Supplementary Material (ESI) for New Journal of Chemistry

Anion triggered electropolymerisation in ferrocene functionalised *ortho*-phenylenediamine based receptors

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Supplementary information

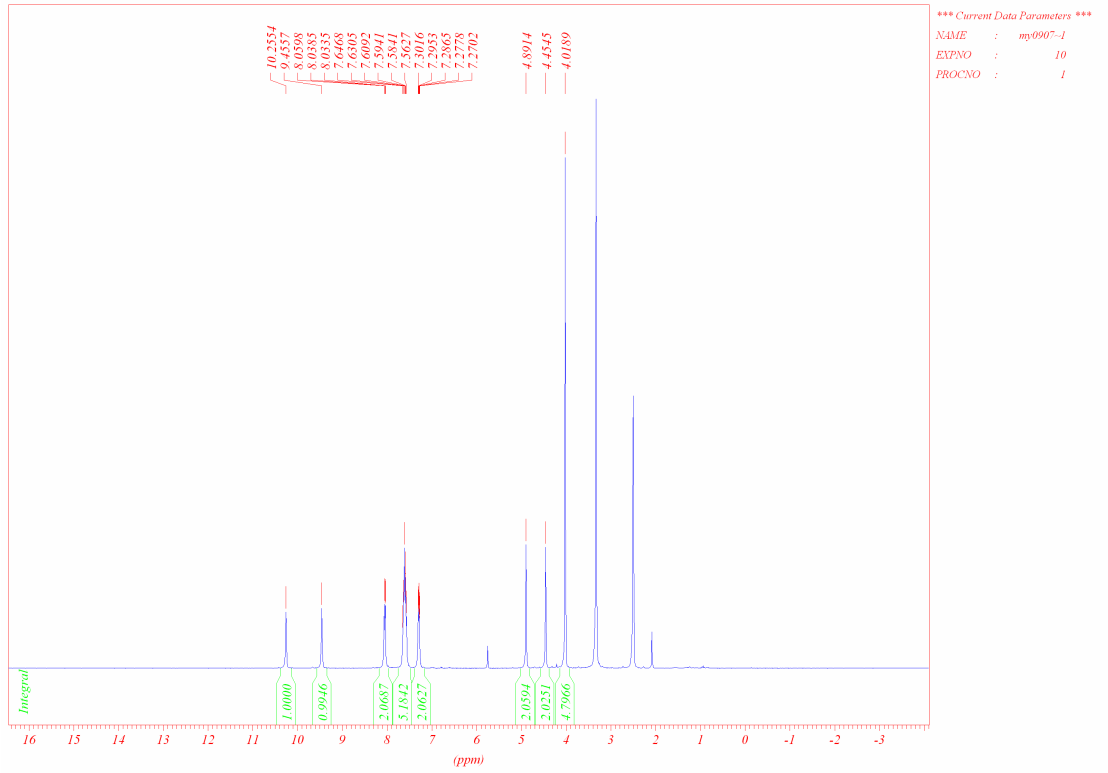

Figure S1 ^{1}H NMR spectrum of compound **1** in DMSO-d_6

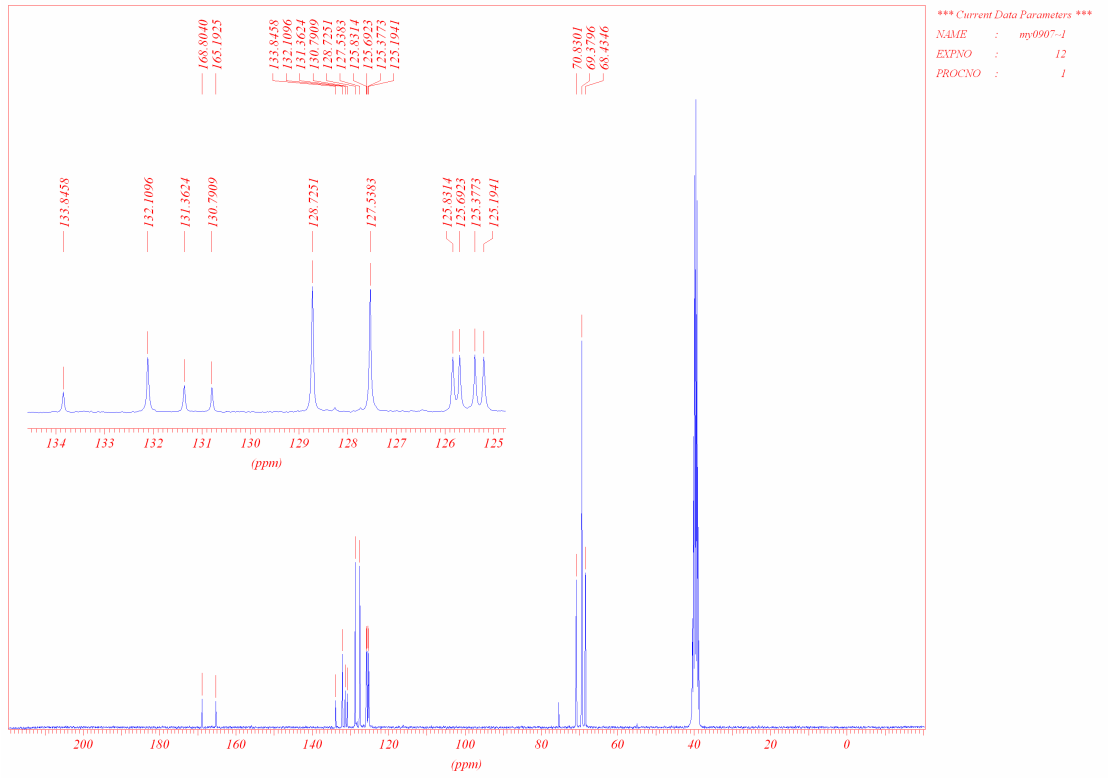

Figure S2 $^{13}C\{^{1}H\}$ NMR spectrum of compound **1** in DMSO-d_6

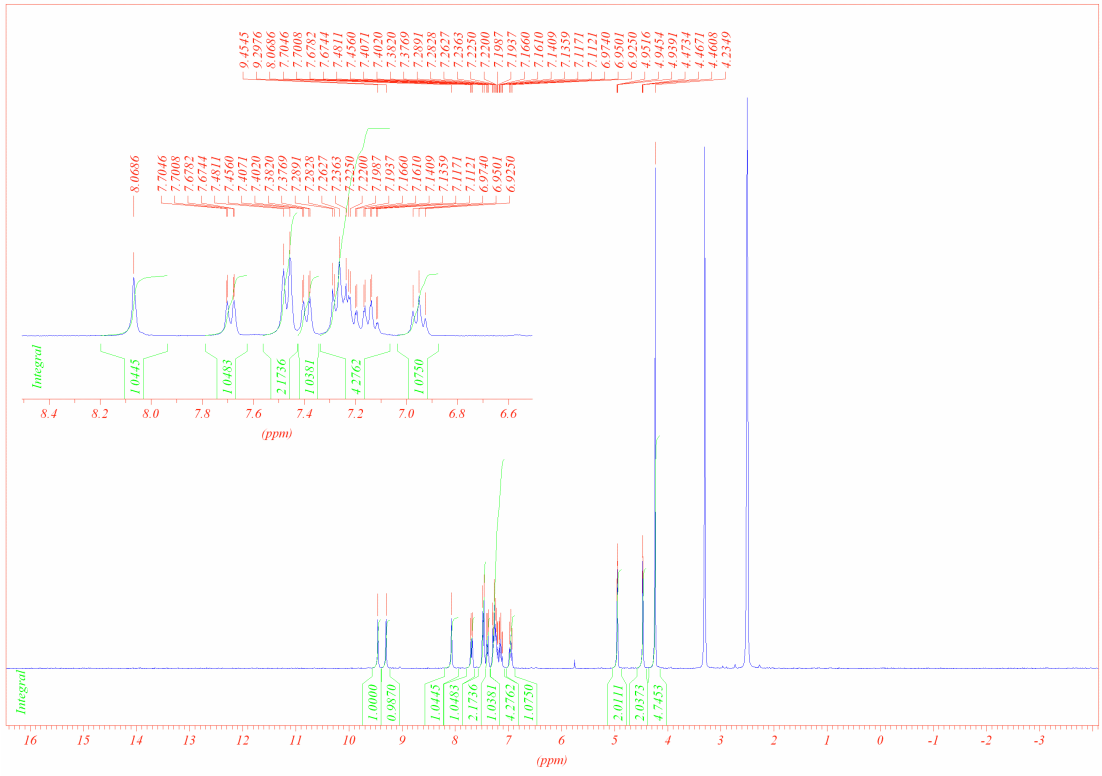

Figure S3 ^{1}H NMR spectrum of compound **2** in DMSO-d_6

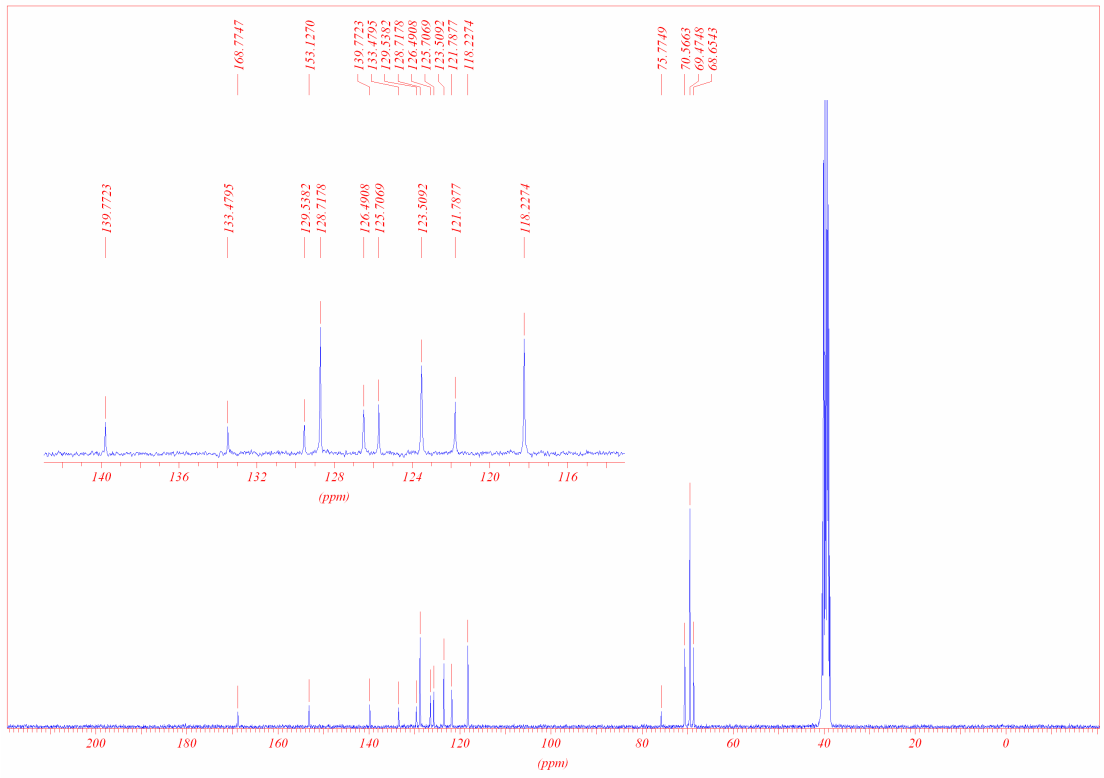

Figure S4 $^{13}C\{^{1}H\}$ NMR spectrum of compound **2** in DMSO-d_6

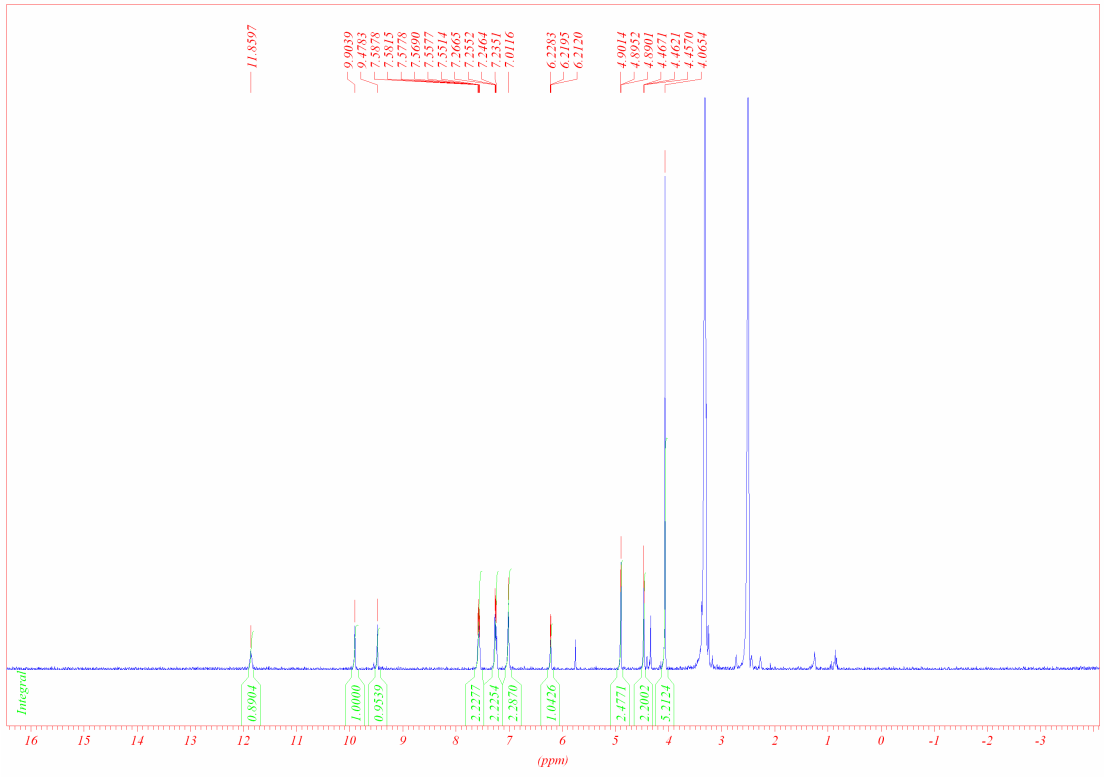

Figure S5 ^{1}H NMR spectrum of compound **3** in DMSO-d_6

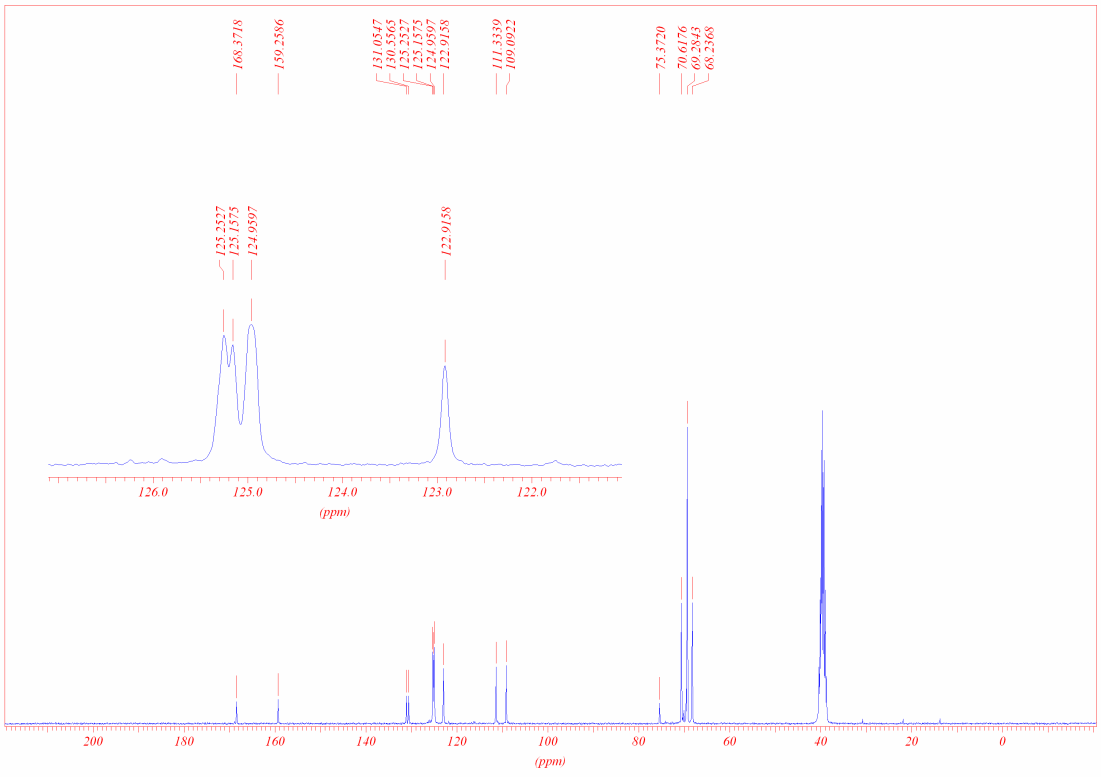

Figure S6 $^{13}C\{^{1}H\}$ NMR spectrum of compound **3** in DMSO-d_6

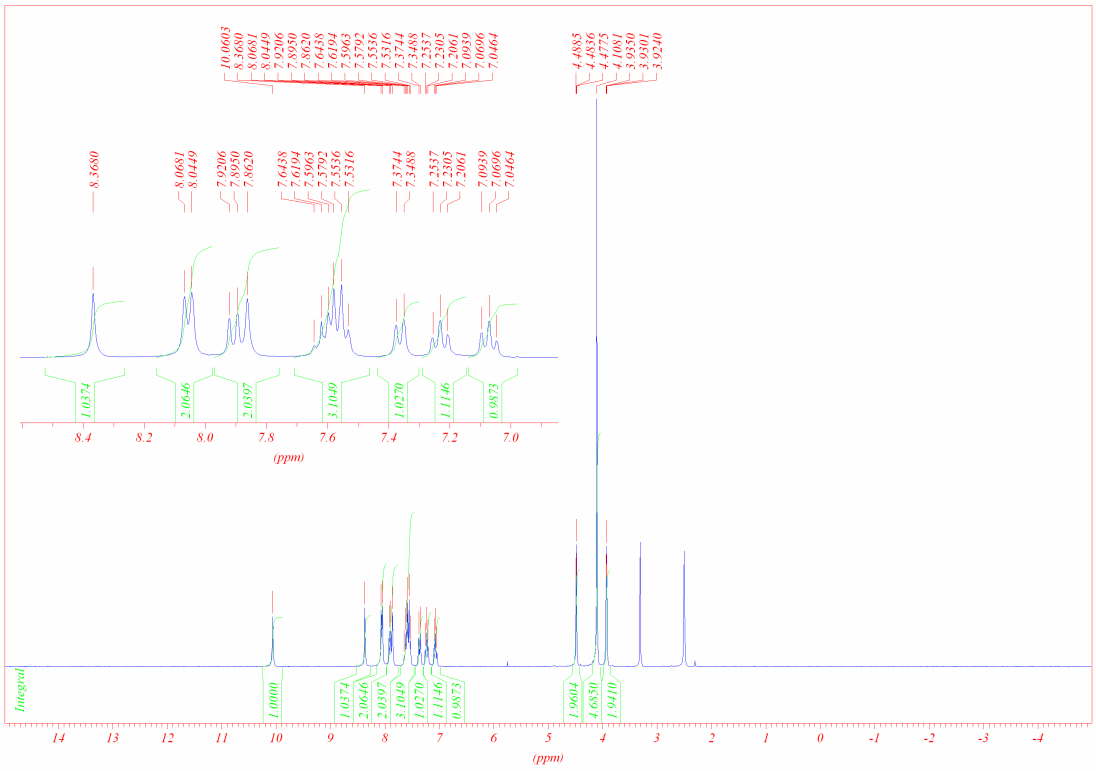

Figure S7 ^{1}H NMR spectrum of compound **4** in DMSO-d_6

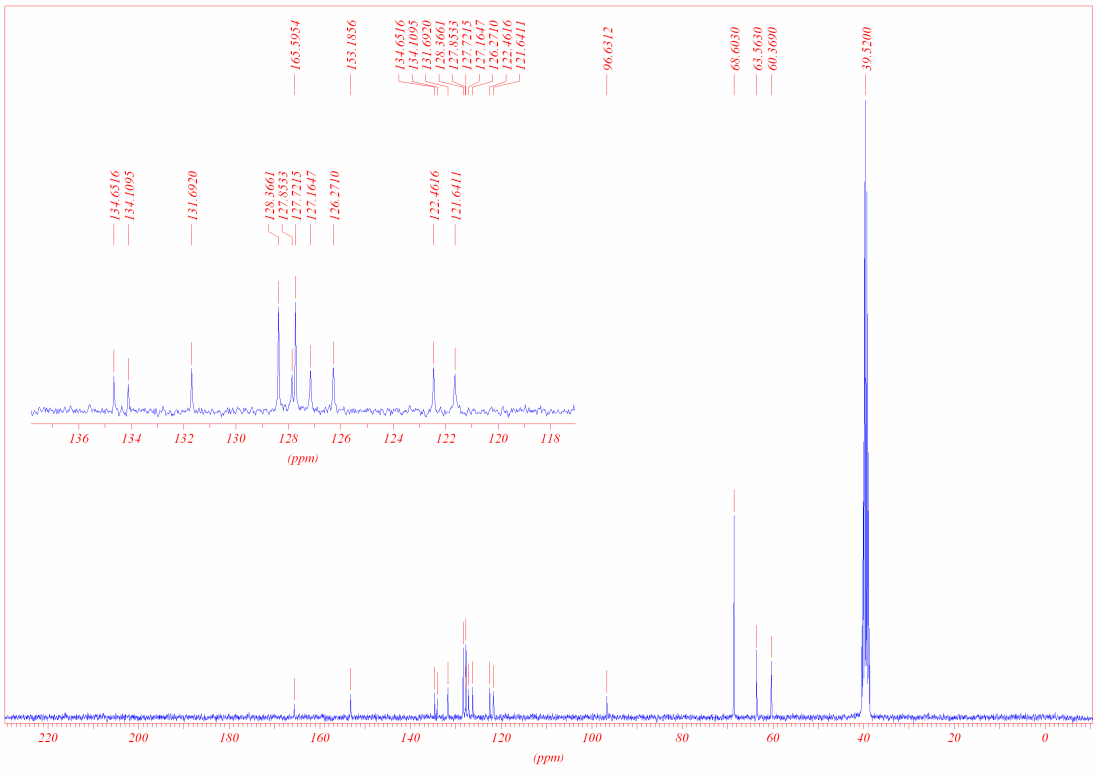

Figure S8 $^{13}C\{^{1}H\}$ NMR spectrum of compound **4** in DMSO-d_6

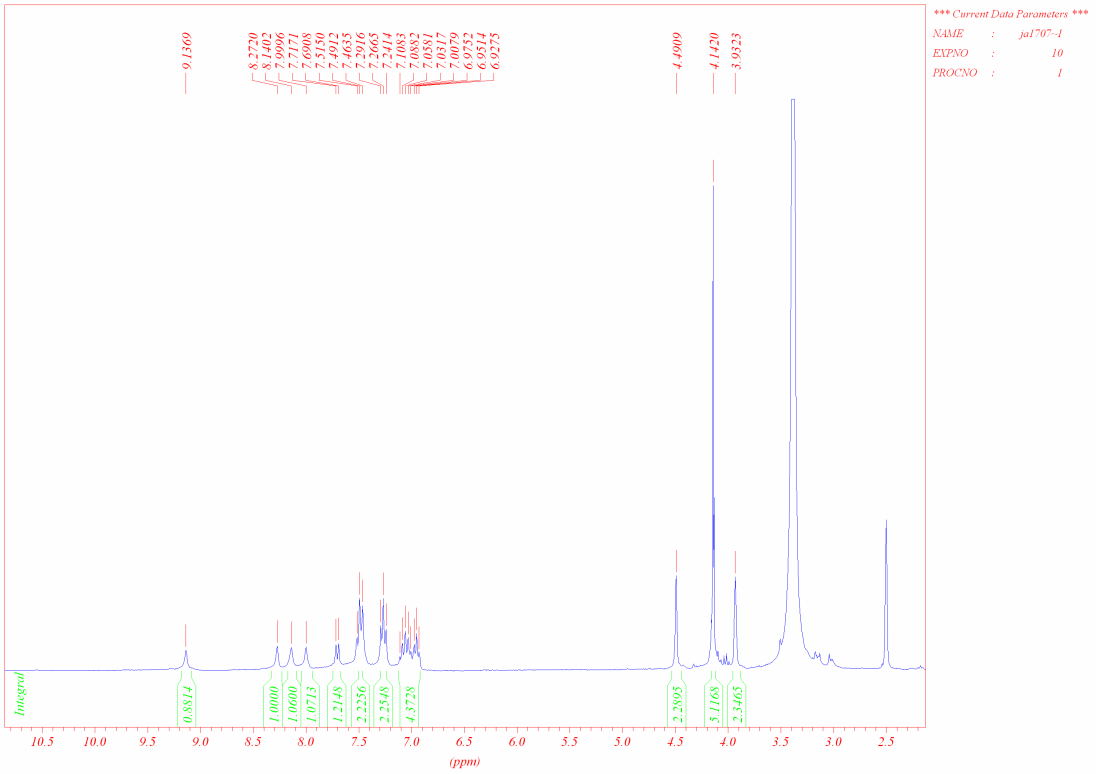

Figure S9 ^{1}H NMR spectrum of compound **5** in DMSO-d_6

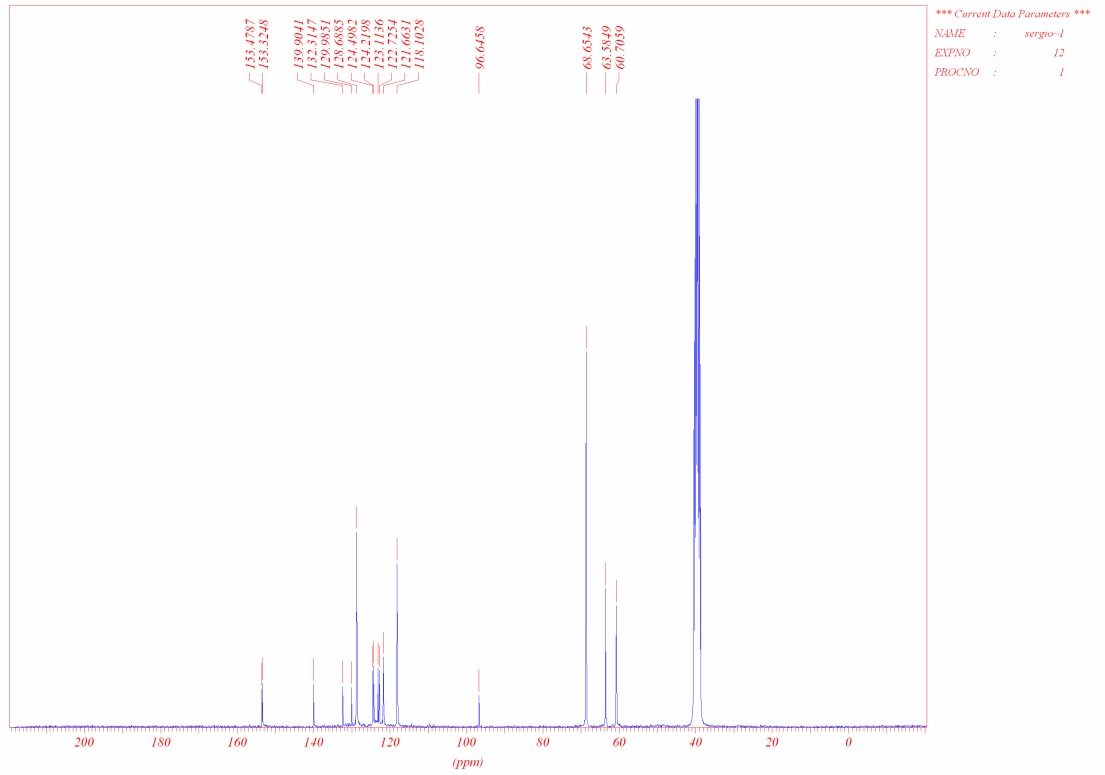

Figure S10 $^{13}C\{^{1}H\}$ NMR spectrum of compound **5** in DMSO-d_6

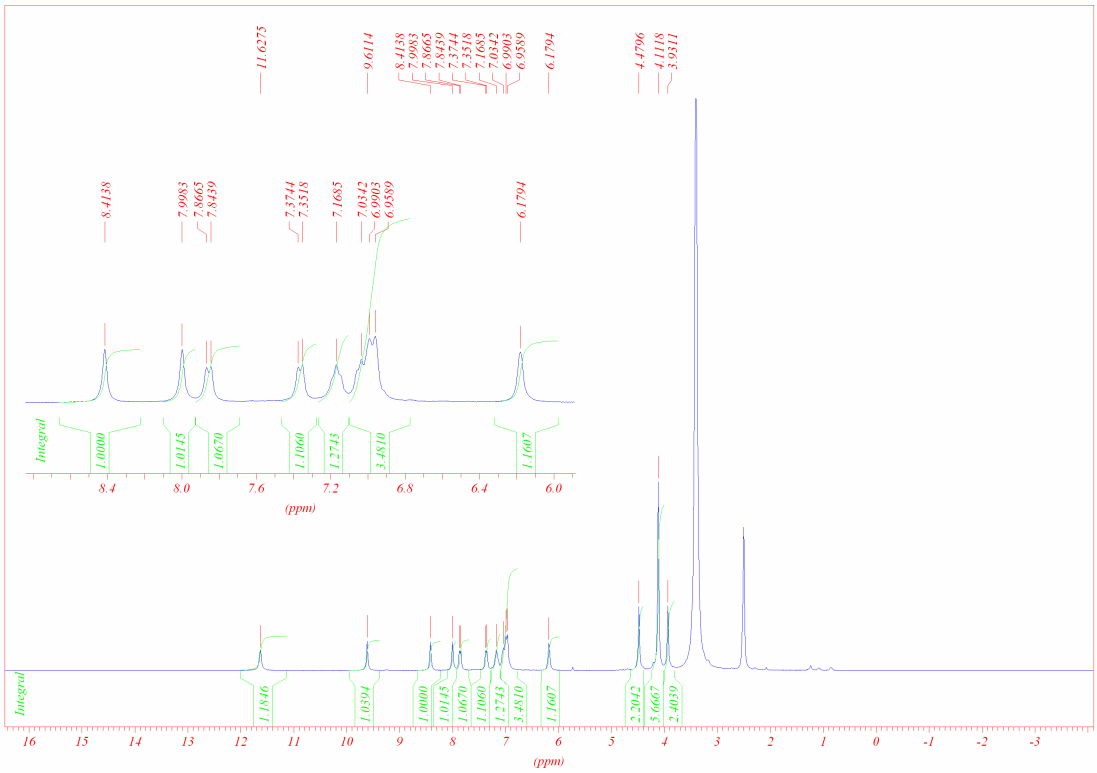

Figure S11 ^{1}H NMR spectrum of compound **6** in DMSO-d_6

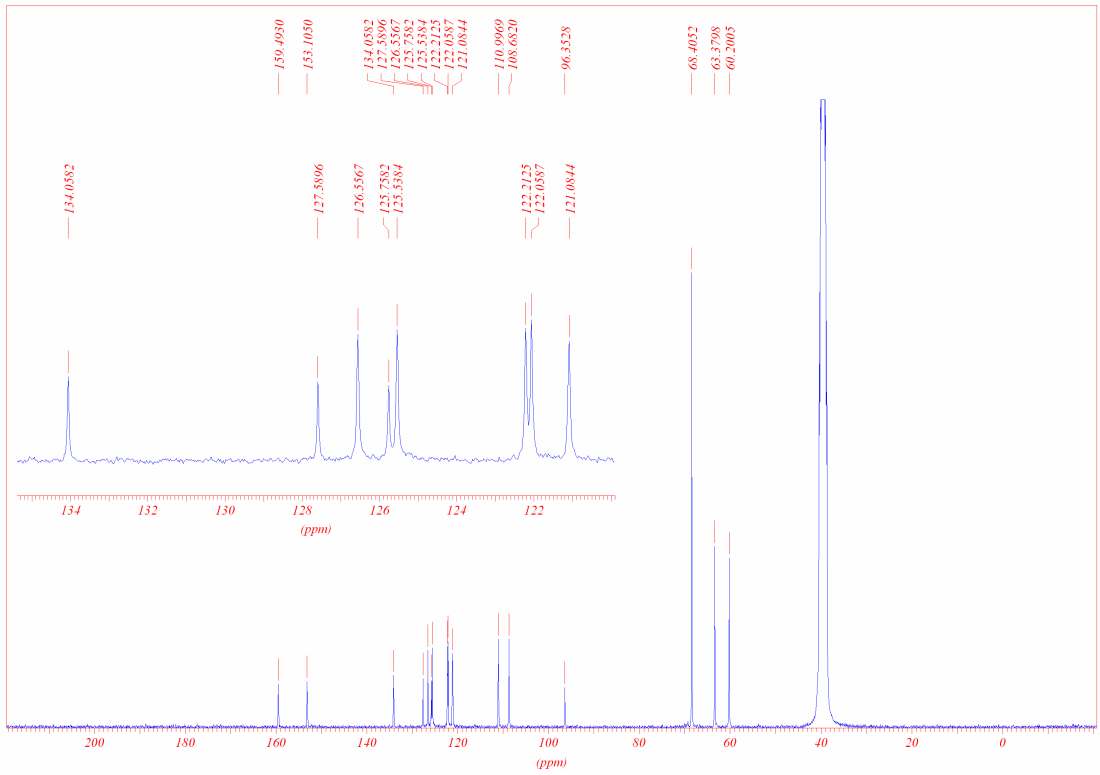

Figure S12 $^{13}C\{^{1}H\}$ NMR spectrum of compound **6** in DMSO-d_6

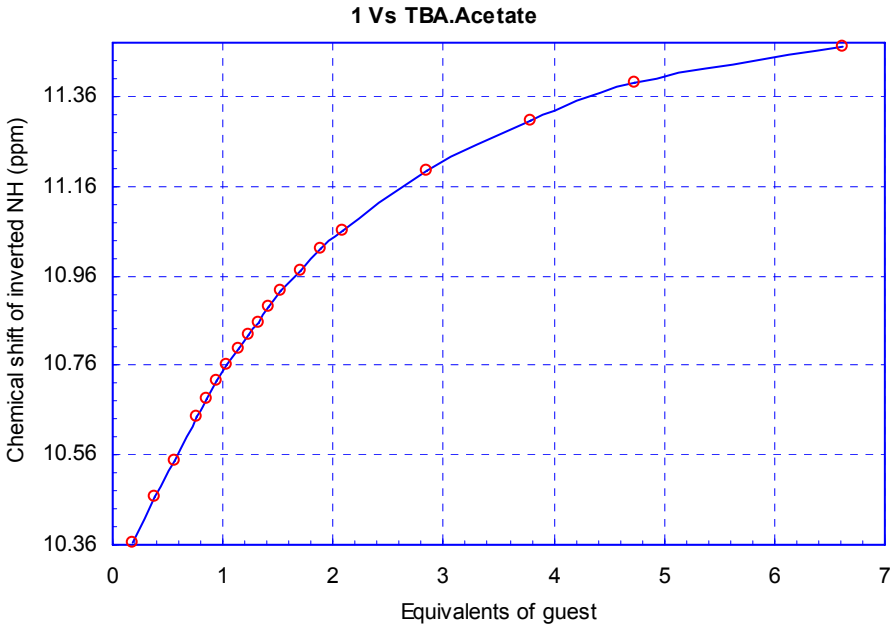

Figure S13 ^{1}H NMR titration curve of **1** with tetrabutylammonium acetate.

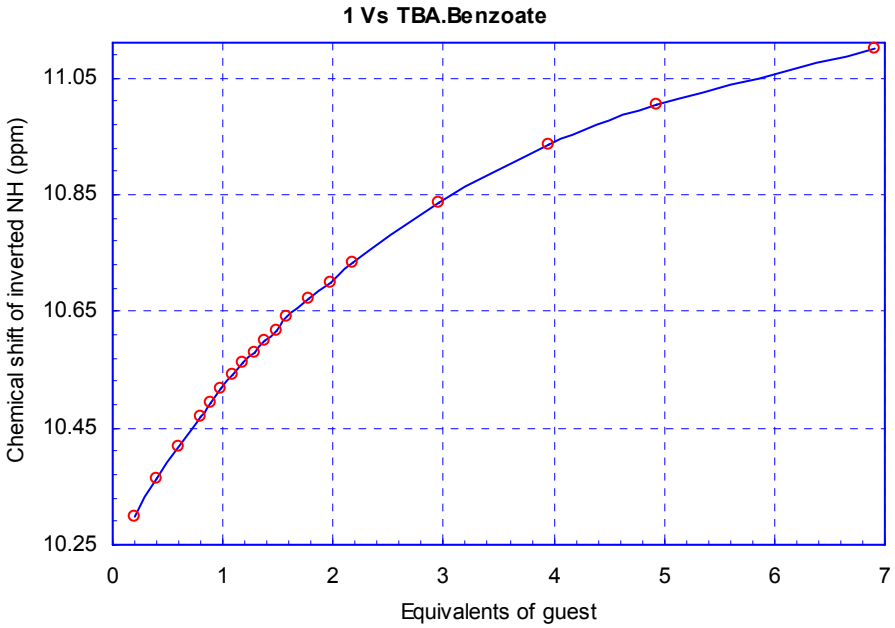

Figure S14 ^{1}H NMR titration curve of **1** with tetrabutylammonium benzoate.

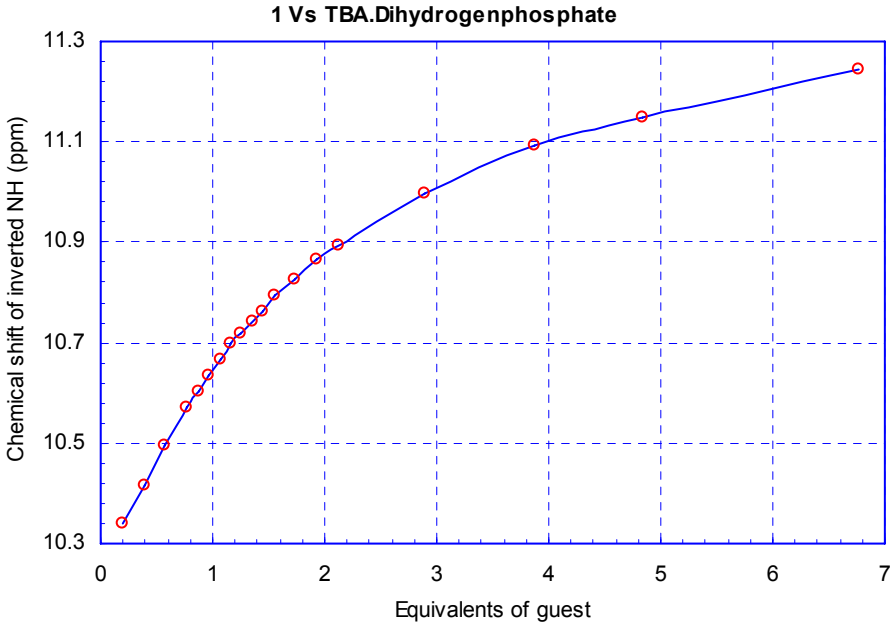

Figure S15 ^{1}H NMR titration curve of **1** with tetrabutylammonium dihydrogenphosphate.

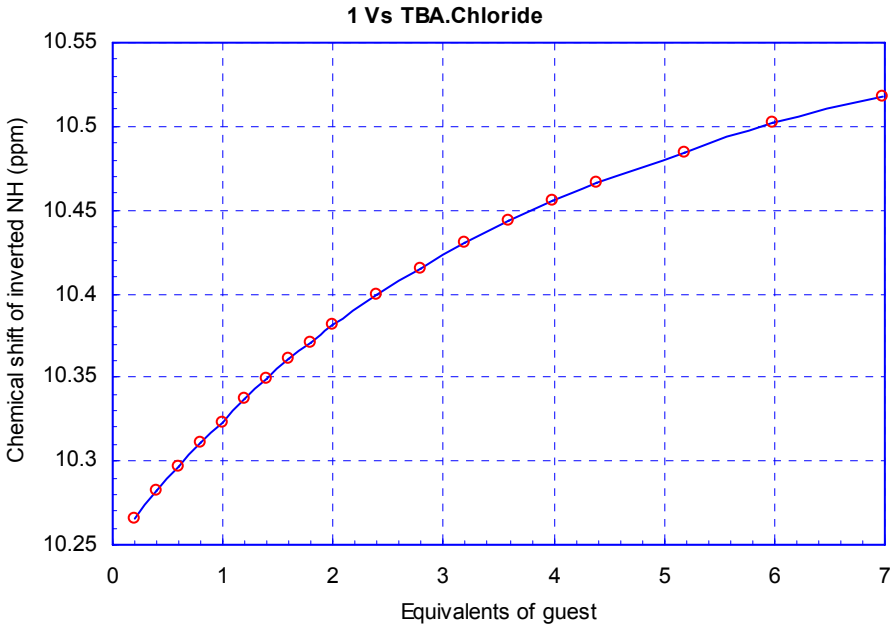

Figure S16 ^{1}H NMR titration curve of **1** with tetrabutylammonium chloride.

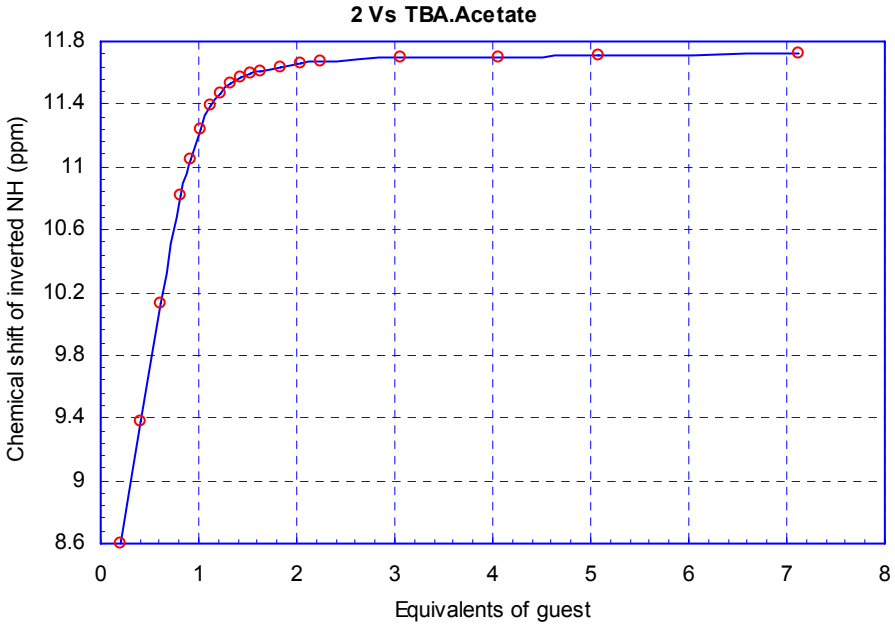

Figure S17 ^{1}H NMR titration curve of **2** with tetrabutylammonium acetate.

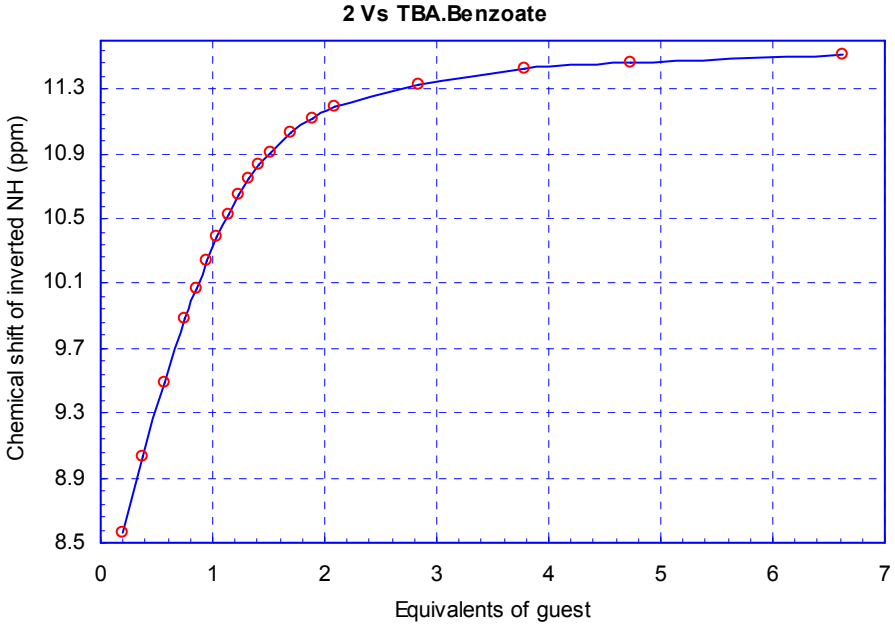

Figure S18 ^{1}H NMR titration curve of **2** with tetrabutylammonium benzoate.

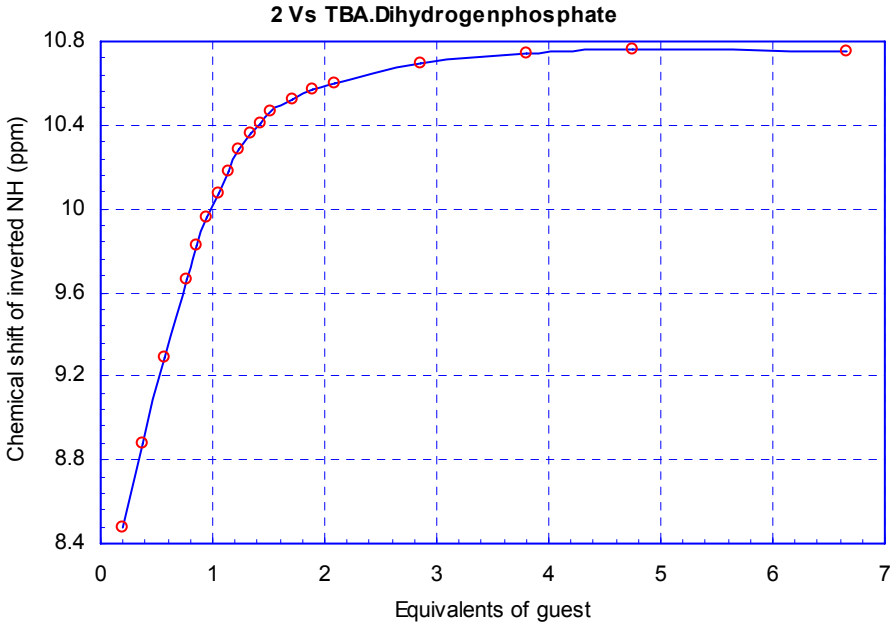

Figure S19 ^{1}H NMR titration curve of **2** with tetrabutylammonium dihydrogenphosphate.

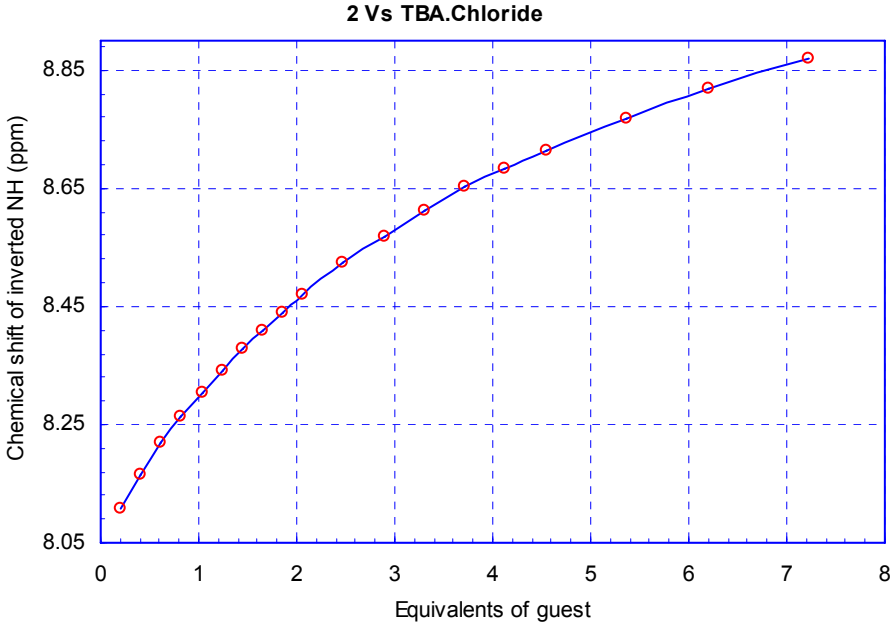

Figure S20 ^{1}H NMR titration curve of **2** with tetrabutylammonium chloride.

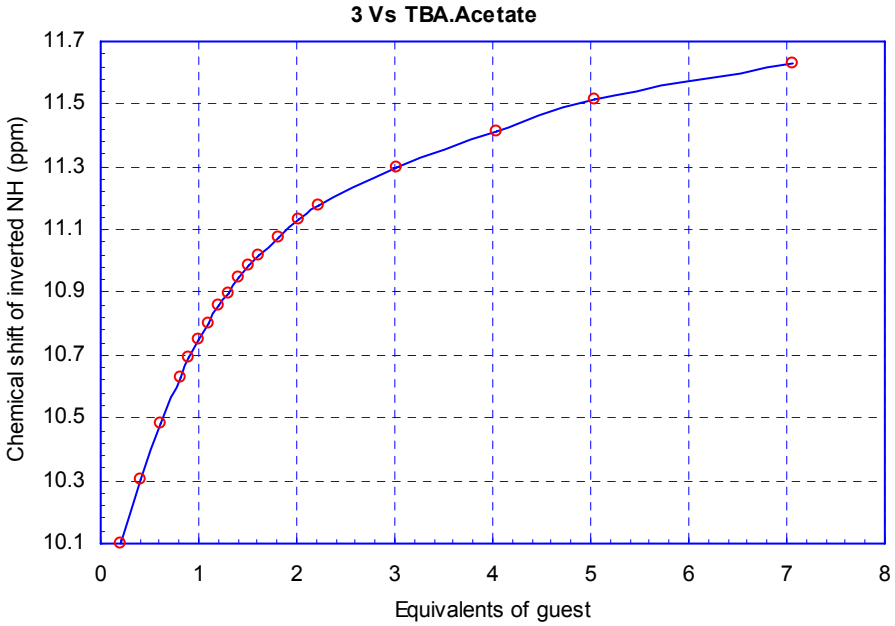

Figure S21 ^{1}H NMR titration curve of **3** with tetrabutylammonium acetate.

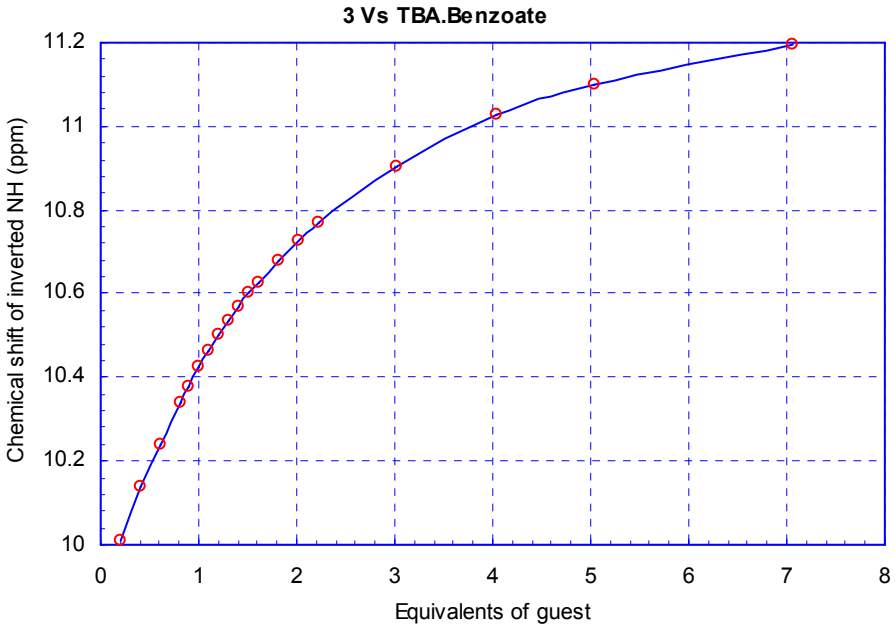

Figure S22 ^{1}H NMR titration curve of **3** with tetrabutylammonium benzoate.

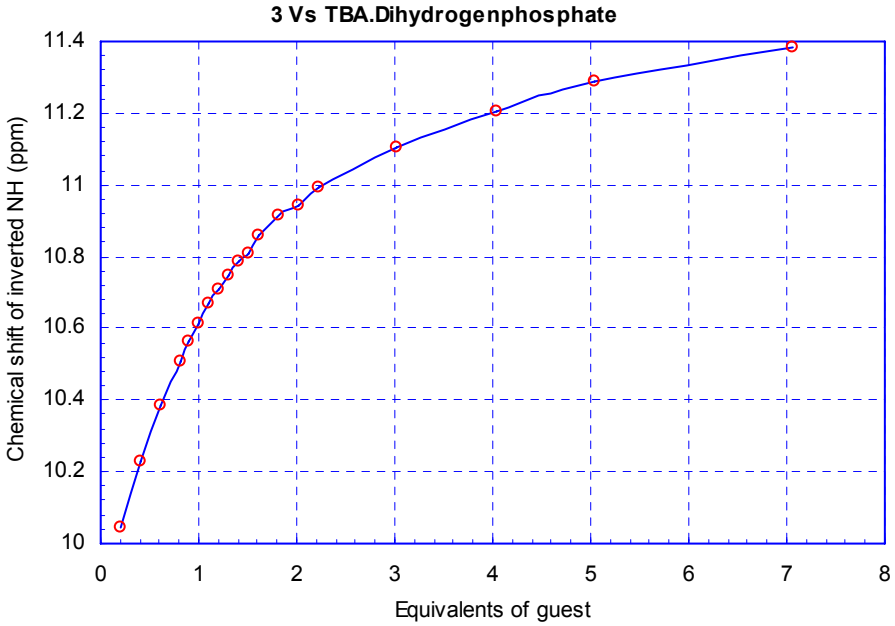

Figure S23 ^{1}H NMR titration curve of **3** with tetrabutylammonium dihydrogenphosphate.

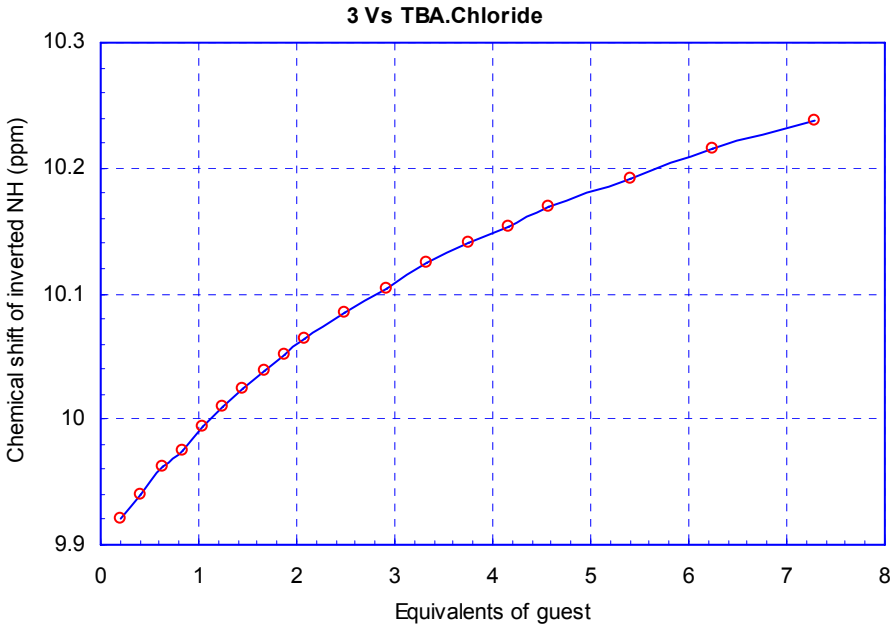

Figure S24 ^{1}H NMR titration curve of **3** with tetrabutylammonium chloride.

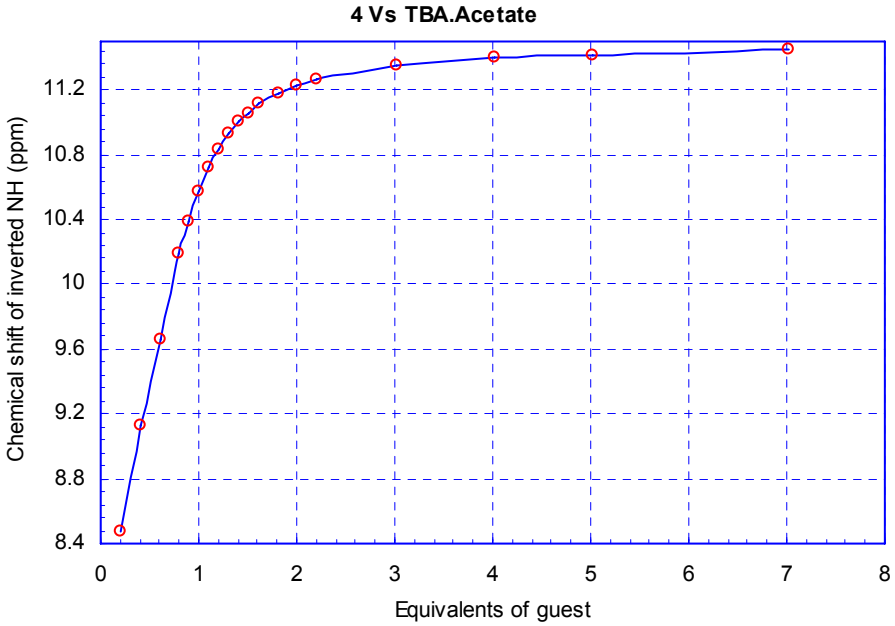

Figure S25 ^{1}H NMR titration curve of **4** with tetrabutylammonium acetate.

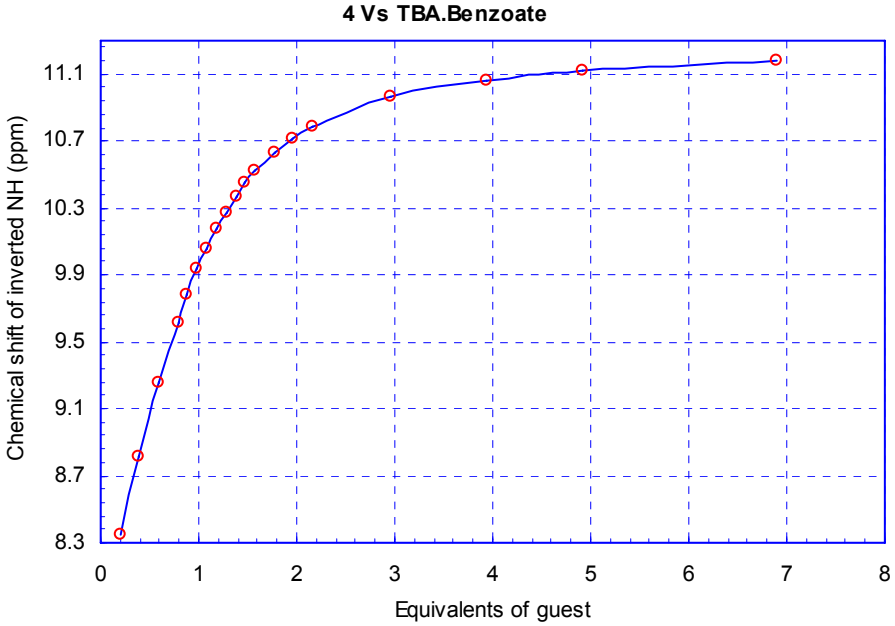

Figure S26 ^{1}H NMR titration curve of **4** with tetrabutylammonium benzoate.

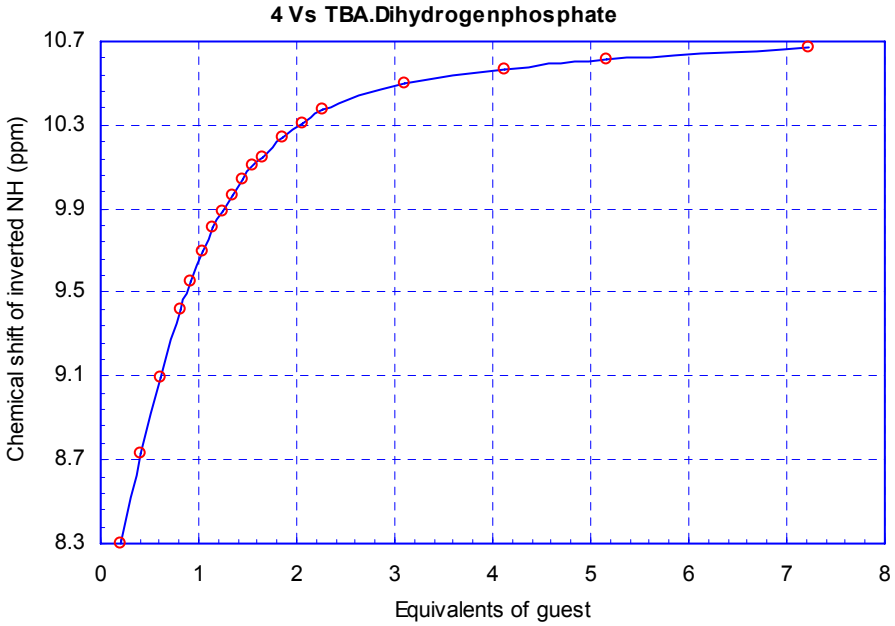

Figure S27 ^{1}H NMR titration curve of **4** with tetrabutylammonium dihydrogenphosphate.

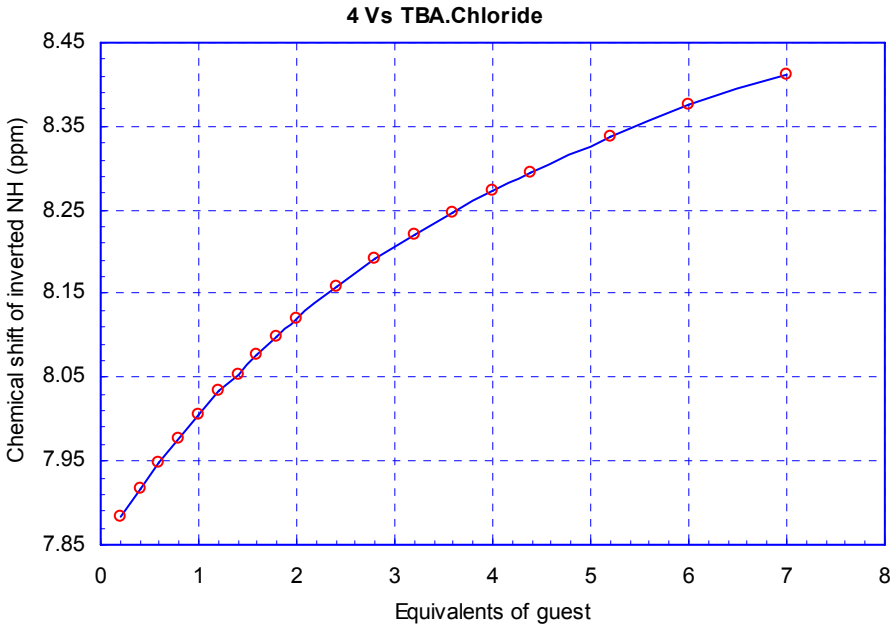

Figure S28 ^{1}H NMR titration curve of **4** with tetrabutylammonium chloride.

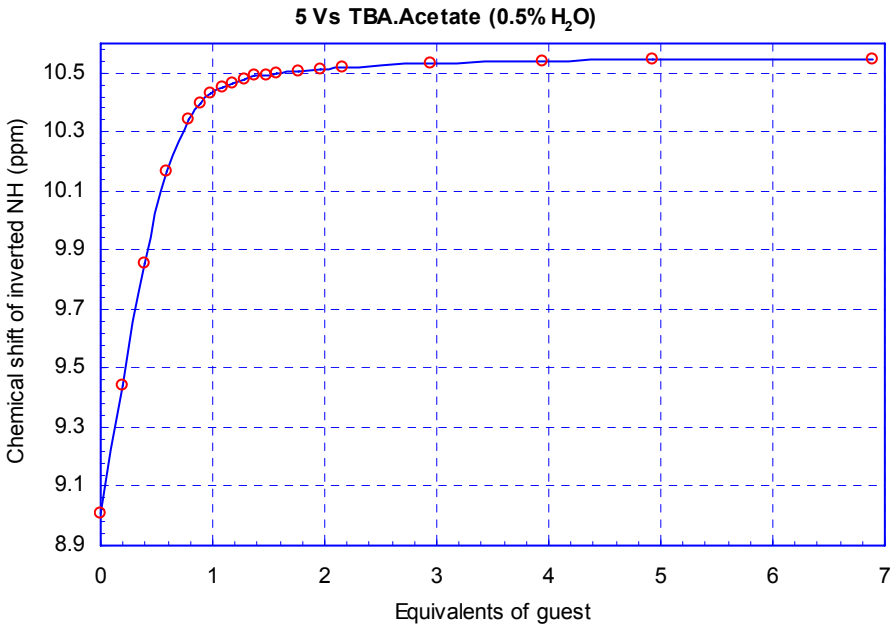

Figure S29 ^{1}H NMR titration curve of **5** with tetrabutylammonium acetate in DMSO-d_6/0.5% H_2O.

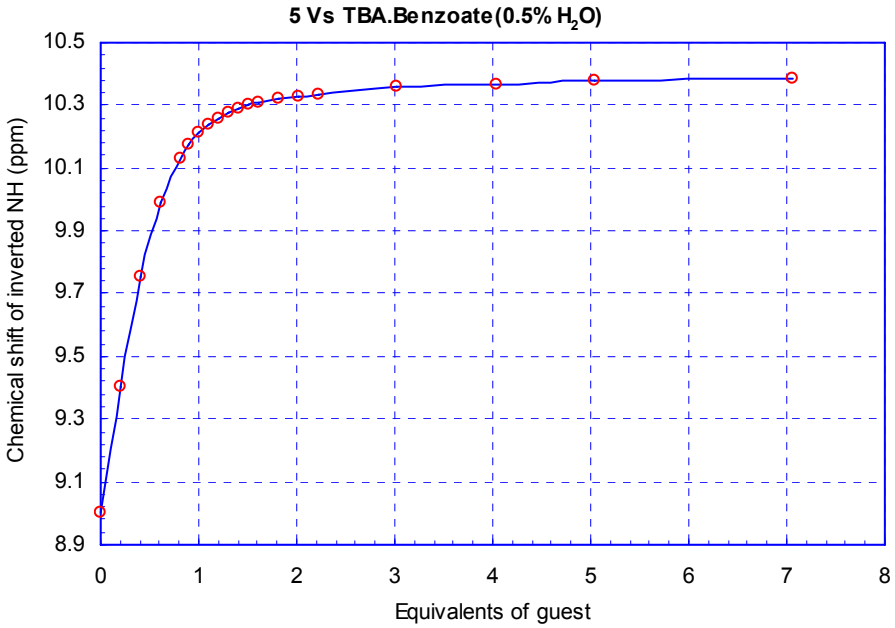

Figure S30 ^{1}H NMR titration curve of **5** with tetrabutylammonium benzoate in DMSO-d_6/0.5% H_2O.

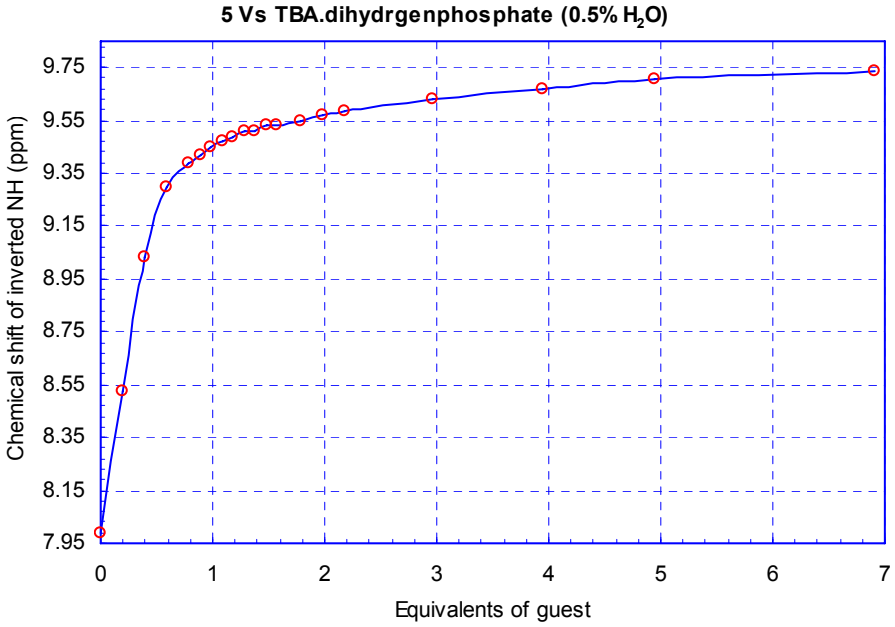

Figure S31 ^{1}H NMR titration curve of **5** with tetrabutylammonium dihydrogenphosphate in DMSO-d_6/0.5% H_2O.

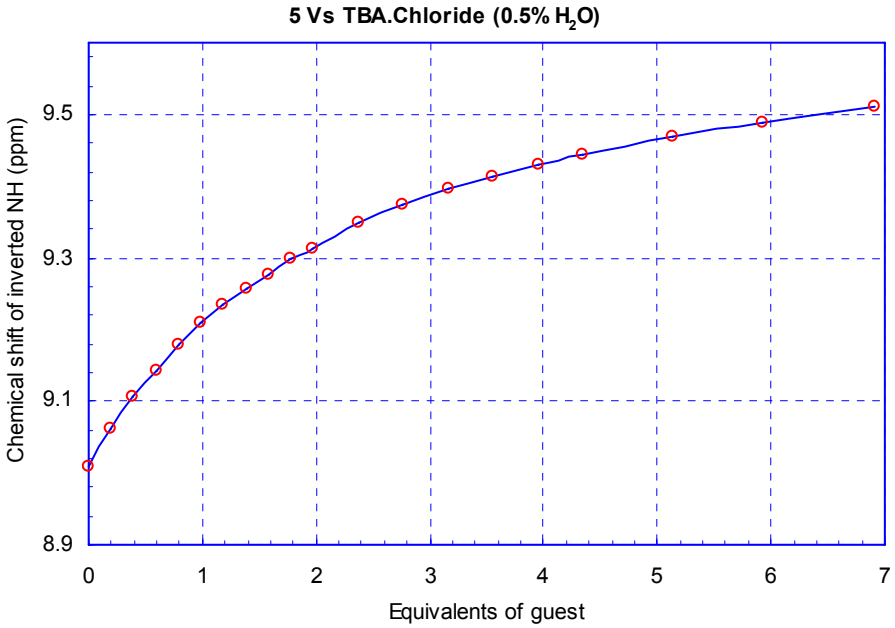

Figure S32 ^{1}H NMR titration curve of **5** with tetrabutylammonium chloride in DMSO-d_6/0.5% H_2O.

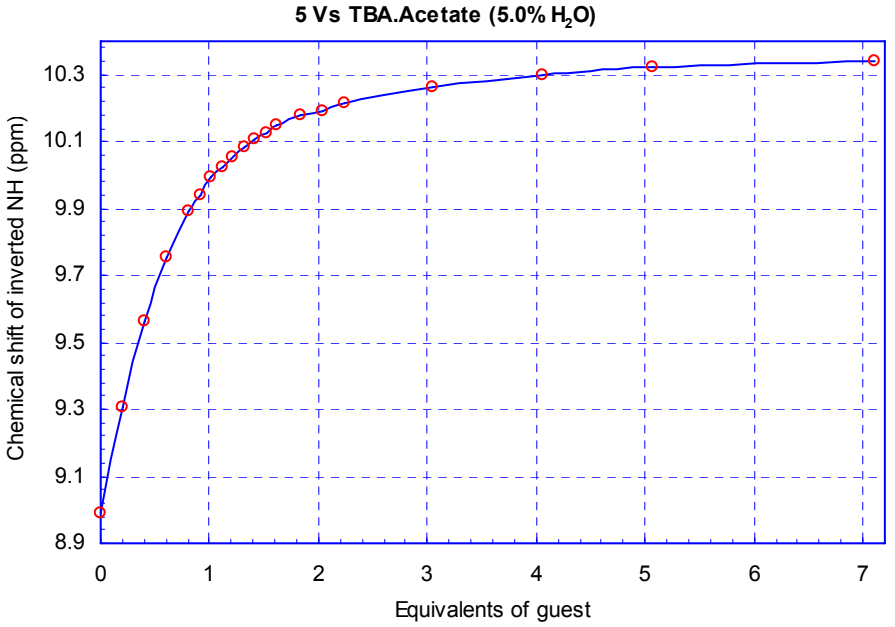

Figure S33 ^{1}H NMR titration curve of **5** with tetrabutylammonium acetate in DMSO-d_6/5.0% H_2O.

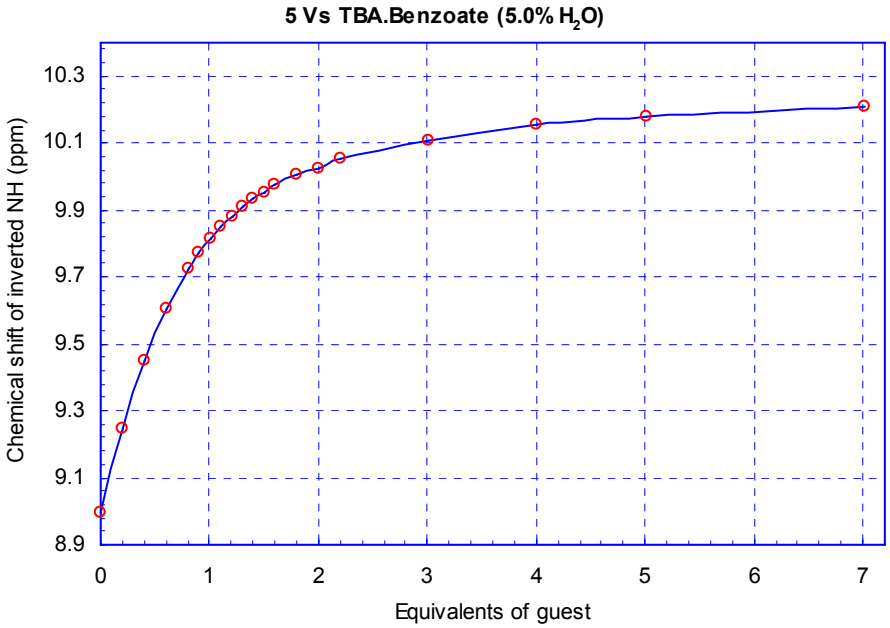

Figure S34 ^{1}H NMR titration curve of **5** with tetrabutylammonium benzoate in DMSO-d_6/5.0% H_2O.

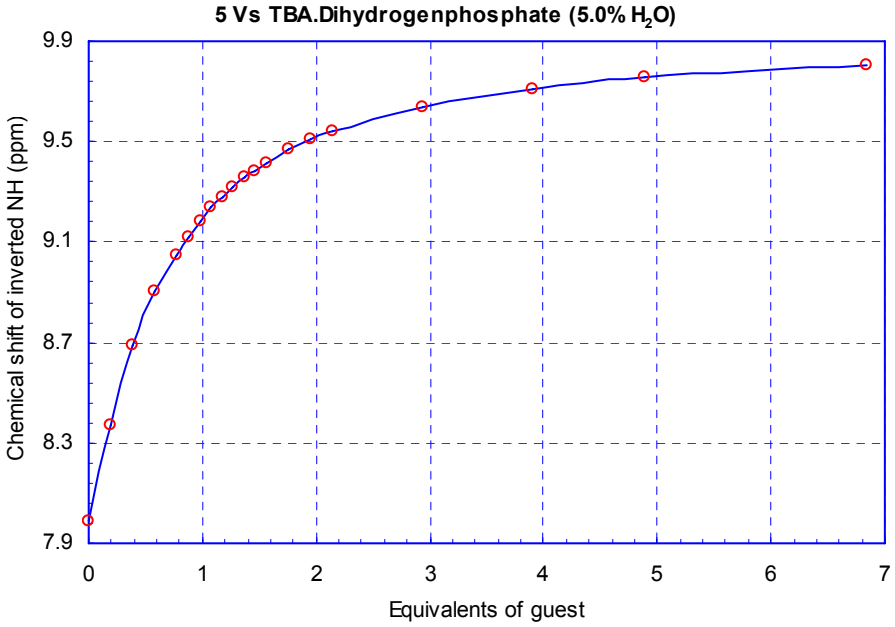

Figure S35 ^{1}H NMR titration curve of **5** with tetrabutylammonium dihydrogenphosphate in DMSO-d_6/5.0% H_2O.

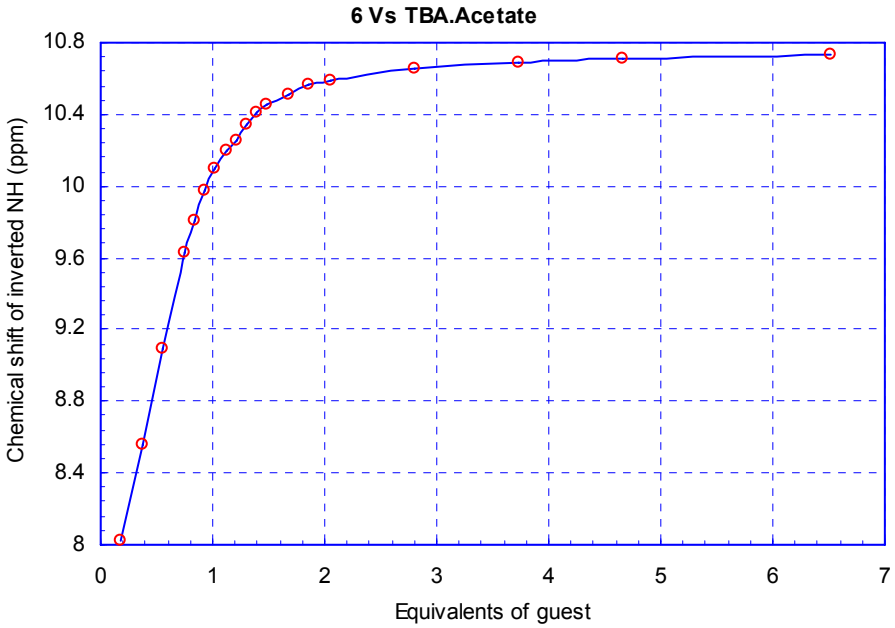

Figure S36 ^{1}H NMR titration curve of **6** with tetrabutylammonium acetate.

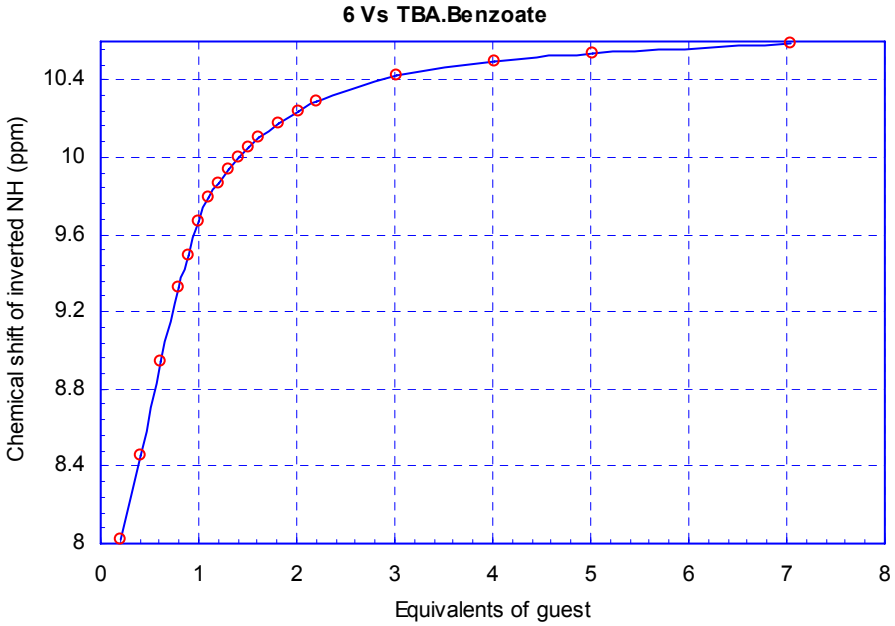

Figure S37 ^{1}H NMR titration curve of **6** with tetrabutylammonium benzoate.

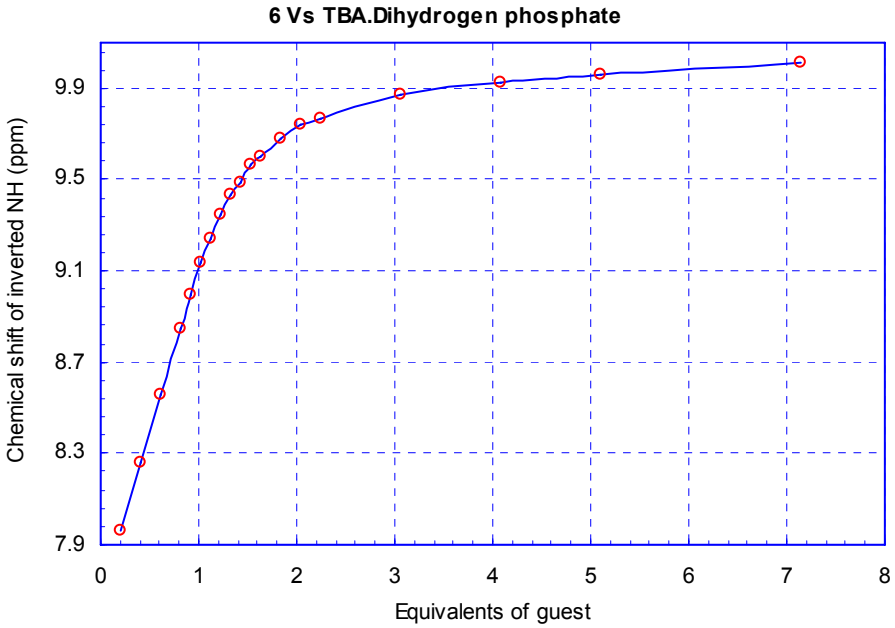

Figure S38 ^{1}H NMR titration curve of **6** with tetrabutylammonium dihydrogenphosphate.

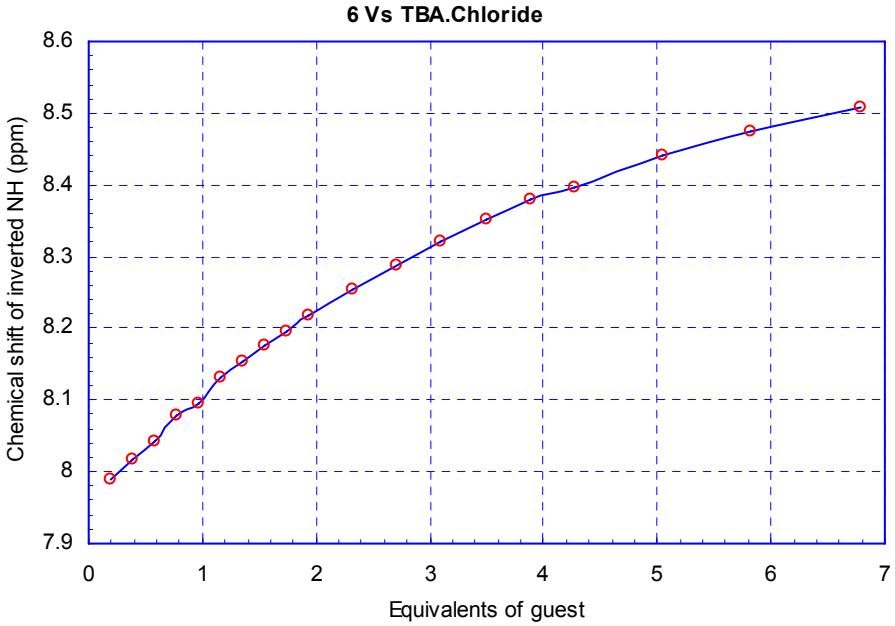

Figure S39 ^{1}H NMR titration curve of **6** with tetrabutylammonium chloride.

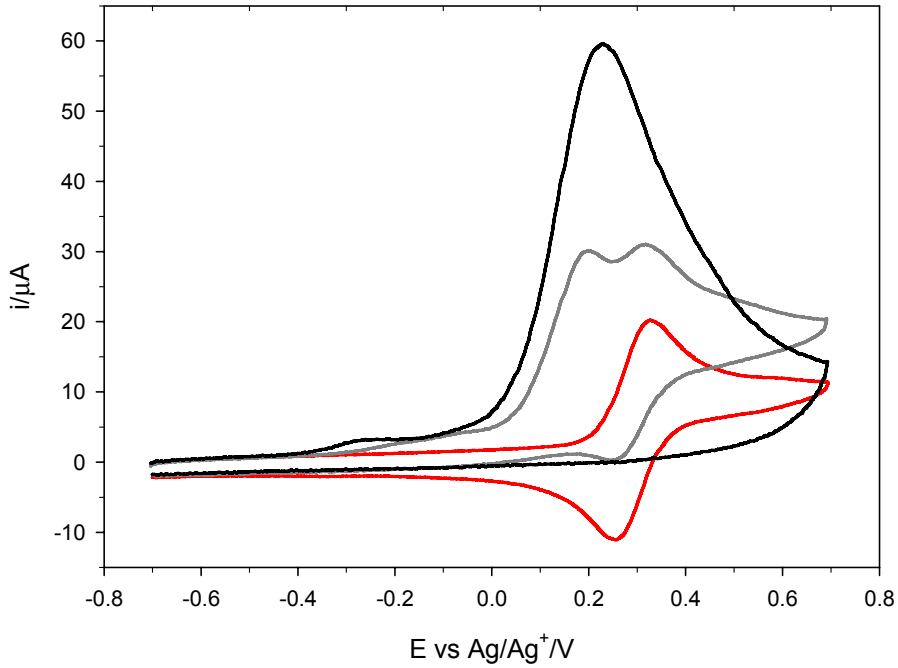

Figure S40 Cyclic voltammetric data gathered for compound (**3**) at a 3 mm diameter glassy carbon disk as a function of acetate to ferrocene receptor concentration ratio (0:1, 2:1 and 5:1 respectively). The electrolyte consisted of 0.1 mol dm^{-3} TBATFP in (95% CH_3CN/5% DMSO). The initial ferrocene derivative concentration was 1 mM. All voltammetry was recorded at 20 mV s^{-1} under anaerobic conditions at 20-23˚C.

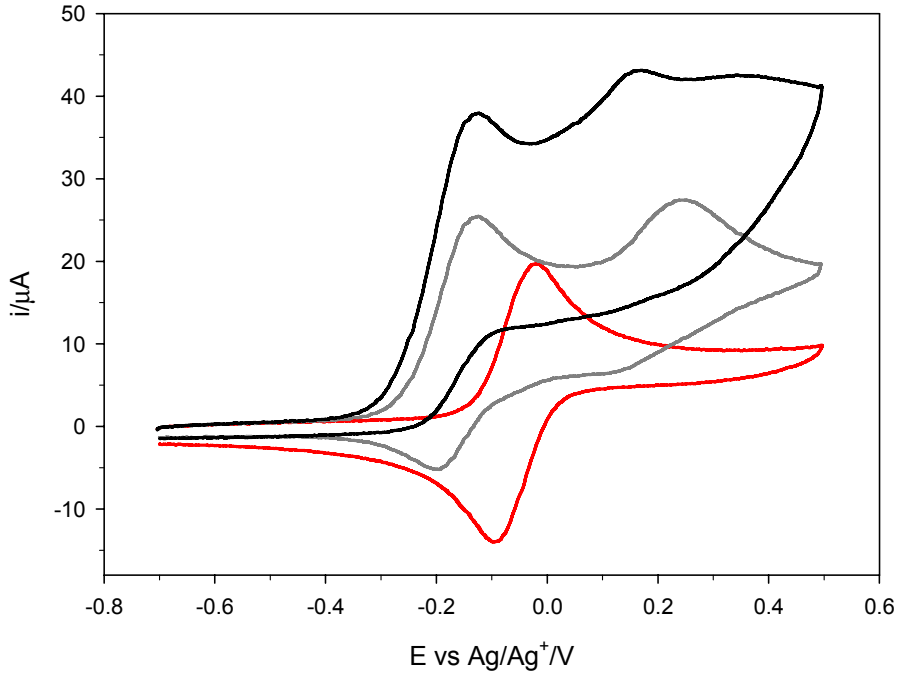

Figure S41 Cyclic voltammetric data gathered for compound (**4**) at a 3 mm diameter glassy carbon disk as a function of acetate to ferrocene receptor concentration ratio (0:1, 2:1 and 5:1 respectively). The electrolyte consisted of 0.1 mol dm^{-3} TBATFP in (95% CH_3CN/5% DMSO). The initial ferrocene derivative concentration was 1 mM. All voltammetry was recorded at 20 mV s^{-1} under anaerobic conditions at 20-23˚C.

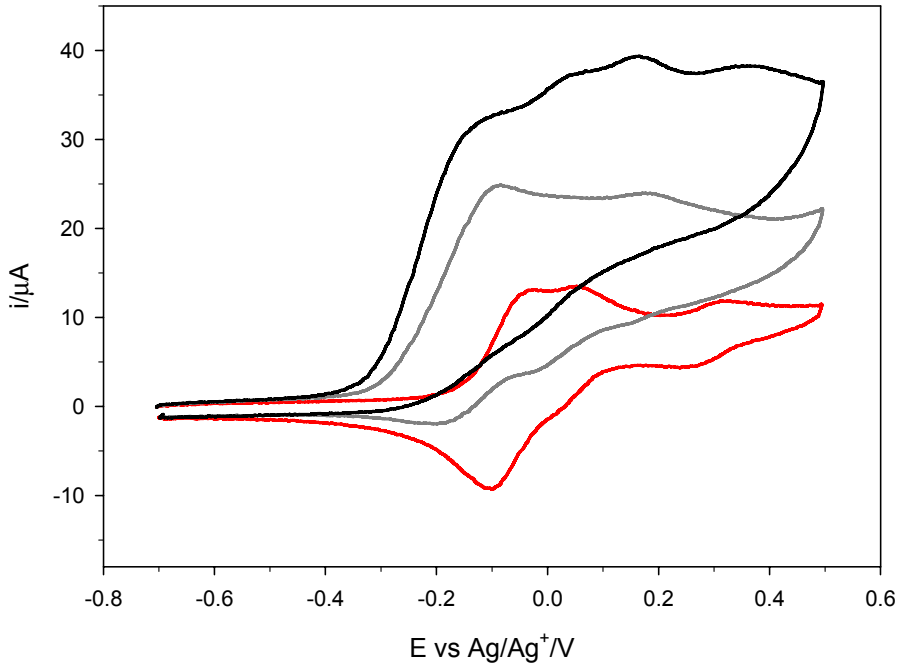

Figure S42 Cyclic voltammetric data gathered for compound (**5**) at a 3 mm diameter glassy carbon disk as a function of acetate to ferrocene receptor concentration ratio (0:1—, 2:1— and 5:1— respectively). The electrolyte consisted of 0.1 mol dm^{-3} TBATFP in (95% CH_3CN/5% DMSO). The initial ferrocene derivative concentration was 1 mM. All voltammetry was recorded at 20 mV s^{-1} under anaerobic conditions at 20-23˚C.

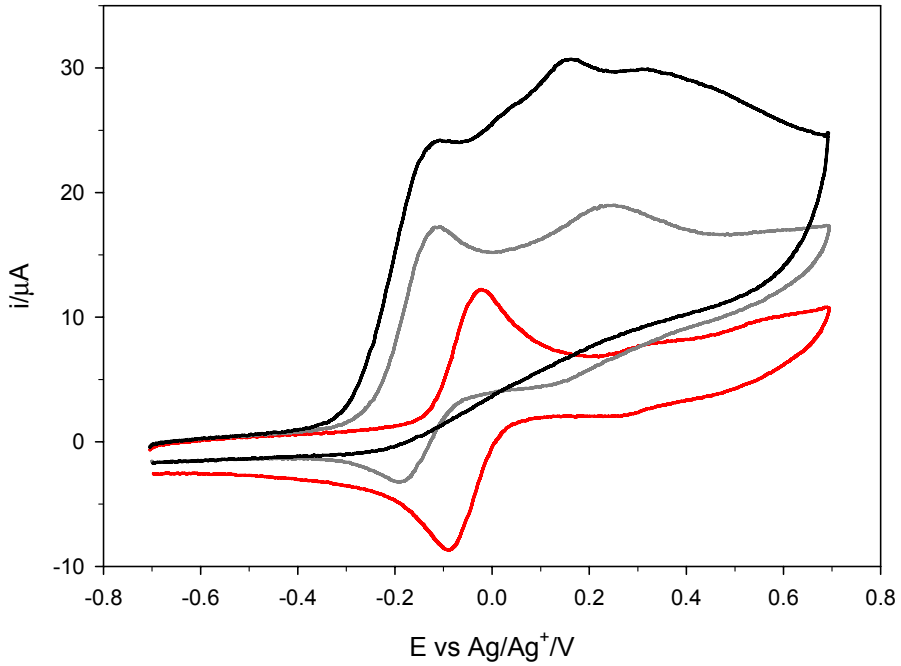

Figure S43 Cyclic voltammetric data gathered for compound (**6**) at a 3 mm diameter glassy carbon disk as a function of acetate to ferrocene receptor concentration ratio (0:1—, 2:1— and 5:1— respectively). The electrolyte consisted of 0.1 mol dm^{-3} TBATFP in (95% CH_3CN/5% DMSO). The initial ferrocene derivative concentration was 1 mM. All voltammetry was recorded at 20 mV s^{-1} under anaerobic conditions at 20-23˚C.