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SUPPORTING INFORMATION

Title: Nickel–Alkyl Complexes with a Reactive PNC-Pincer Ligand

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Multinuclear NMR spectra (^{1}H, ^{13}C, ^{31}P, ^{19}F) for complexes **2CH$_3$** and **2CF$_3$**

Cyclic voltammogram of **2CF$_3$** (anodic scan)

UV/VIS Spectroelectrochemistry of **2CF$_3$** (anodic scan)

NMR spectra (^{31}P and ^{19}F) from reaction of **2CF$_3$** with (thianthrenium)BF_4 and $AgBF_4$

EPR spectrum for reaction of **2CF$_3$** with KC_8

EPR spectrum (r.t.) obtained from cathodic reduction of **2CF$_3$**

Cathodic EPR spectroelectrochemistry of **2CH$_3$**

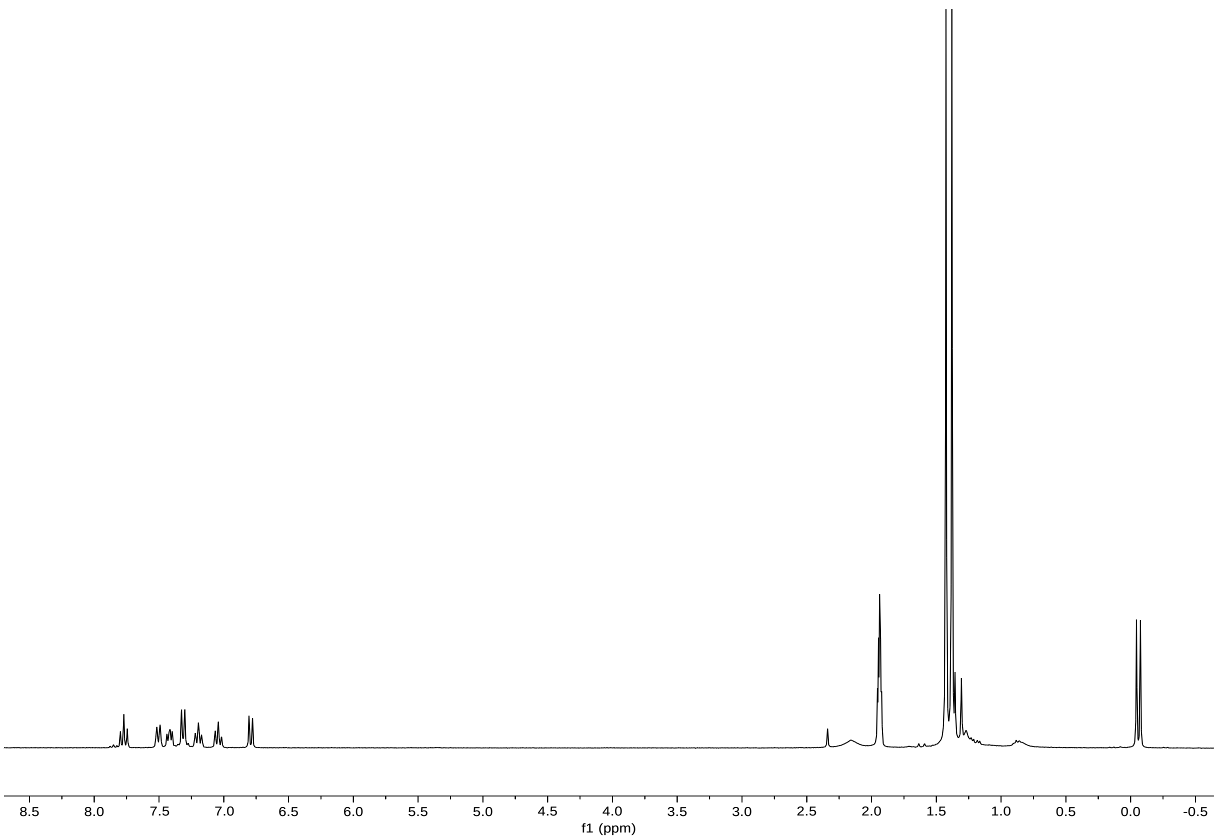

Figure S1 ^{1}H NMR (300 MHz) spectrum of **$2CH_3$** in MeCN-d_3

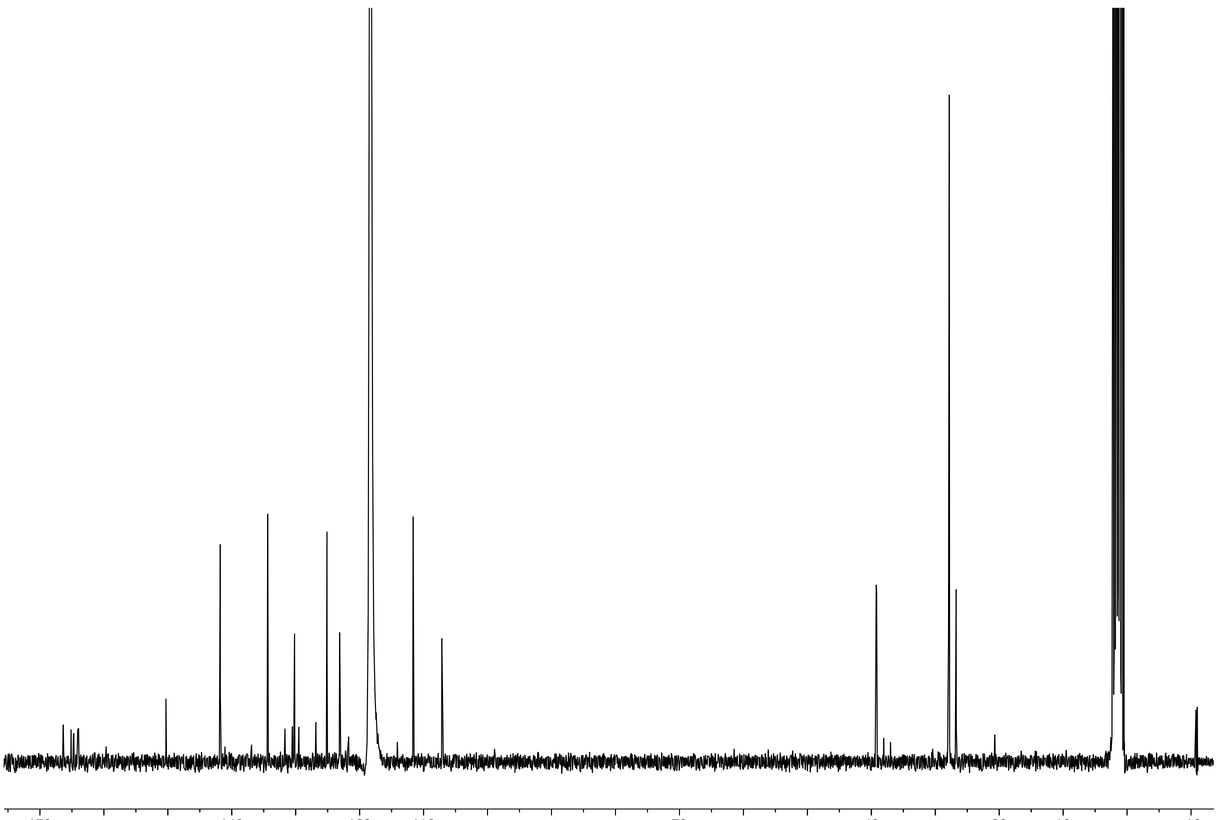

Figure S2 ^{13}C NMR (75 MHz) spectrum of **$2CH_3$** in MeCN-d_3

Figure S3 ^{31}P NMR (121 MHz) spectrum of **$2CH_3$** in MeCN-d_3

Figure S4 ^{1}H NMR (300 MHz) spectrum of **$2CF_3$** in MeCN-d_3

Figure S5 ^{13}C NMR (75 MHz) spectrum of **$2CF_3$** in MeCN-d_3

Figure S6 ^{31}P NMR (121 MHz) spectrum of **$2CF_3$** in MeCN-d_3

Figure S7 ^{19}F NMR (282 MHz) spectrum of **$2CF_3$** in MeCN-d_3

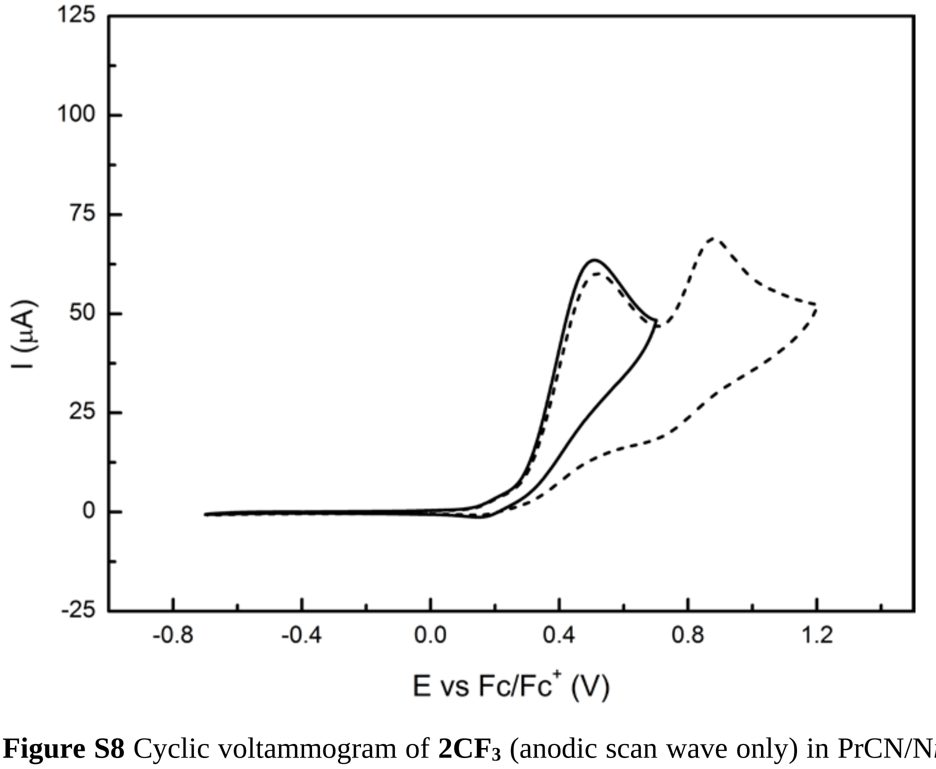

Figure S8 Cyclic voltammogram of **$2CF_3$** (anodic scan wave only) in PrCN/N*n*Bu_4PF_6 at 298 K, with a scan rate of 100 mV/s

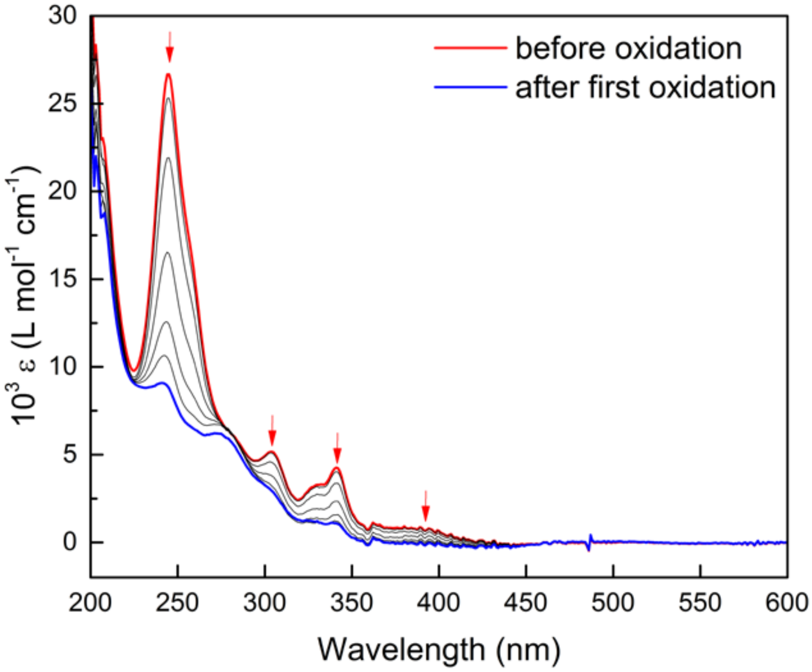

Figure S9. UV/Vis spectroelectrochemical oxidation of a solution of complex **$2CF_3$** in THF/*n*Bu_4NPF_6; anodic scan from 0 V to +1.8 V (referenced to Ag/Ag^+).

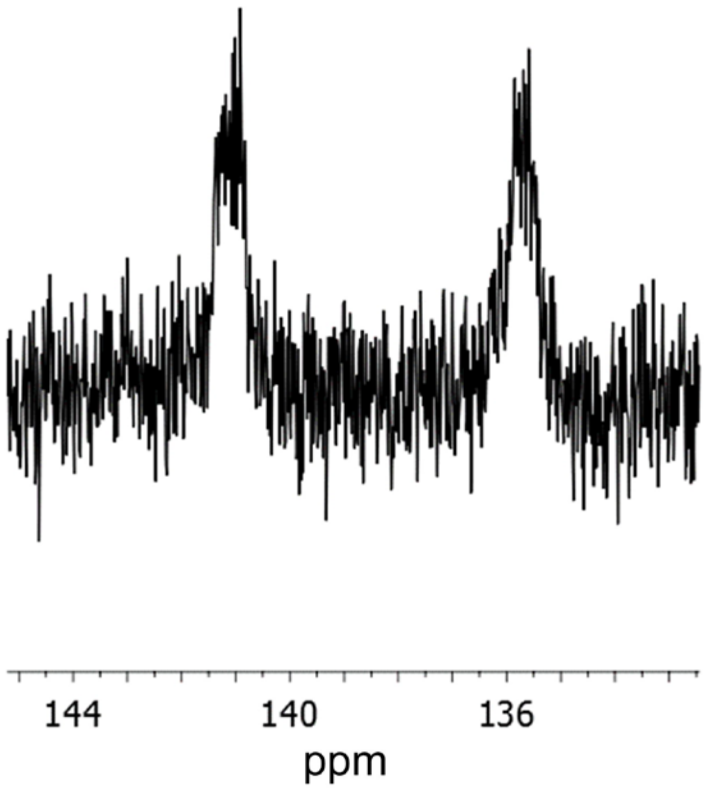

Figure S10 ^{31}P NMR spectrum of product from reaction of **$2CF_3$** with (thianthrenium)BF_4 and $AgBF_4$

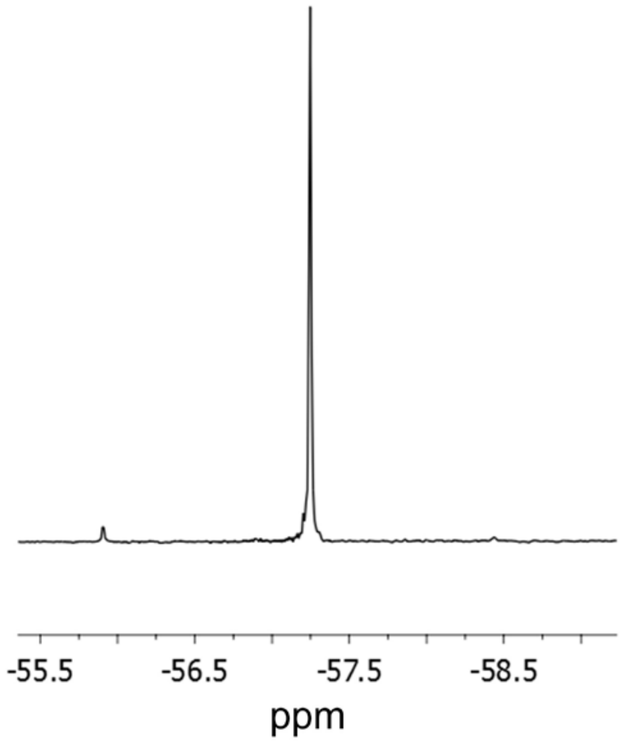

Figure S11 ^{19}F NMR spectrum of product from reaction of **$2CF_3$** with (thianthrenium)BF_4 and $AgBF_4$

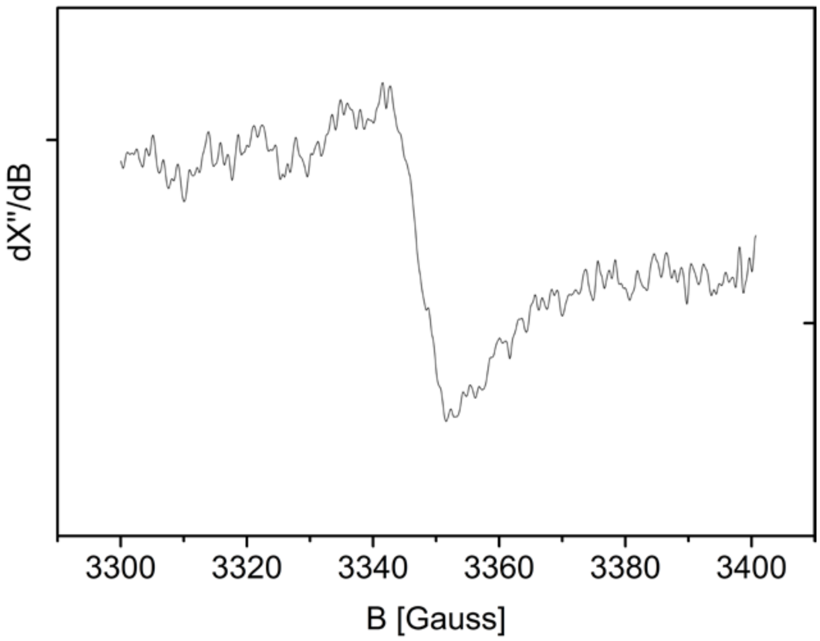

Figure S12 EPR spectrum (r.t.) after reduction of **$2CF_3$** with KC_8

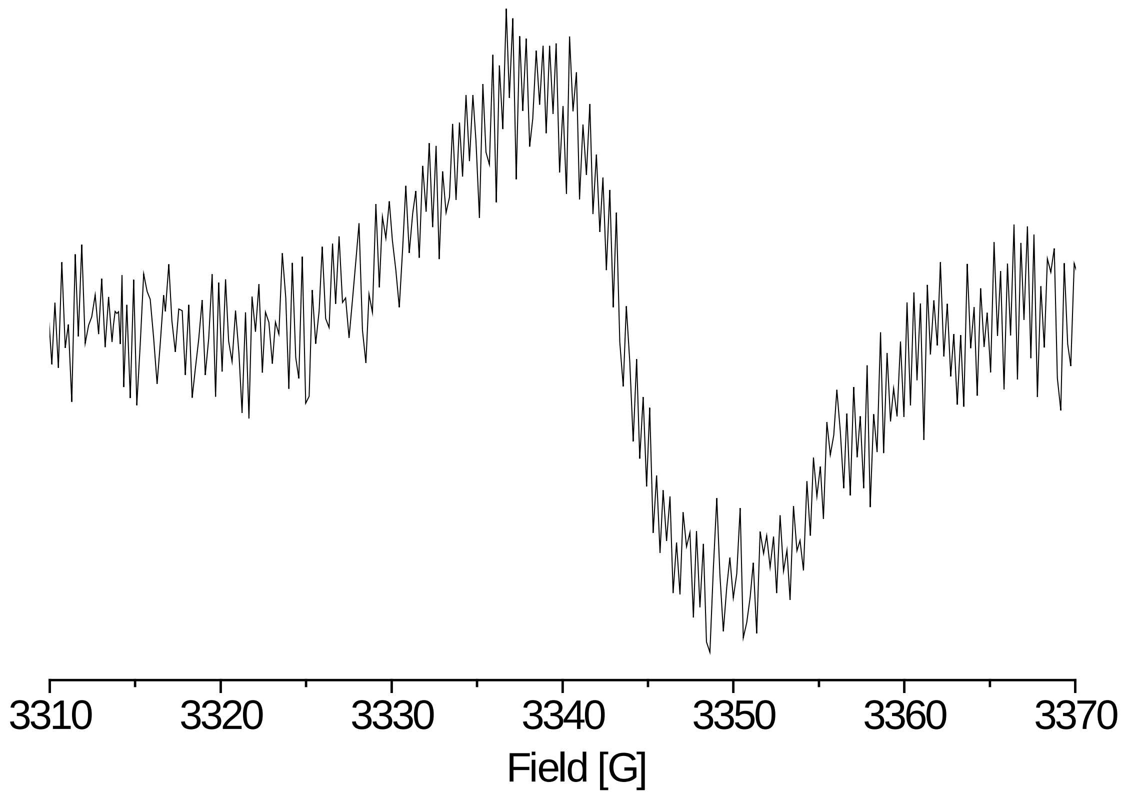

Figure S13 EPR spectrum obtained from cathodic reduction of **$2CF_3$** at –2.4 V in THF/N*n*Bu_4PF_6 at 298 K.

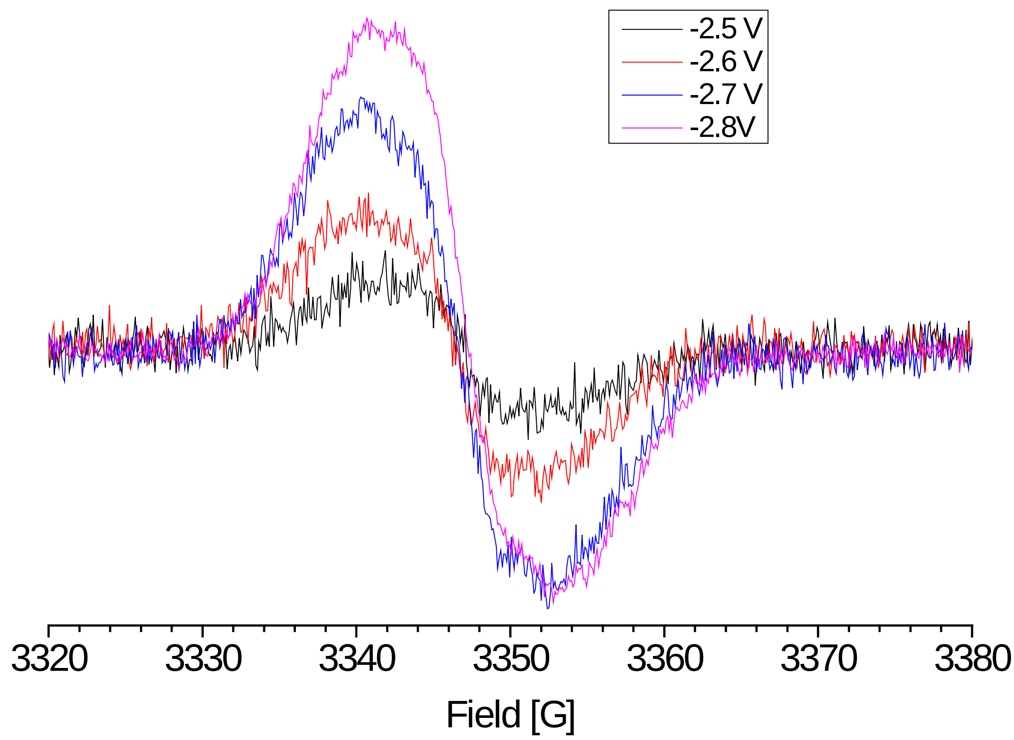

Figure S14 EPR spectra recorded during cathodic reduction of **$2CH_3$** in THF/*n*Bu_4NPF_6 at 298 K.