

**Electronic Supplementary Information:**  
**Anion binding by *p*-aminoazobenzene derived aromatic amides.**  
**Spectroscopic and electrochemical studies**

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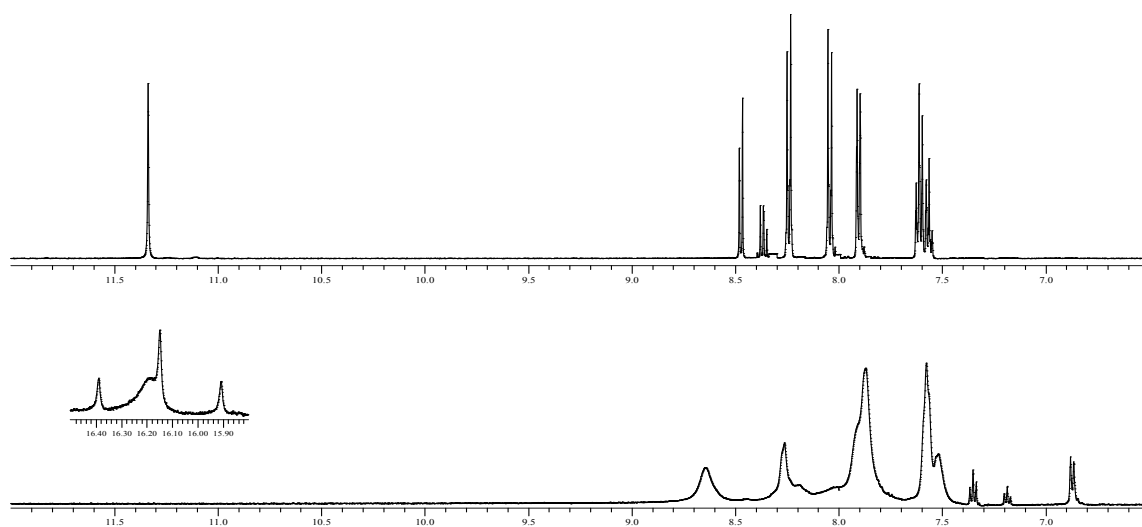
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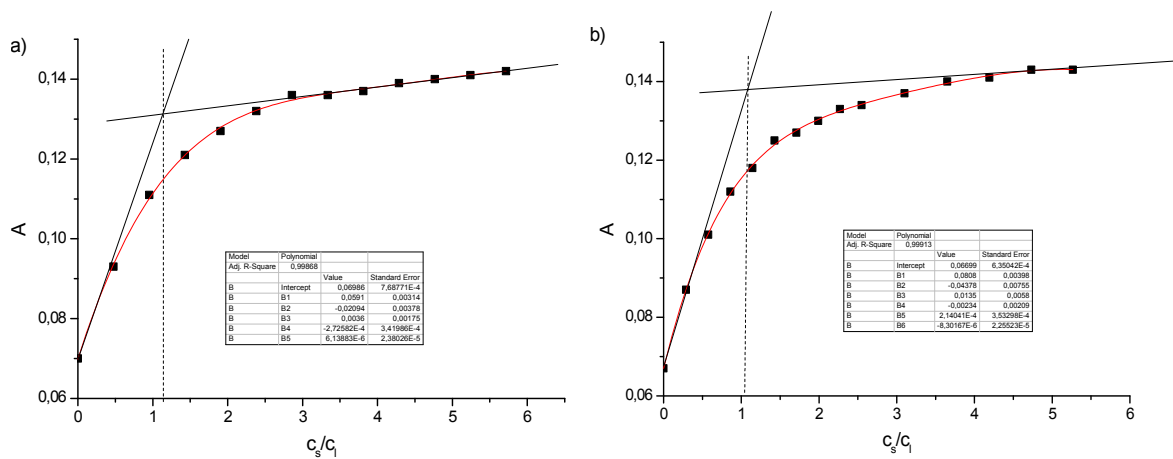
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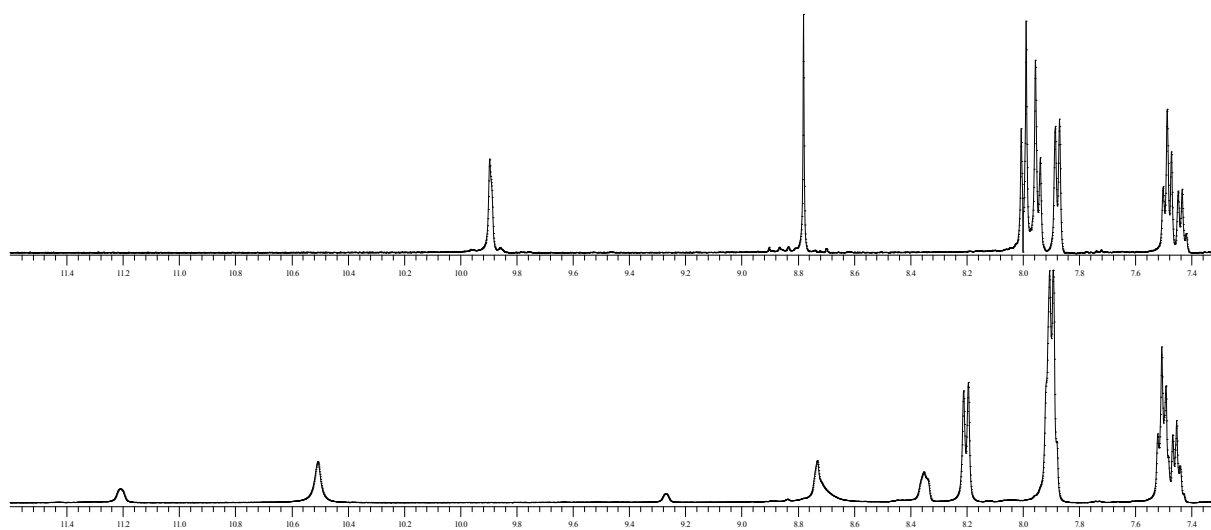
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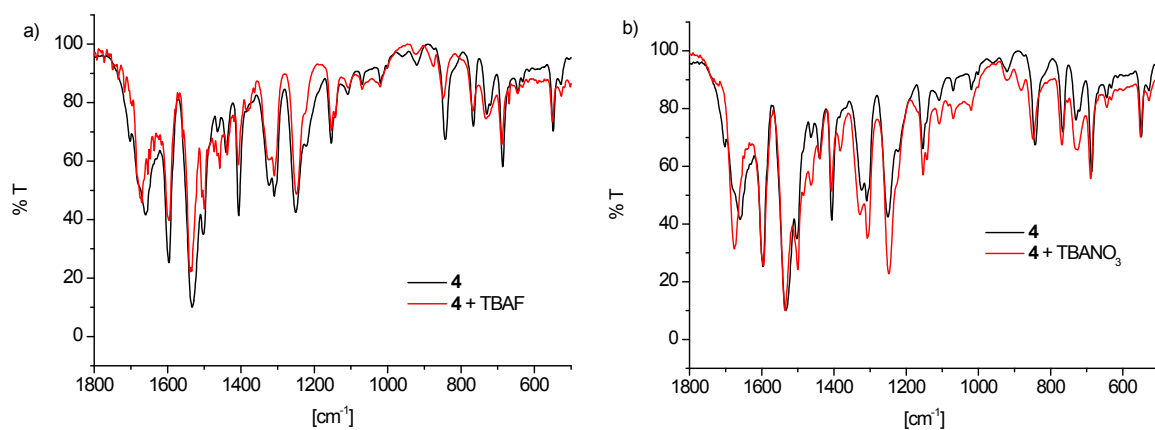
**Fig. ESI1** The comparison of  $^1\text{H}$  NMR spectra of free ligand 2 (top) and after addition of tetra-*n*-butylammonium fluoride (2:F $^-$  = 1:1, bottom) in  $\text{DMSO-}d_6$ .



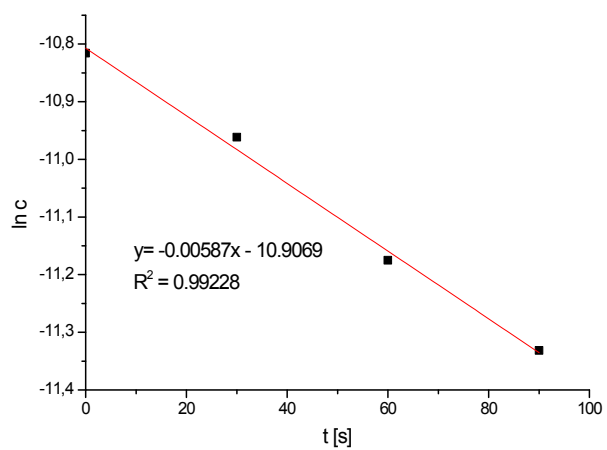
**Fig. ESI2** Molar ratio plot obtained from spectrophotometric titration of ligand **4** with tetra-*n*-butylammonium a) benzoate ( $c_4 = 1.37 \times 10^{-5}$  M,  $0 \leq R \leq 5.72$ ), b) fluoride ( $c_4 = 9.13 \times 10^{-6}$  M,  $0 \leq R \leq 3.13$ ) in chloroform; R= salt/ligand molar ratio.



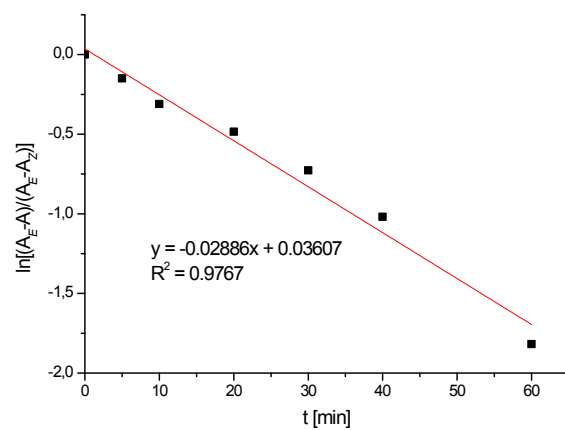
**Fig. ESI3** The comparison of  $^1\text{H}$  NMR spectra of free ligand **4** (top) and its complex (1:1) with tetra-*n*-butylammonium fluoride (bottom) in chloroform-*d*.



**Fig. ESI4** The comparison of FTIR spectra (KBr pellets) of the ligand **4** and its complex with a) tetra-*n*-butylammonium fluoride (1:1); b) tetra-*n*-butylammonium nitrate (1:1).



**Fig. ES15** Plot of the first-order reaction determined for *trans* to *cis* isomerization of ligand **4** ( $c_4 = 2.01 \times 10^{-5}$  M) solution in chloroform ( $\lambda = 354$  nm).



**Fig. ESI6** Plot of the first-order reaction determined for thermal *cis* to *trans* isomerization of ligand **4** ( $c_{A_{trans}} = 2.01 \times 10^{-5}$  M) solution in chloroform ( $\lambda = 354$  nm).