Electronic Supplementary Information

An investigation of the role increasing π-conjugation has on the efficiency of dye-sensitized solar cells fabricated from ferrocene-based dyes

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1. Cyclic voltammetry

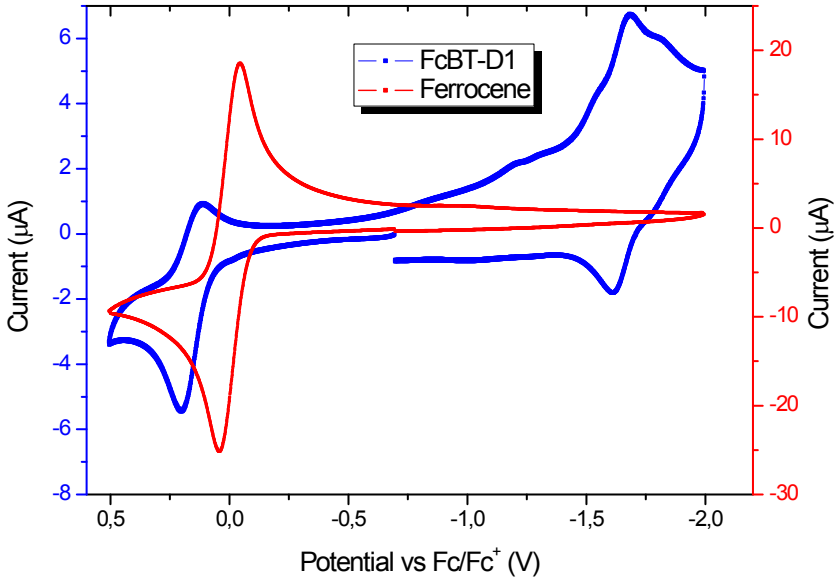


Fig. S1. Cyclic voltammogram of a solution of **Fc-D1** (1 x 10^{-3}M) in DMF (blue line) and of ferrocene in DMF (red line), performed using a Pt working electrode, a Pt counter electrode and a Ag wire as a pseudo-reference electrode. $TBAPF_6$ (0.1M) was used as supporting electrolyte and the collected data were referred to the redox potential of the Fc/Fc^+ couple.

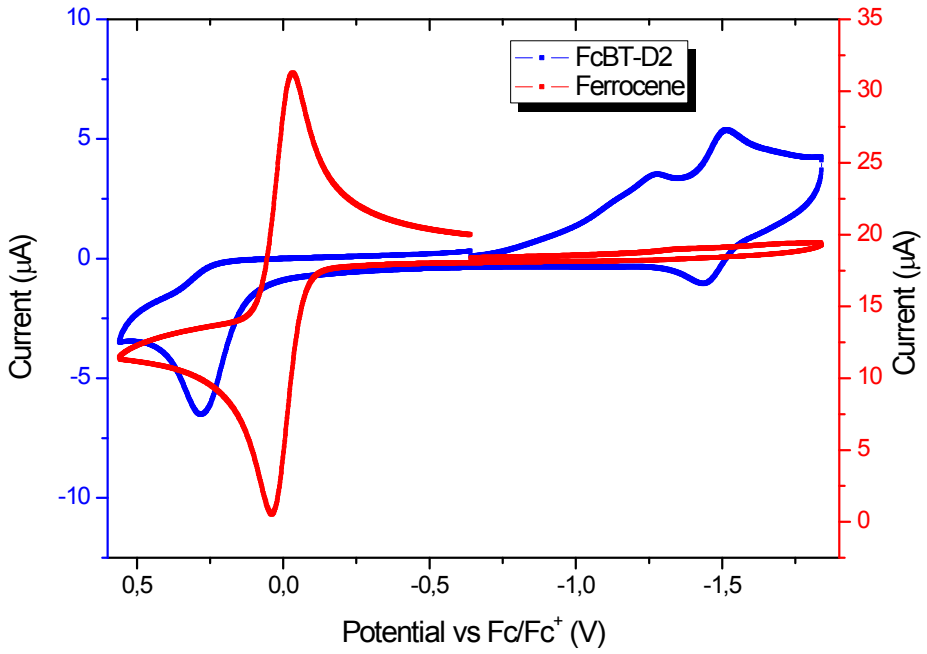


Fig. S2. Cyclic voltammogram of a solution of **Fc-D2** (1 x 10^{-3}M) in DMF (blue line) and of ferrocene in DMF (red line), performed using a Pt working electrode, a Pt counter electrode and a Ag wire as a pseudo-reference electrode. $TBAPF_6$ (0.1M) was used as supporting electrolyte and the collected data were referred to the redox potential of the Fc/Fc^+ couple.

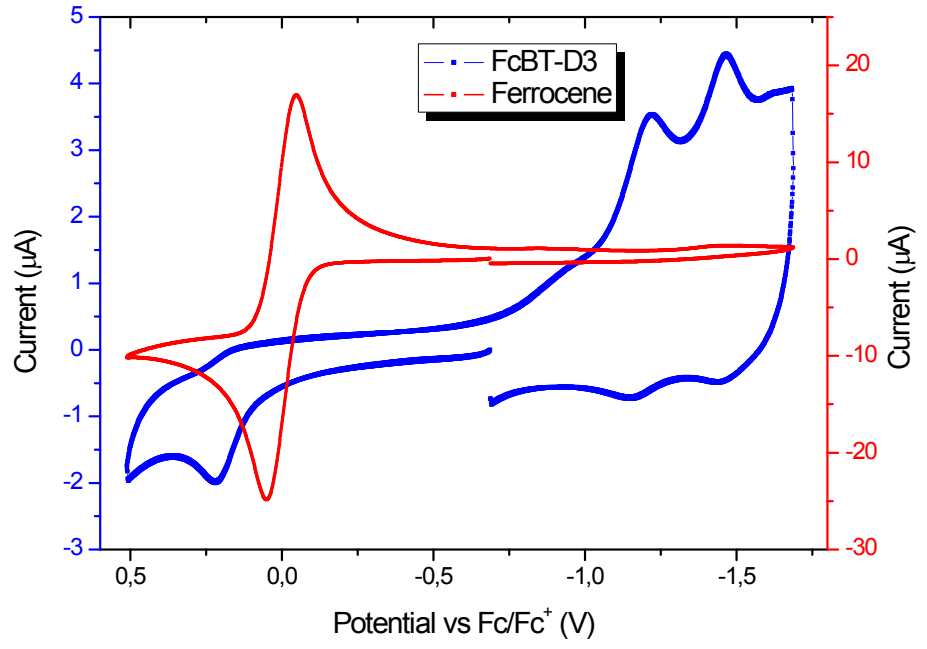
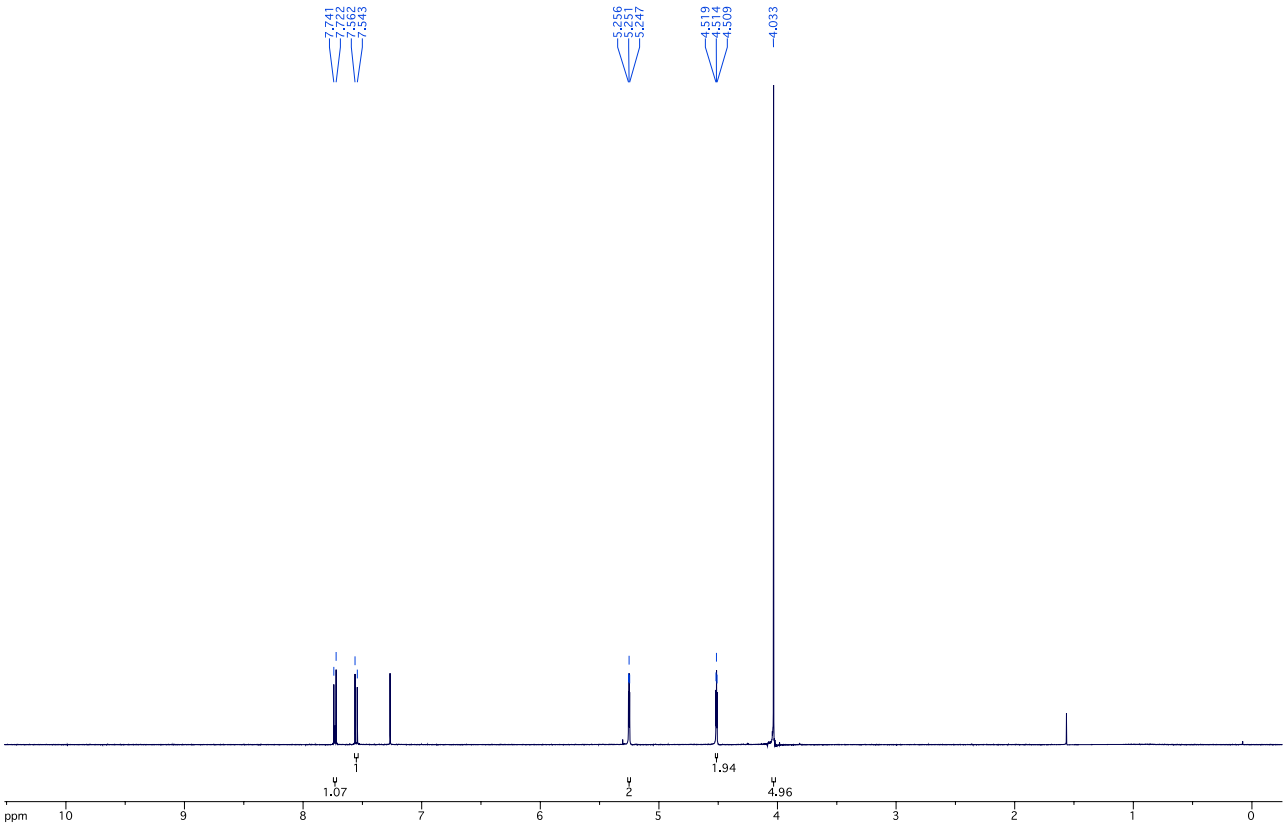


Fig. S3. Cyclic voltammogram of a solution of **Fc-D3** (1 x 10^{-3}M) in DMF (blue line) and of ferrocene in DMF (red line), performed using a Pt working electrode, a Pt counter electrode and a Ag wire as a pseudo-reference electrode. $TBAPF_6$ (0.1M) was used as supporting electrolyte and the collected data were referred to the redox potential of the Fc/Fc^+ couple.

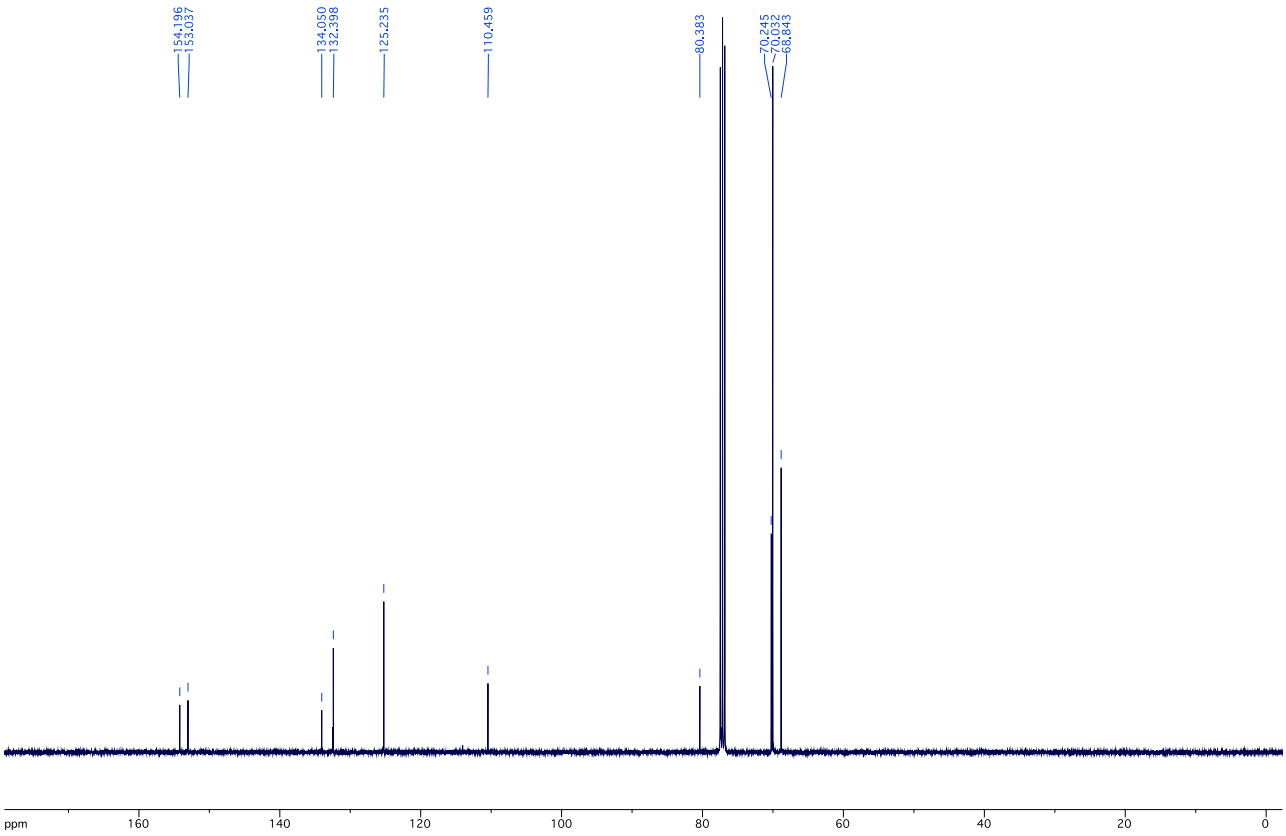
2. NMR Spectra

Compound 3

^{1}H (400 MHz, $CDCl_3$, TMS)

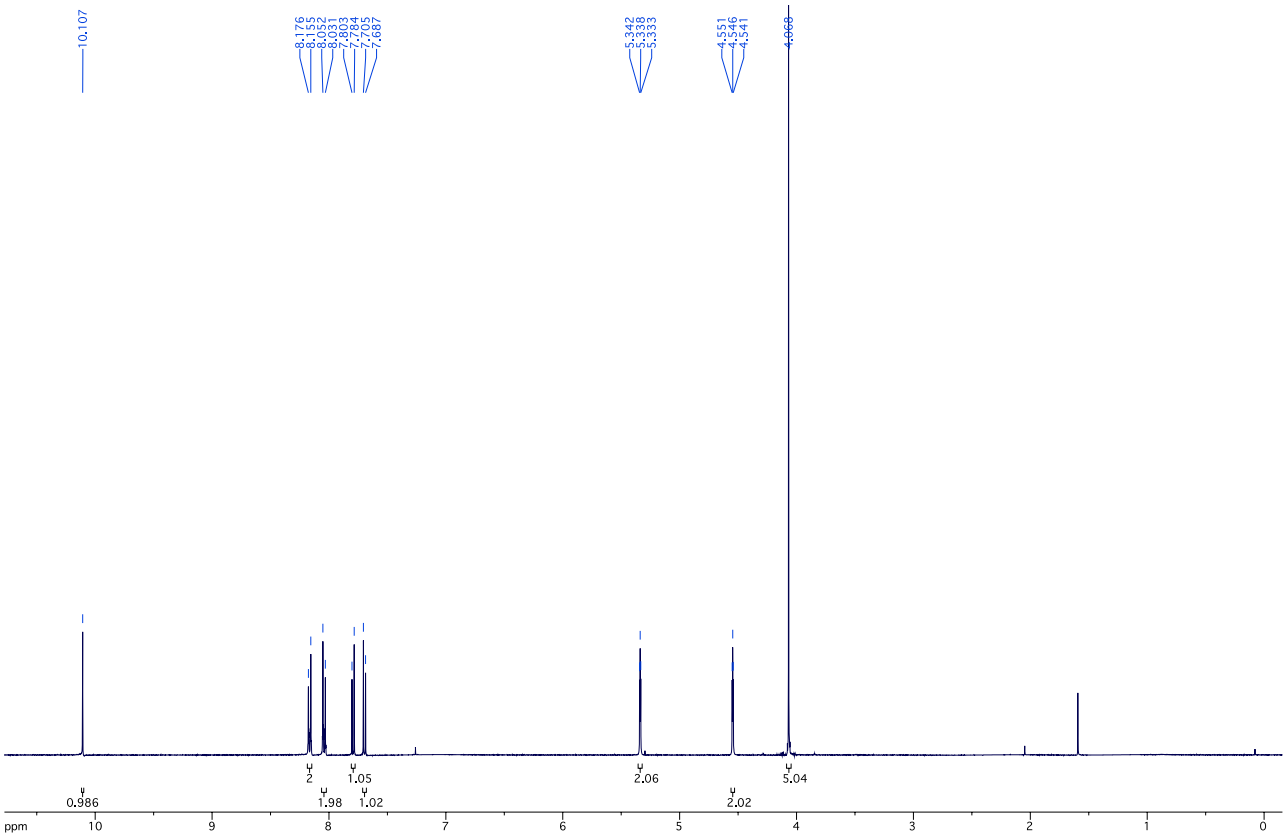


^{13}C (100 MHz, $CDCl_3$, TMS)

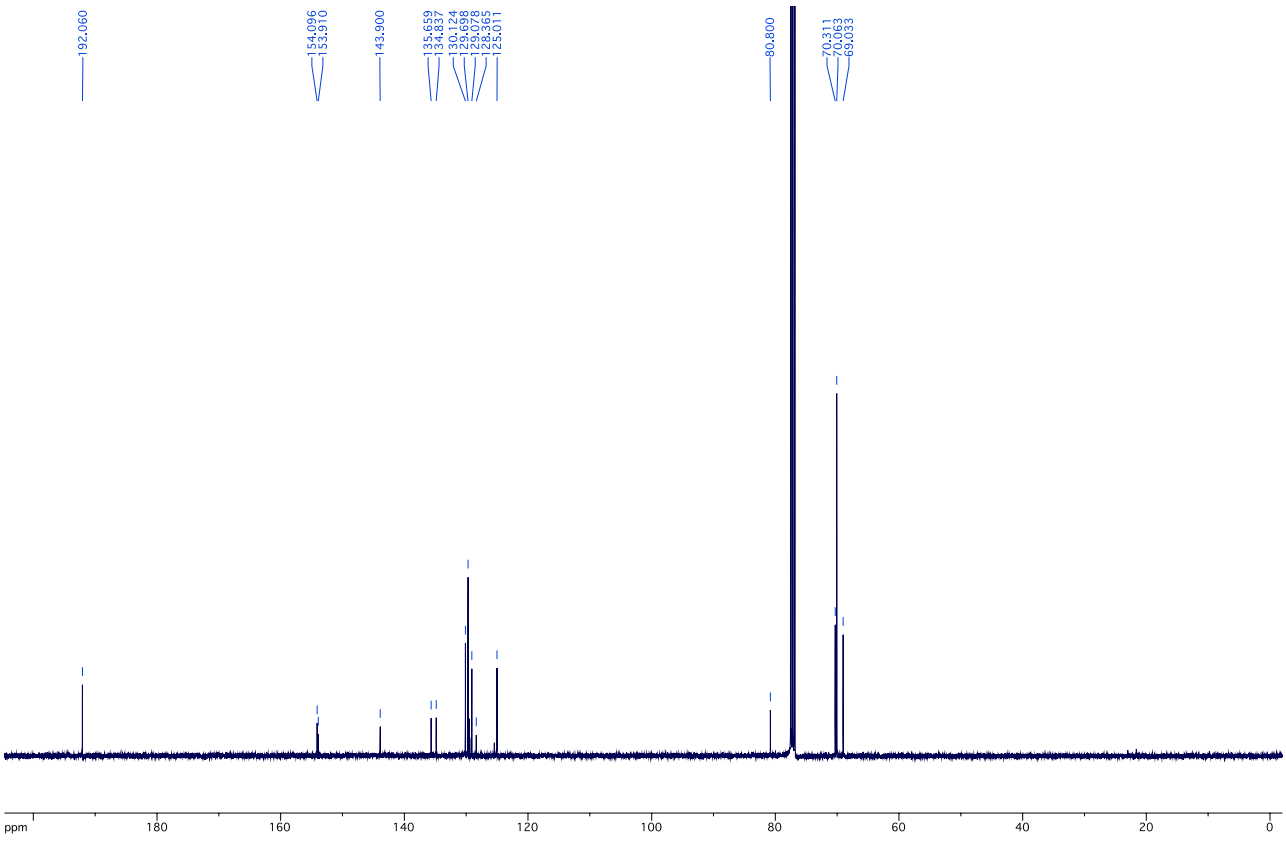


Compound 4

^{1}H (400 MHz, $CDCl_3$, TMS)

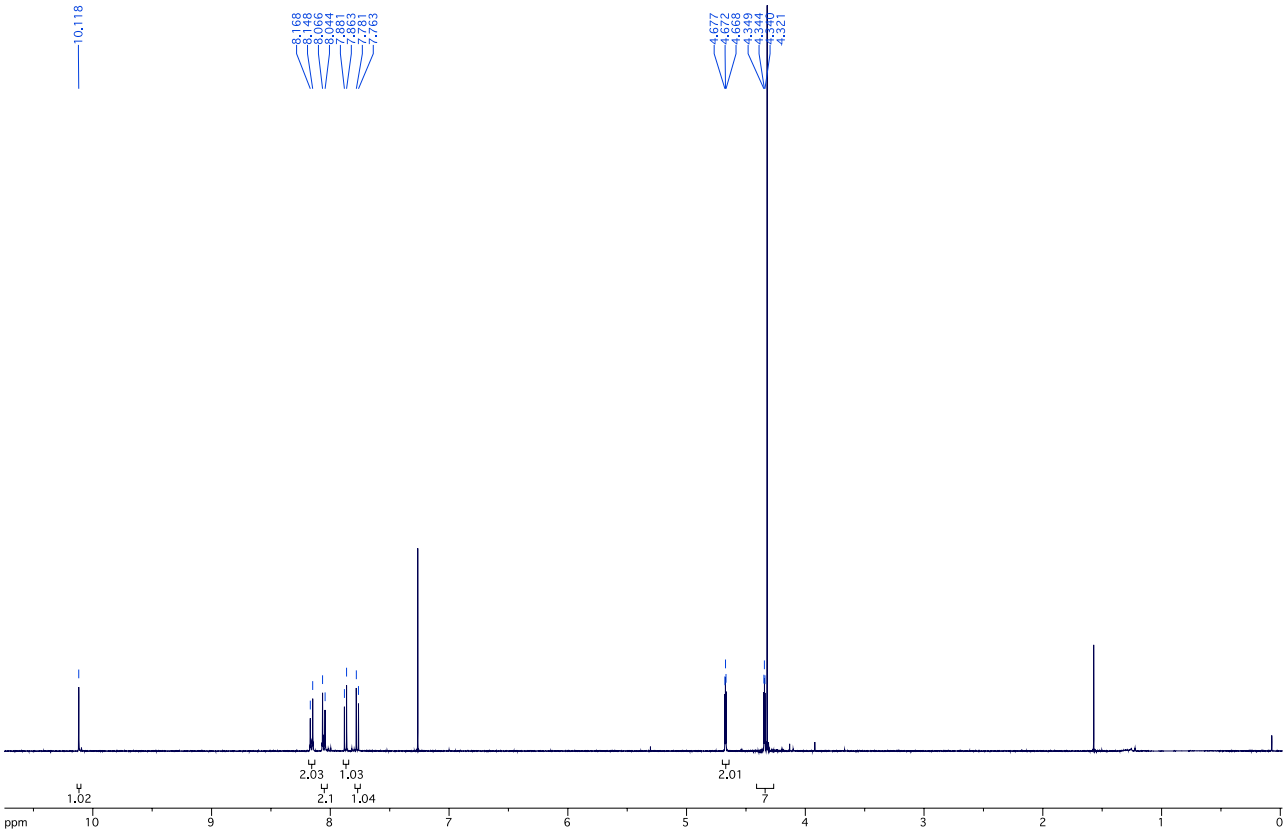


^{13}C (100 MHz, $CDCl_3$, TMS)

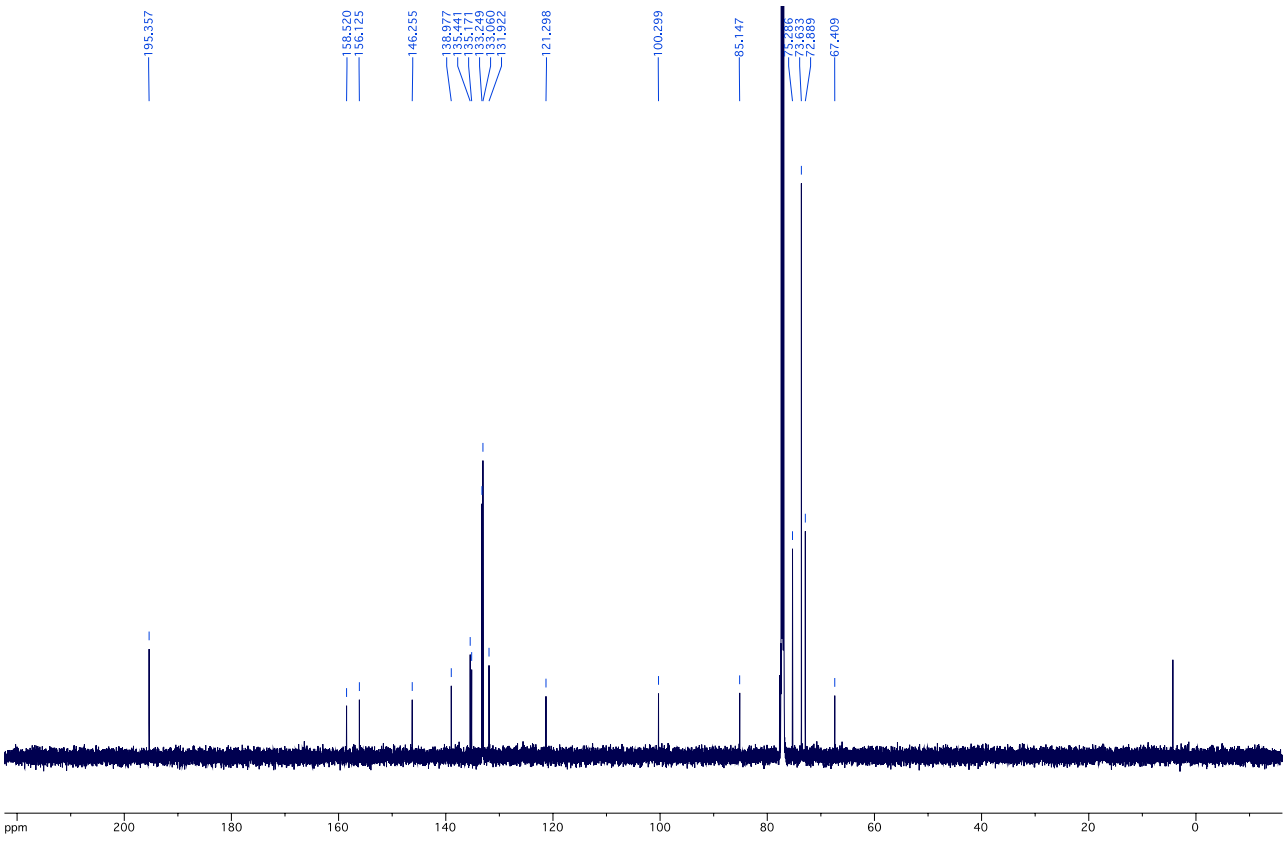


Compound 7

^{1}H (400 MHz, $CDCl_3$, TMS)

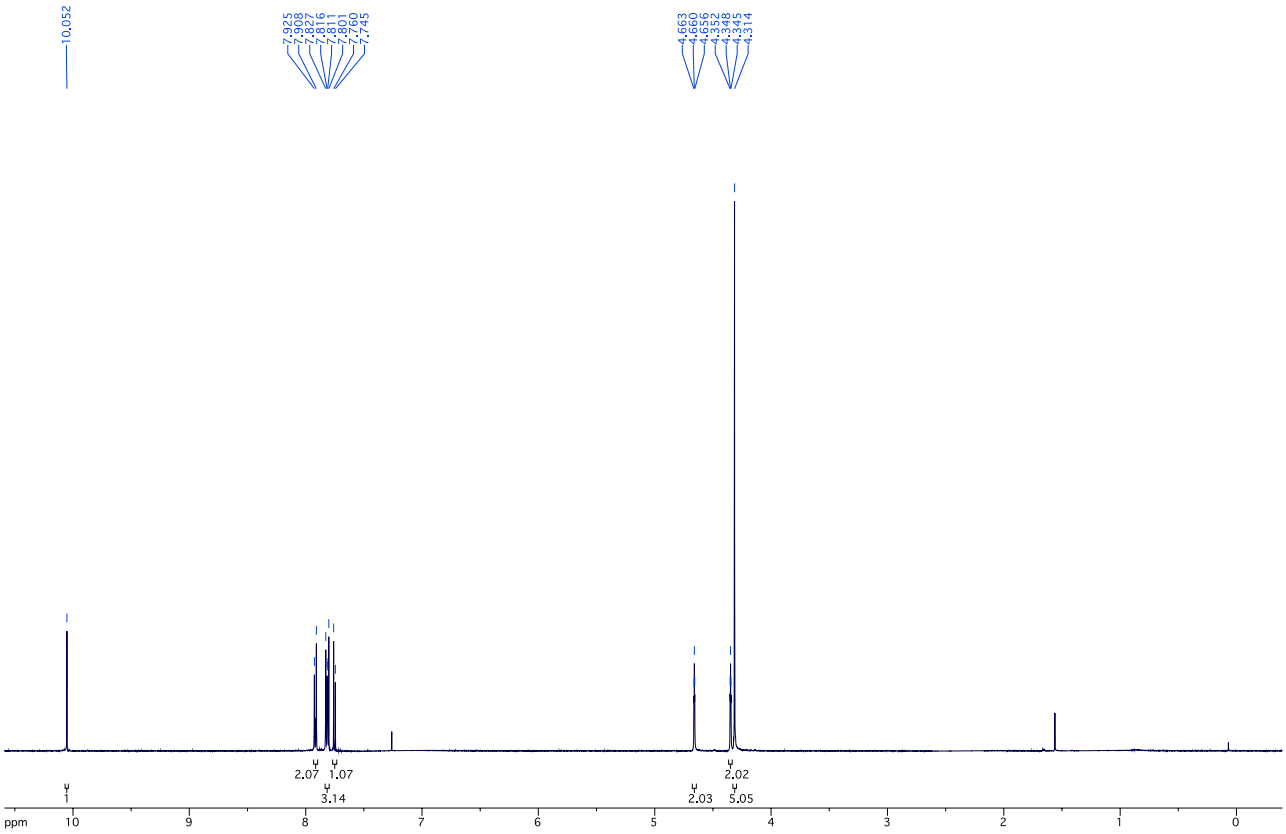


^{13}C (100 MHz, $CDCl_3$, TMS)

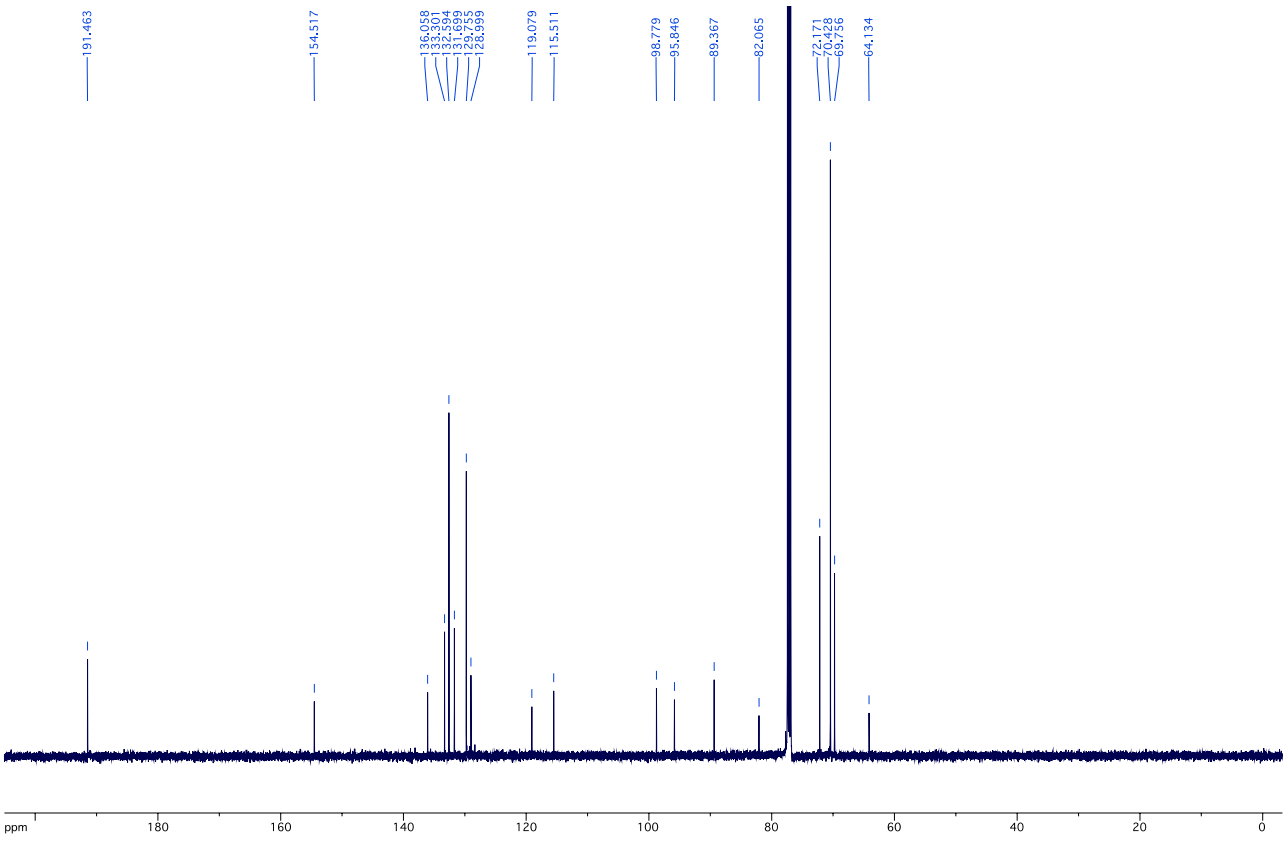


Compound 8

^{1}H (500 MHz, $CDCl_3$, TMS)

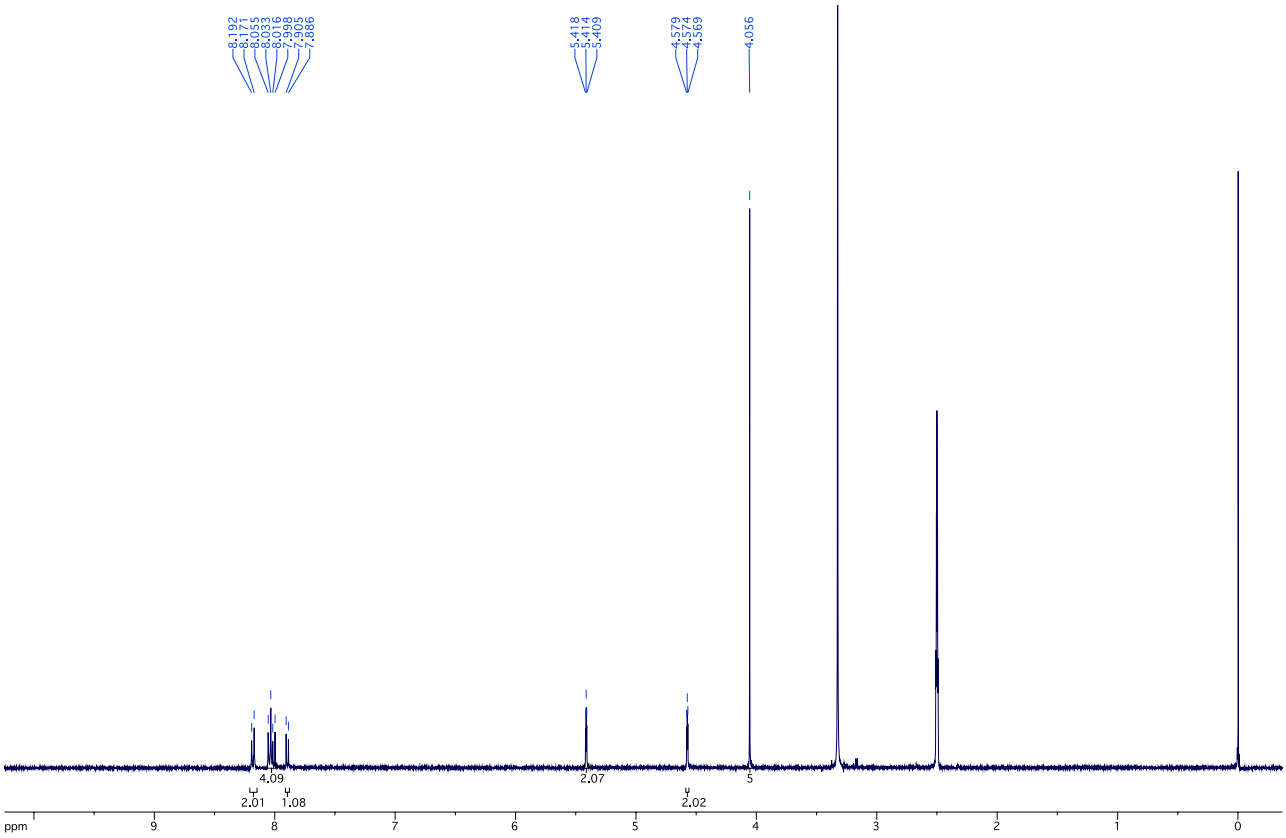


^{13}C (125 MHz, $CDCl_3$, TMS)



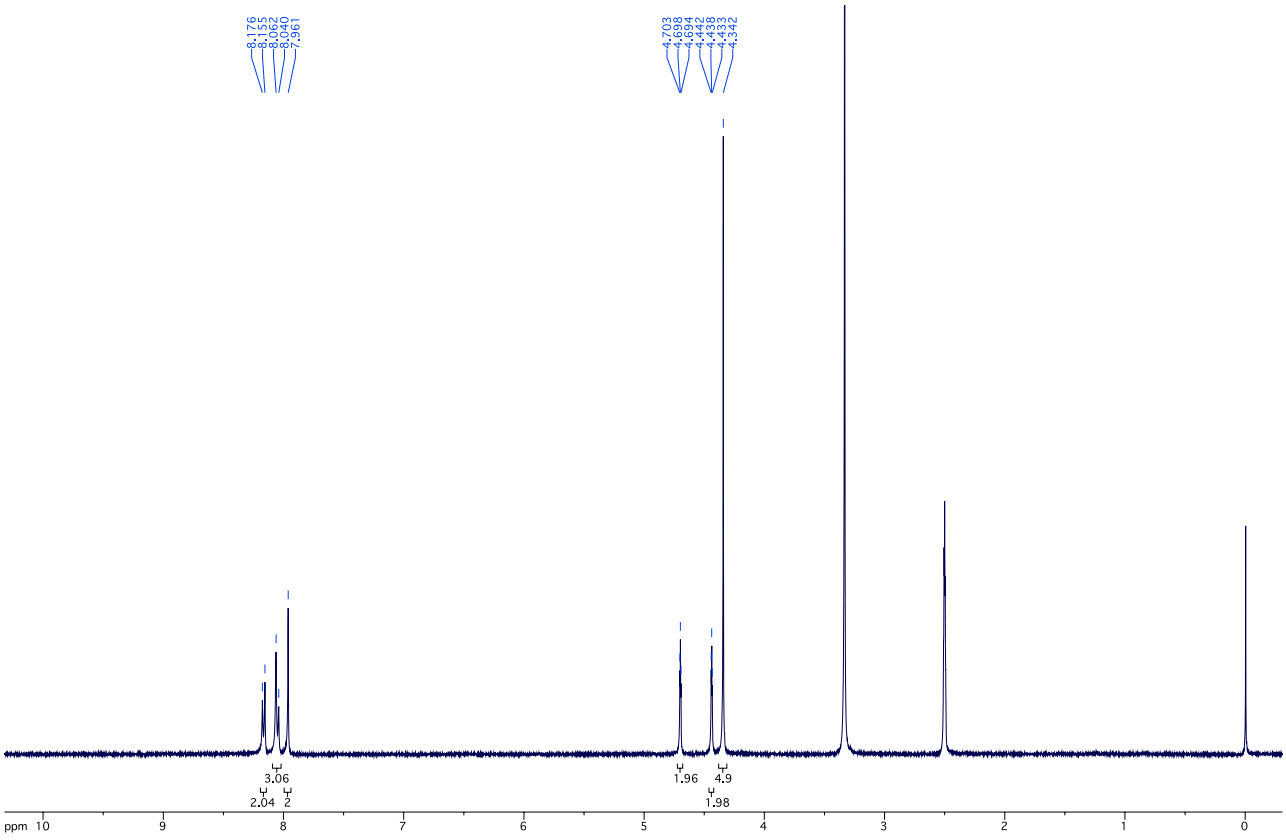
Fc-D1

^{1}H (400 MHz, d-DMSO, TMS)



Fc-D2

^{1}H (400 MHz, d-DMSO, TMS)



Fc-D3

^{1}H (400 MHz, d-DMSO, TMS)