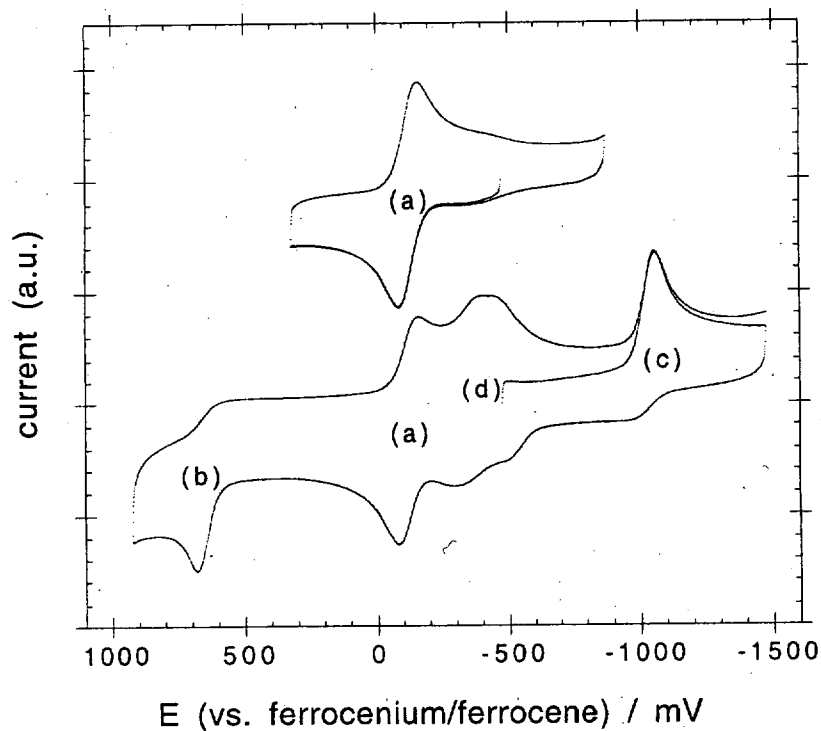
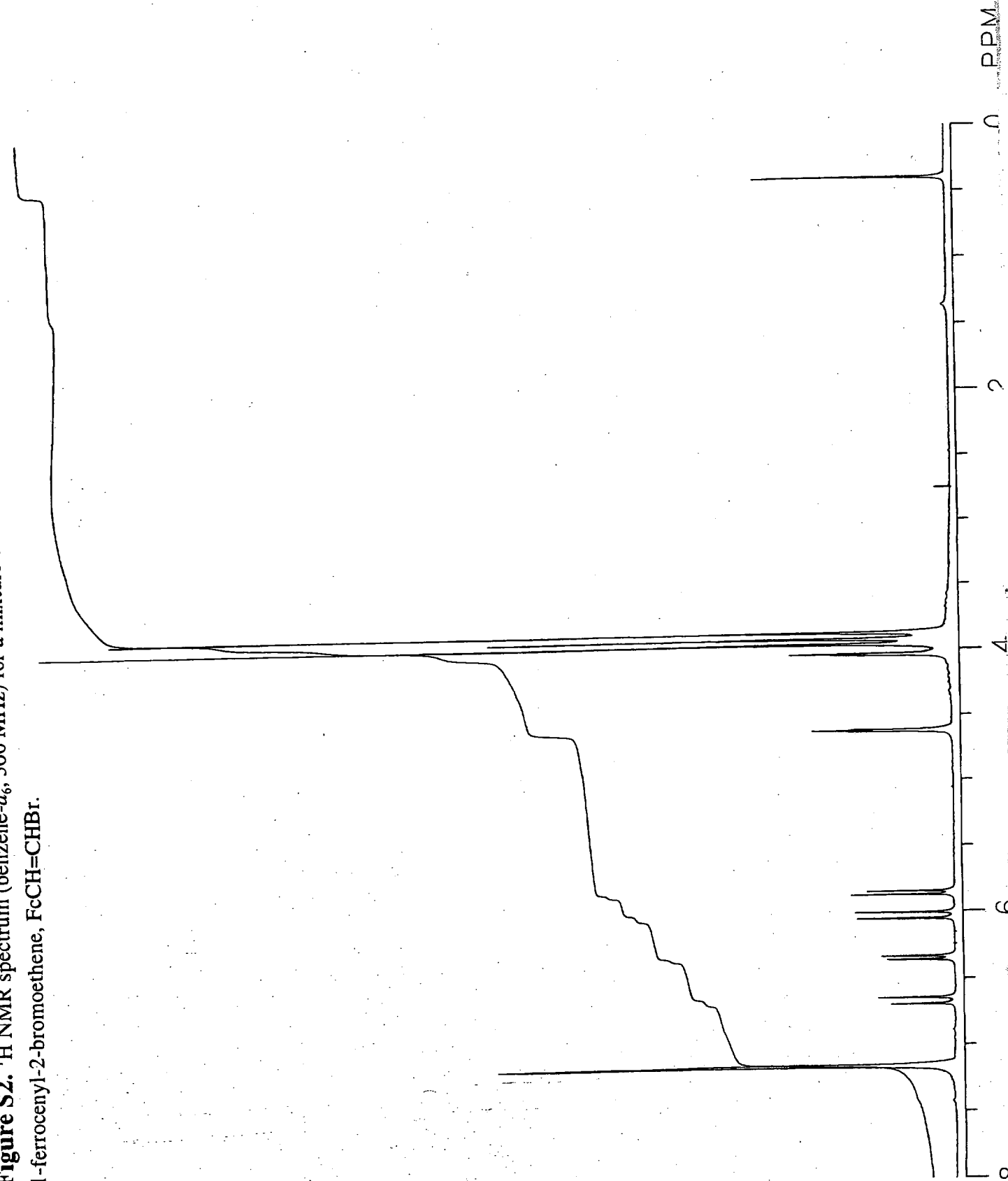


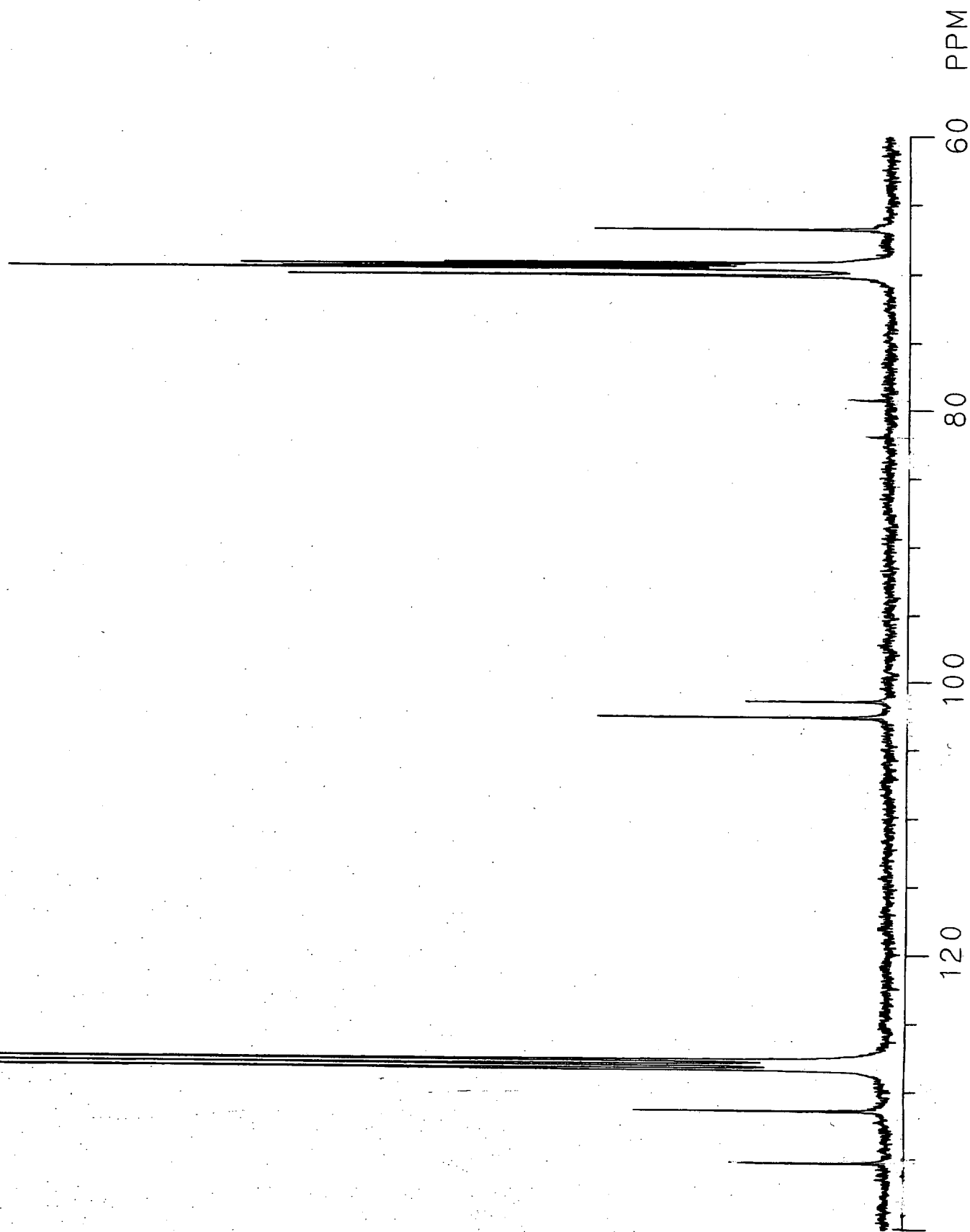
**Fig. S1.** Cyclic voltammograms of  $[\text{Fc}''(\text{CH})_3\text{Fc}'']+[\text{BF}_4]^-$ , **2a**, recorded in  $\text{CH}_2\text{Cl}_2 / 0.1 \text{ M } [\text{Bu}_4\text{N}]^+[\text{PF}_6]^-$  with a scan rate of  $50 \text{ mV s}^{-1}$ . Both scans show the reversible  $2^{2+} / 2^+$  couple, (a), while the lower scan also shows the  $2^{3+} / 2^{2+}$ , (b), and  $2^+ / 2^{\cdot}$ , (c), processes, as well as decomposition products, (d), at ca.  $-400 \text{ mV}$ .  $1^+$  and  $4^+$  show qualitatively similar voltammograms.



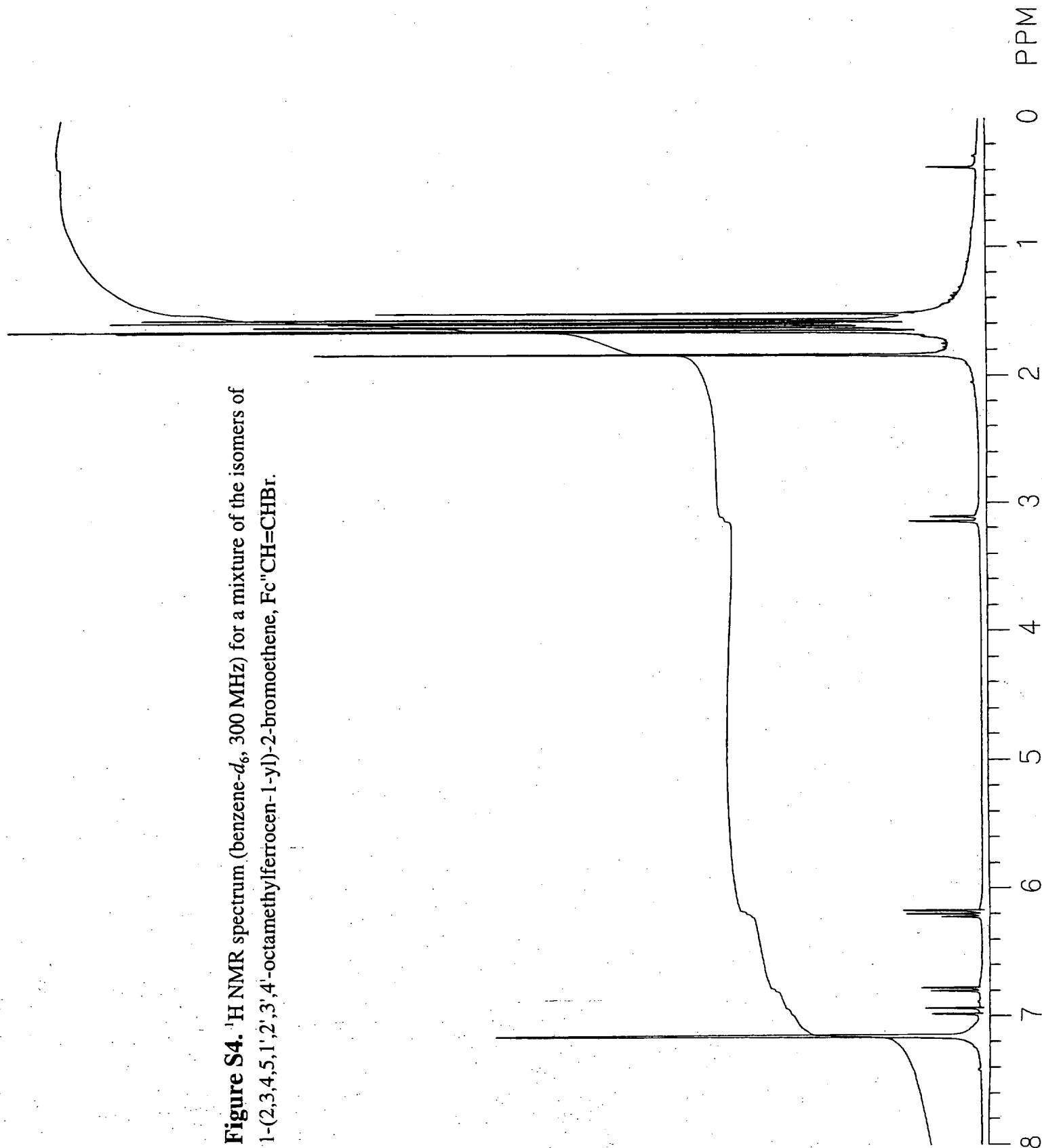
**Figure S2.**  $^1\text{H}$  NMR spectrum (benzene- $d_6$ , 300 MHz) for a mixture of the isomers of 1-ferrocenyl-2-bromoethene,  $\text{FcCH}=\text{CHBr}$ .



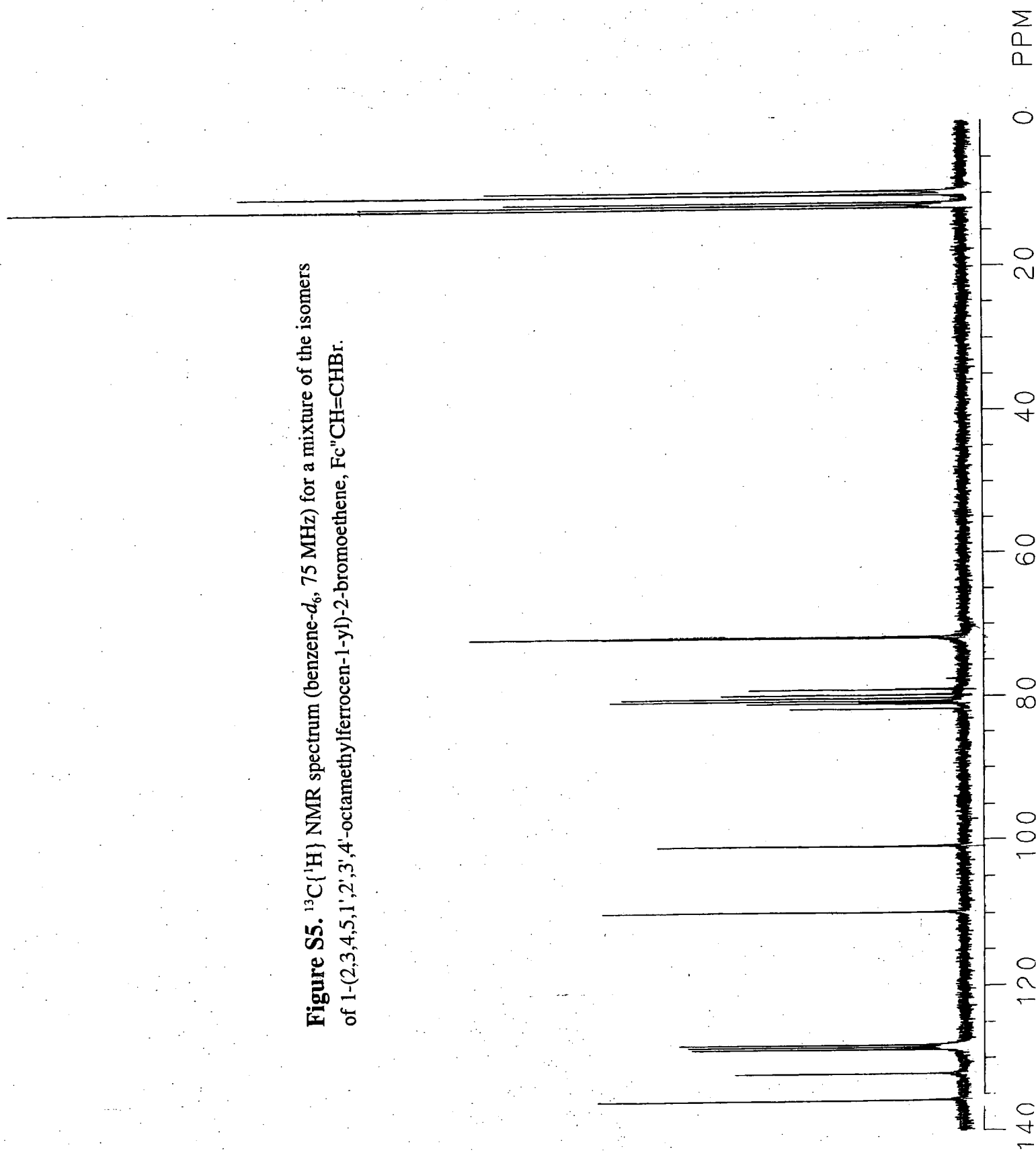
**Figure S3.**  $^{13}\text{C}\{^1\text{H}\}$  NMR spectrum (benzene- $d_6$ , 75 MHz) for a mixture of the isomers of 1-ferrocenyl-2-bromoethene,  $\text{FcCH}=\text{CHBr}$ .



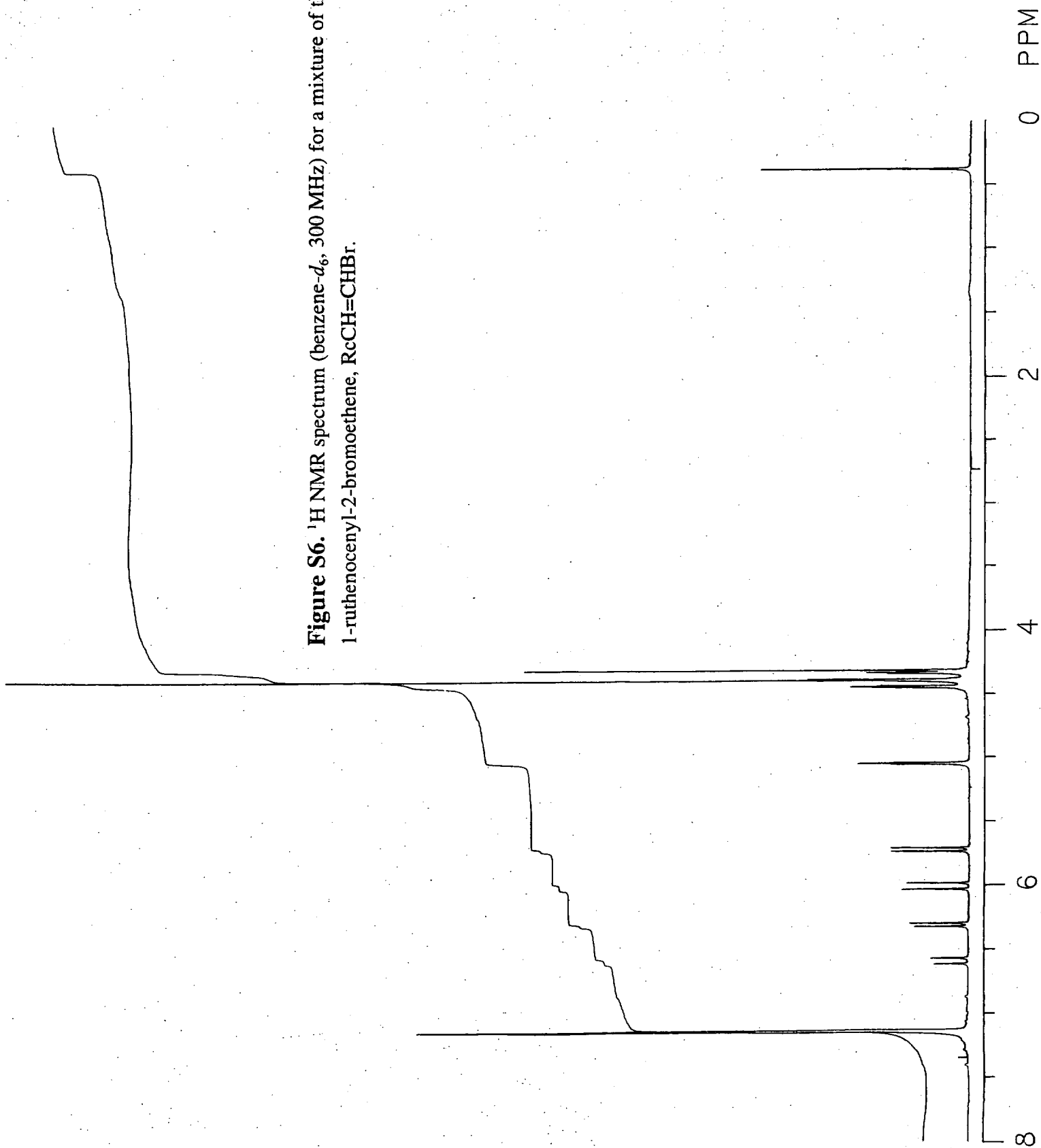
**Figure S4.**  $^1\text{H}$  NMR spectrum (benzene- $d_6$ , 300 MHz) for a mixture of the isomers of 1-(2,3,4,5,1',2',3',4'-octamethylferrocen-1-yl)-2-bromoethene,  $\text{Fc}^{\text{H}}\text{CH}=\text{CHBr}$ .



**Figure S5.**  $^{13}\text{C}\{^1\text{H}\}$  NMR spectrum (benzene- $d_6$ , 75 MHz) for a mixture of the isomers of 1-(2,3,4,5,1',2',3',4'-octamethylferrocen-1-yl)-2-bromoethene,  $\text{Fc}^{\text{''}}\text{CH}=\text{CHBr}$ .



**Figure S6.**  $^1\text{H}$  NMR spectrum (benzene- $d_6$ , 300 MHz) for a mixture of the isomers of 1-ruthenocenyl-2-bromoethene,  $\text{RuCH}=\text{CHBr}$ .



**Figure S7.**  $^{13}\text{C}\{^1\text{H}\}$  NMR spectrum (benzene- $d_6$ , 75 MHz) for a mixture of the isomers of 1-ruthenoceny1-2-bromoethene,  $\text{FcCH}=\text{CHBr}$ .

