- , ■ NO_3^- , ■ Br^- , ◆ Cl^- , ● SO_4^{2-} , ▲ AcO^- , □ H_2PO_4^- , ◆ F^- , ● HCO_3^- , ● Oxalate.

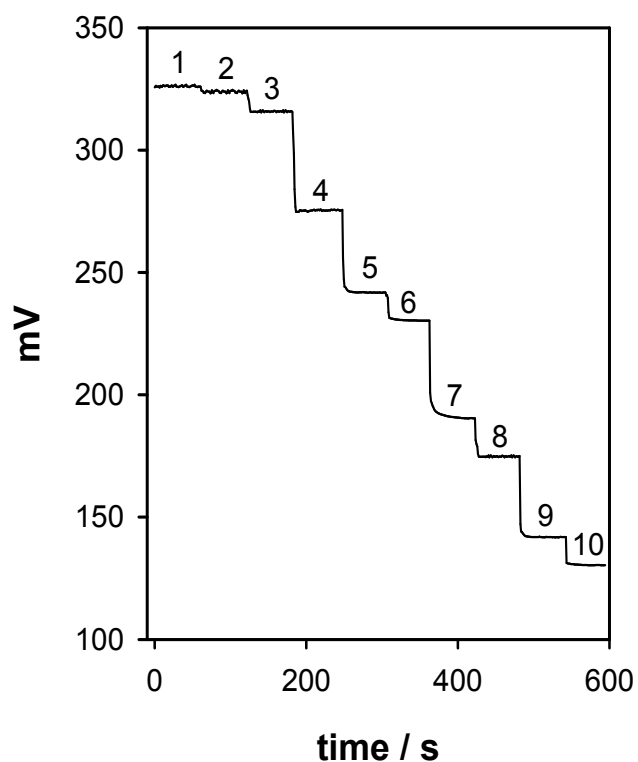


Figure 9. Time trace using membrane D for fluoride concentrations of (1) 1×10^{-8} , (2) 1×10^{-7} , (3) 1×10^{-6} , (4) 1×10^{-5} , (5) 5×10^{-5} , (6) 1×10^{-4} , (7) 5×10^{-4} , (8) 1×10^{-3} , (9) 5×10^{-3} and (10) 1×10^{-2} M.