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Electronic Supplementary Information

A versatile approach to functionalisation of [60]fullerene using 3-trifluoromethyl-3-phenyldiazirine derivatives as photolabelling reagents

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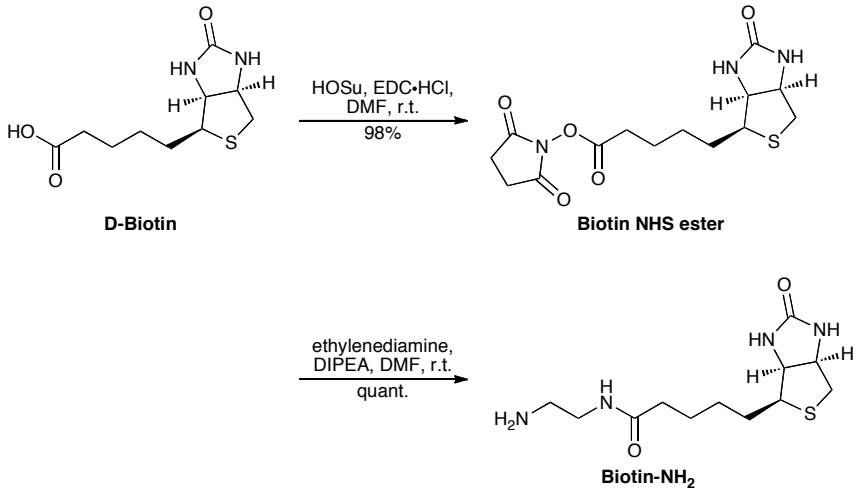

Scheme 1 (ESI). Three-step synthesis of Biotin-NH_2 form D-Biotin.

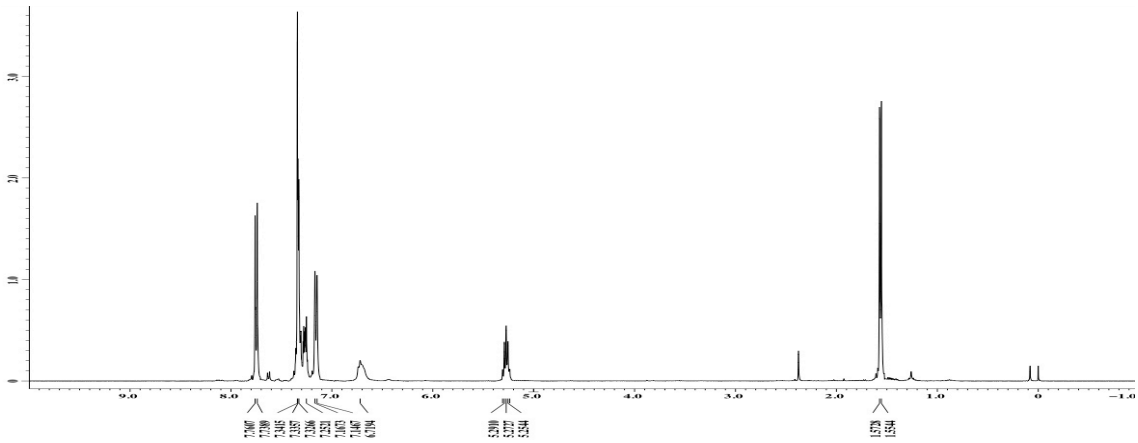

Figure 1 (ESI). ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **1c**.

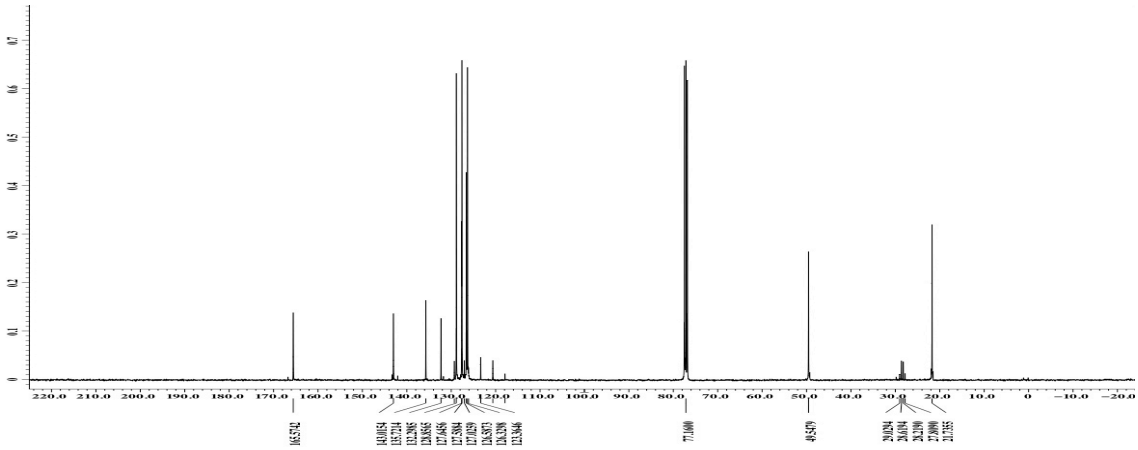

Figure 2 (ESI). ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of **1c**.

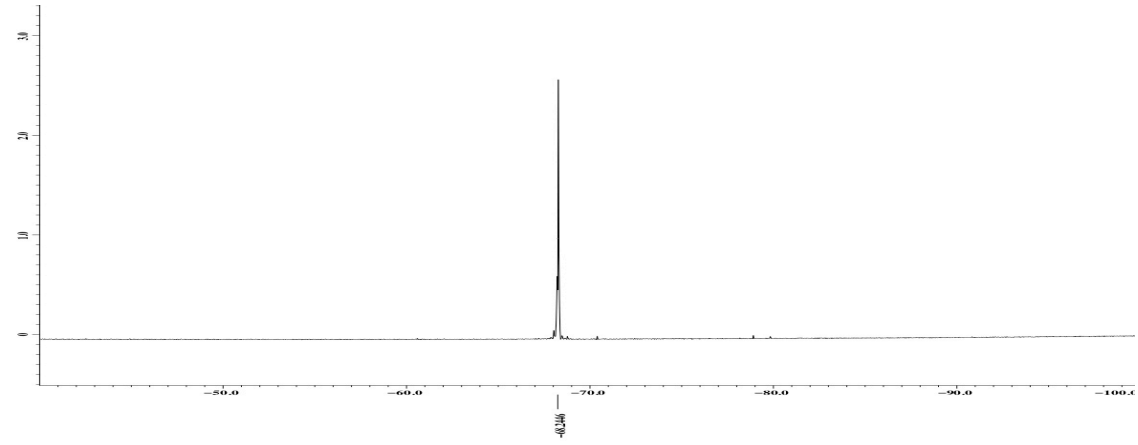

Figure 3 (ESI). ^{19}F NMR spectrum (376 MHz, $CDCl_3$) of **1c**.

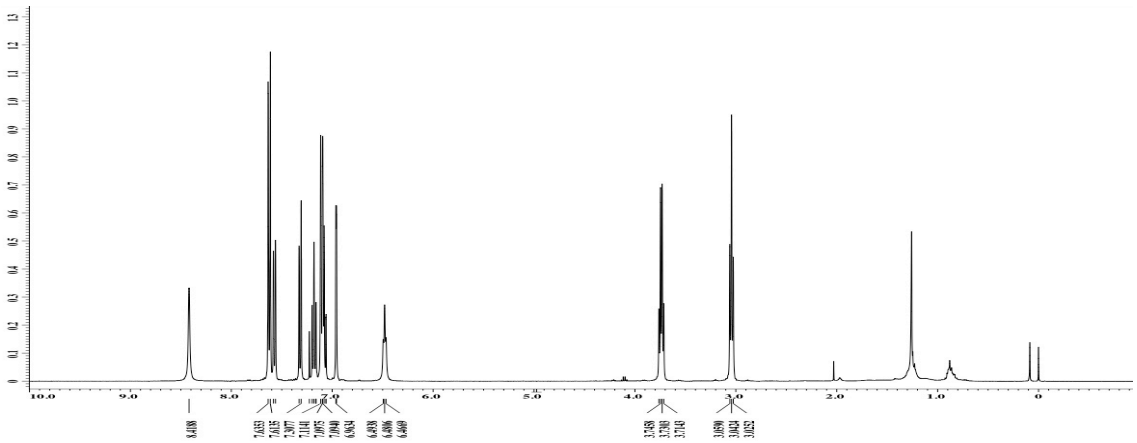

Figure 4 (ESI). ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **1d**.

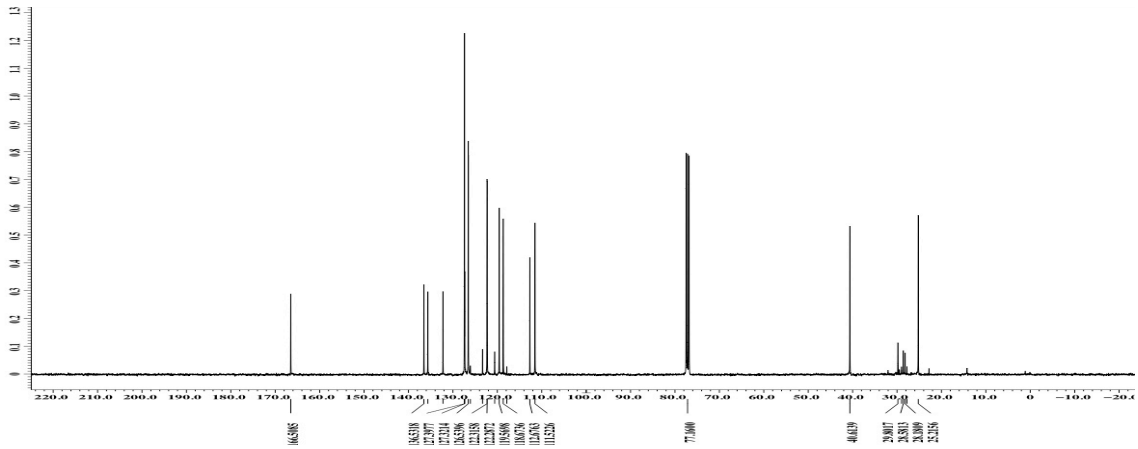

Figure 5 (ESI). ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of **1d**.

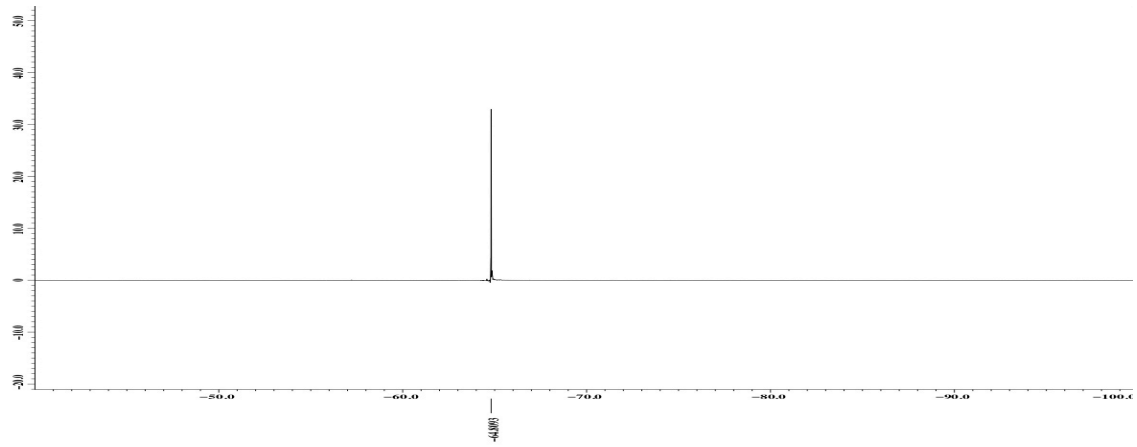

Figure 6 (ESI). ^{19}F NMR spectrum (376 MHz, $CDCl_3$) of **1d**.

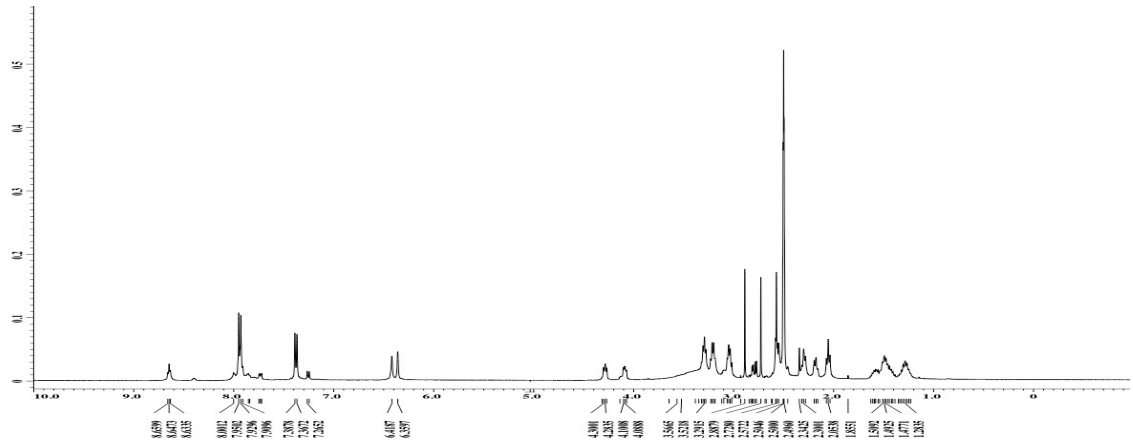

Figure 7 (ESI). ^{1}H NMR spectrum (400 MHz, DMSO–d_6) of **1e**.

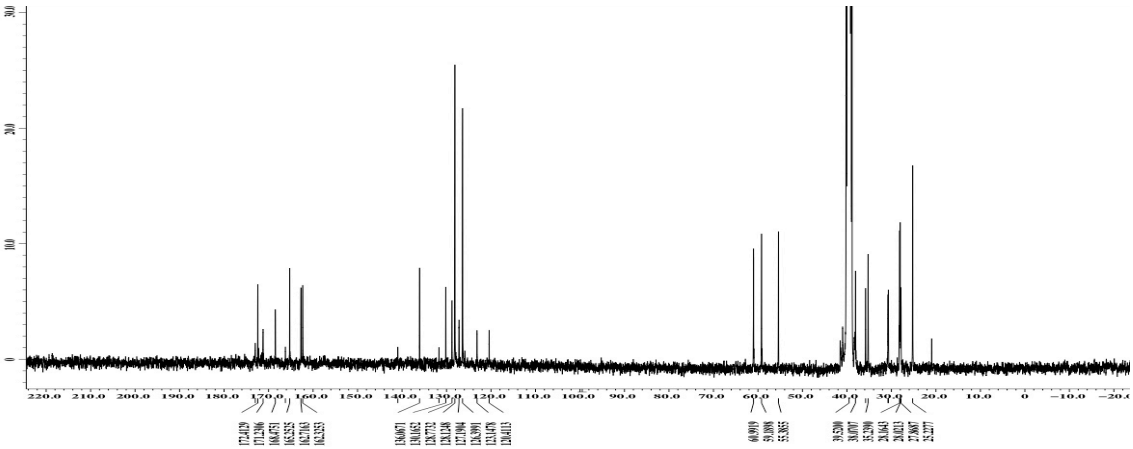

Figure 8 (ESI). ^{13}C NMR spectrum (100 MHz, DMSO–d_6) of **1e**.

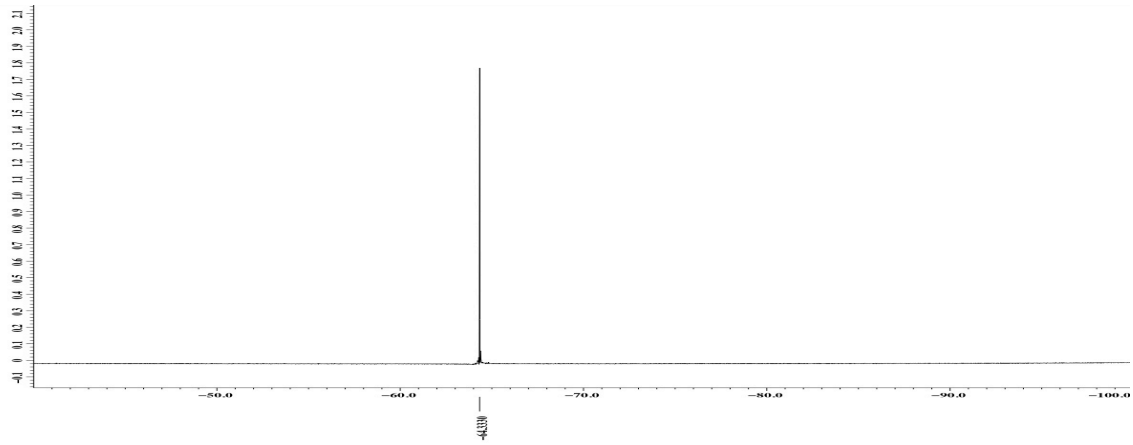

Figure 9 (ESI). ^{19}F NMR spectrum (376 MHz, DMSO–d_6) of **1e**.

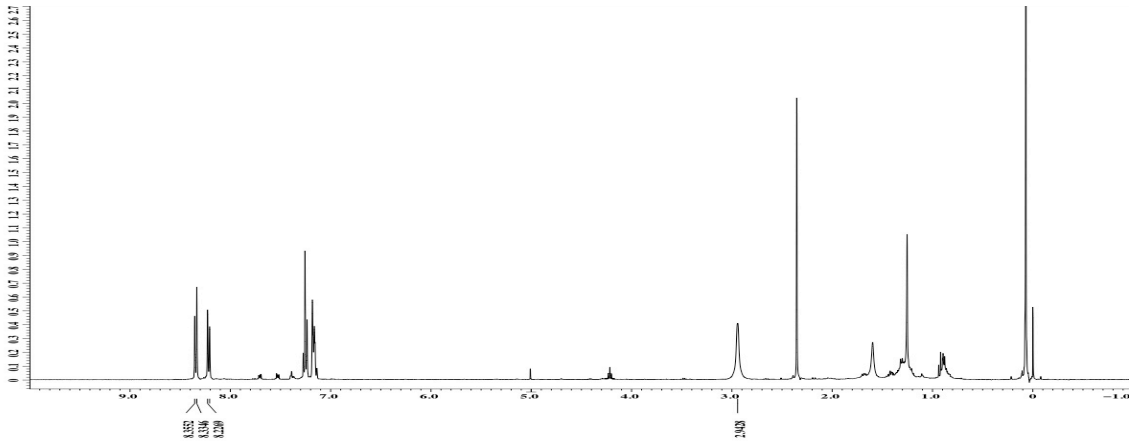

Figure 10 (ESI). ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **2b**.

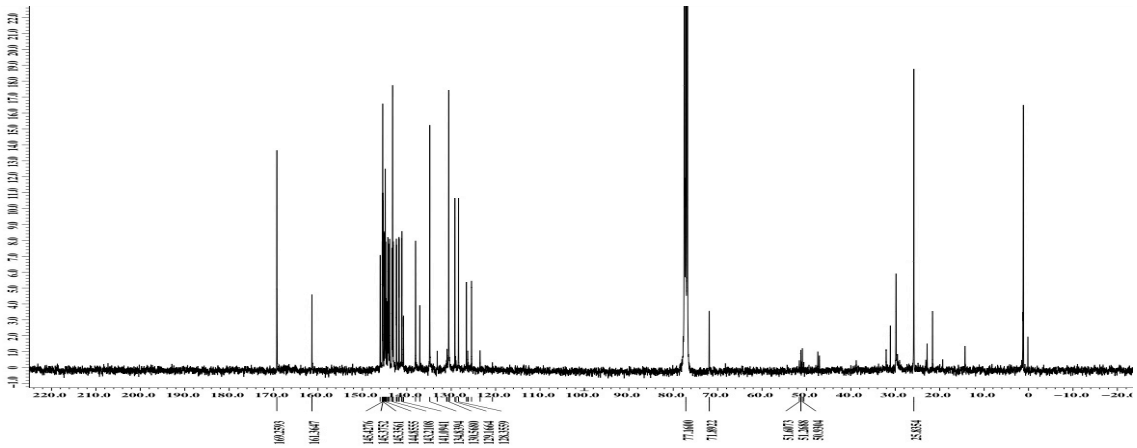

Figure 11 (ESI). ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of **2b**.

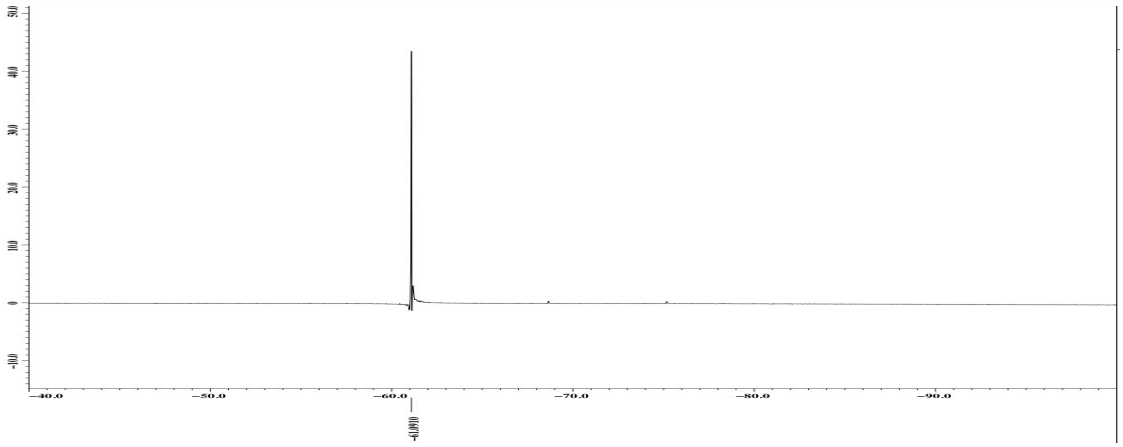

Figure 12 (ESI). ^{19}F NMR spectrum (376 MHz, $CDCl_3$) of **2b**.

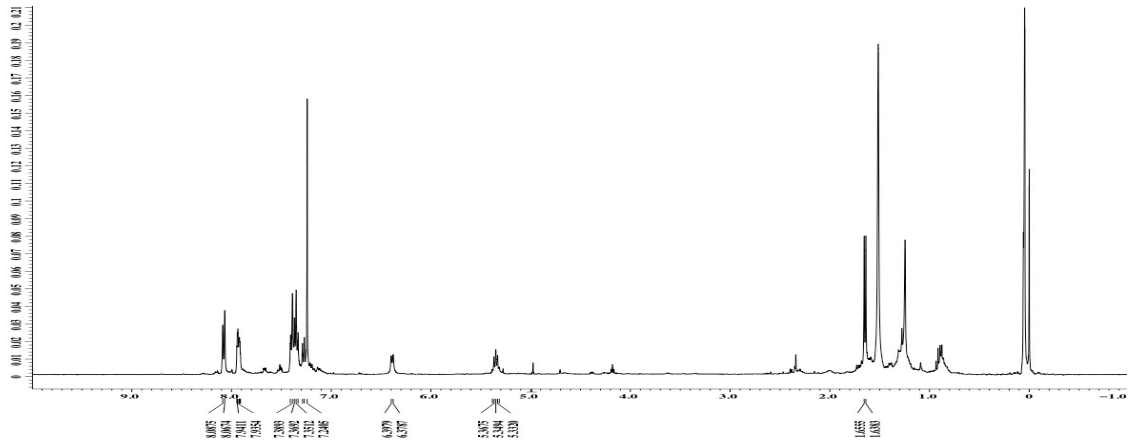

Figure 13 (ESI). ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **2c**.

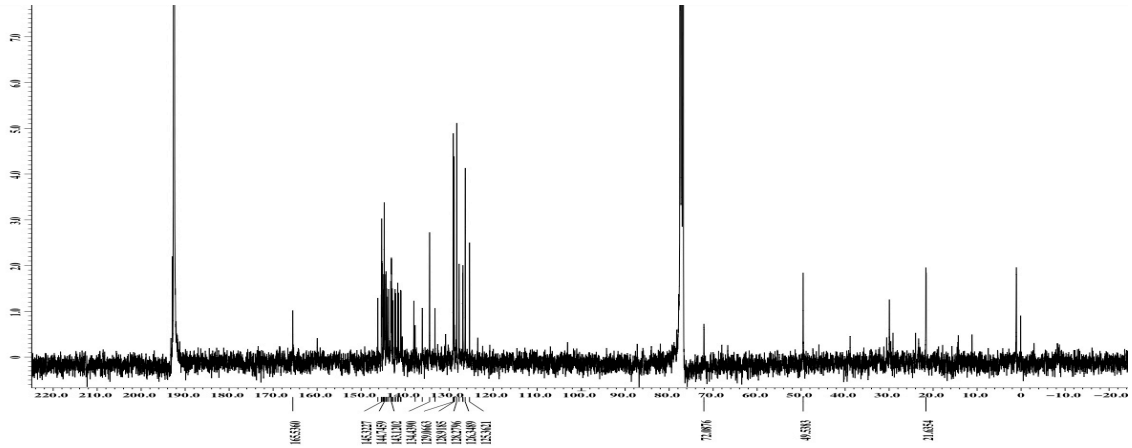

Figure 14 (ESI). ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of **2c**.

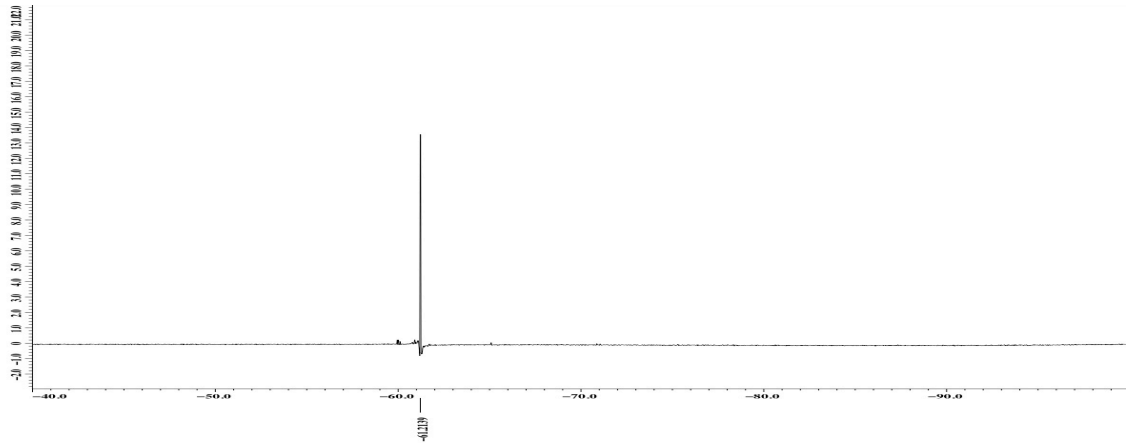

Figure 15 (ESI). ^{19}F NMR spectrum (376 MHz, $CDCl_3$) of **2c**.

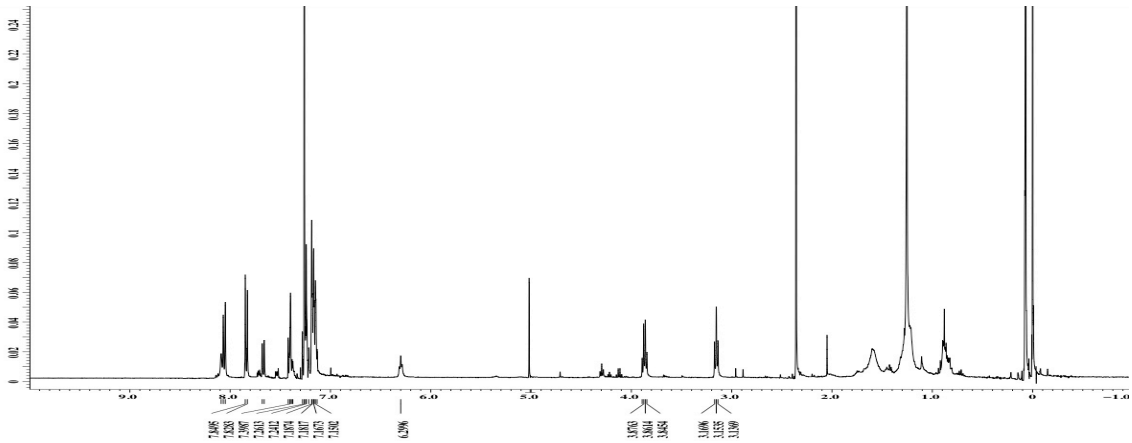

Figure 16 (ESI). ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **2d**.

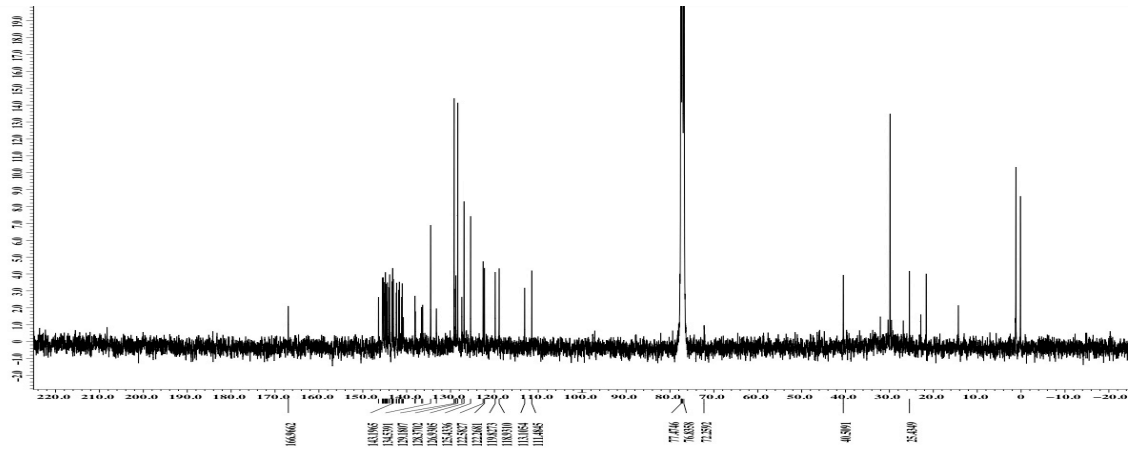

Figure 17 (ESI). ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of **2d**.

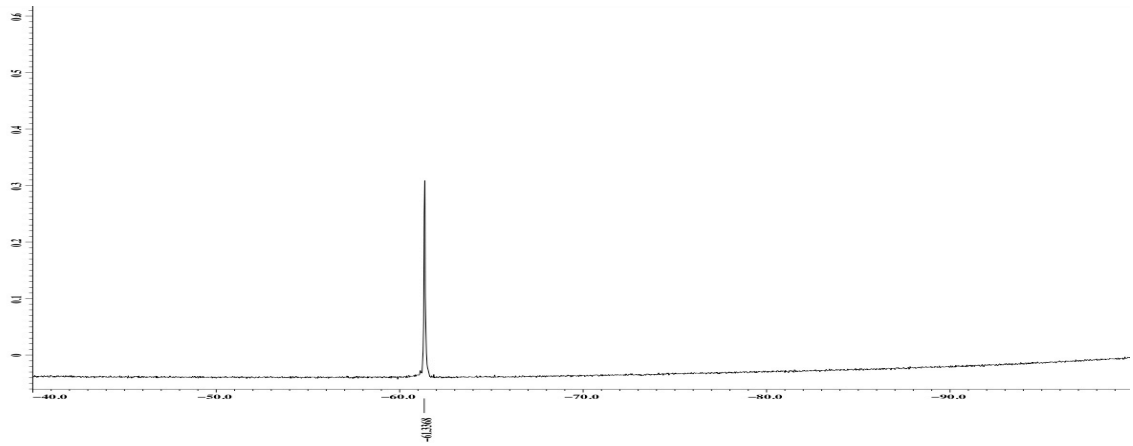

Figure 18 (ESI). ^{19}F NMR spectrum (376 MHz, $CDCl_3$) of **2d**.

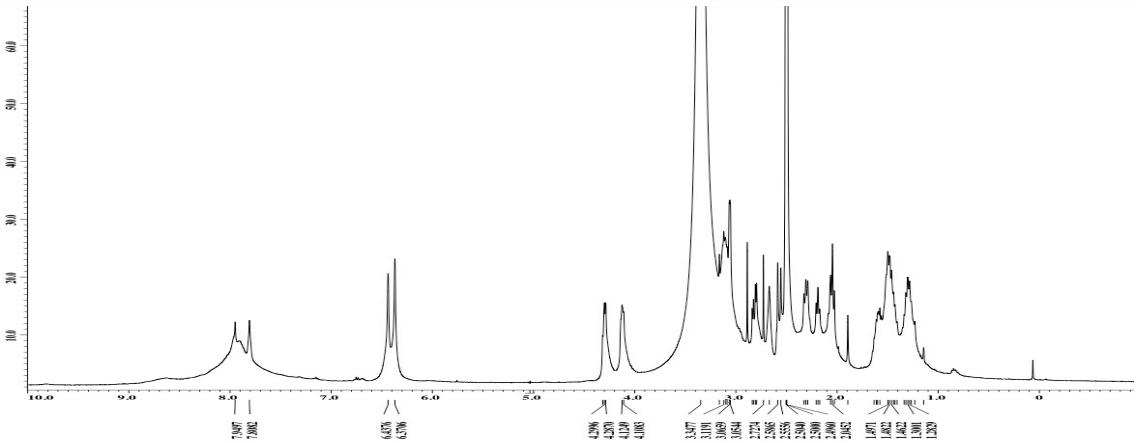

Figure 19 (ESI). ^{1}H NMR spectrum (400 MHz, DMSO–d_6) of **2e**.

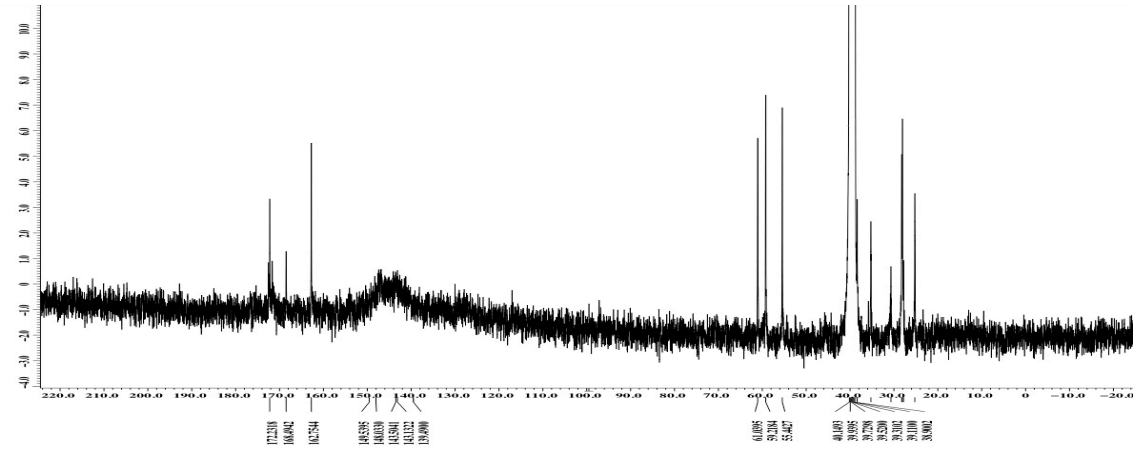

Figure 20 (ESI). ^{13}C NMR spectrum (100 MHz, DMSO–d_6) of **2e**.

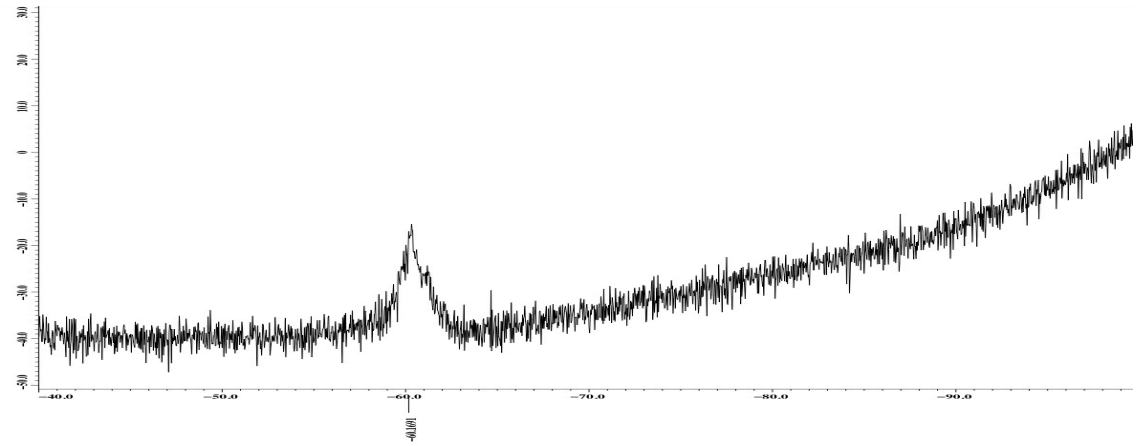

Figure 21 (ESI). ^{19}F NMR spectrum (376 MHz, DMSO–d_6) of **2e**.

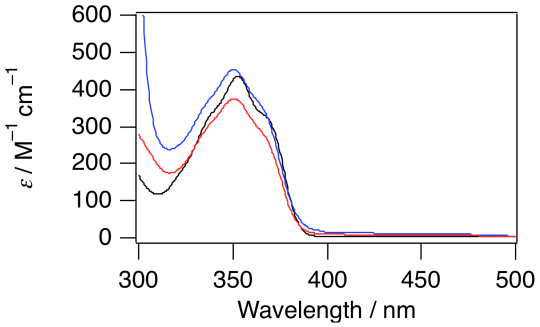

Figure 22 (ESI). Absorption spectra of **1c** (black line, in CH_2Cl_2), **1d** (blue line, in CH_2Cl_2), and **1e** (red line, in MeOH).

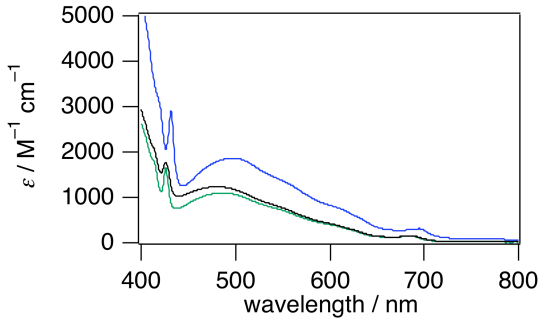

Figure 23 (ESI). Absorption spectra of **2b** (green line), **2c** (black line), and **2d** (blue line) in CH_2Cl_2.

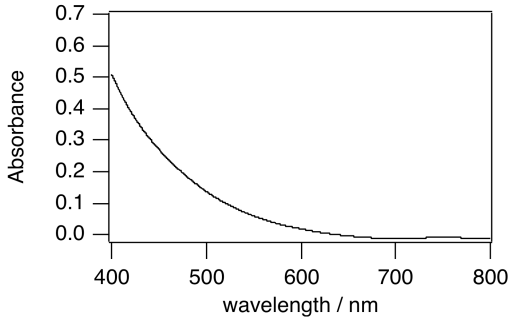

Figure 24 (ESI). Absorption spectrum of **2e** in DMSO.

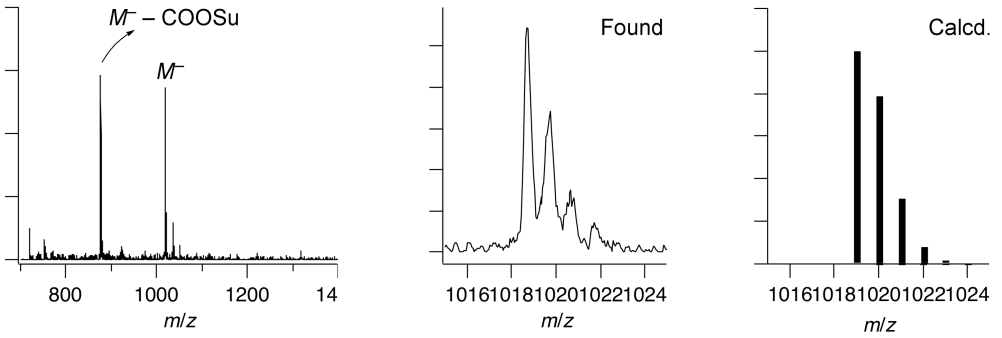

Figure 25 (ESI). Negative-mode MALDI-TOF mass spectrum of **2b**.

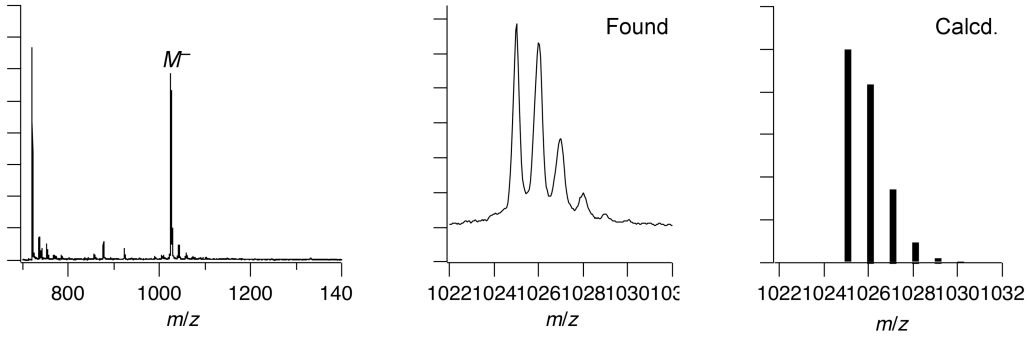

Figure 26 (ESI). Negative-mode MALDI-TOF mass spectrum of **2c**.

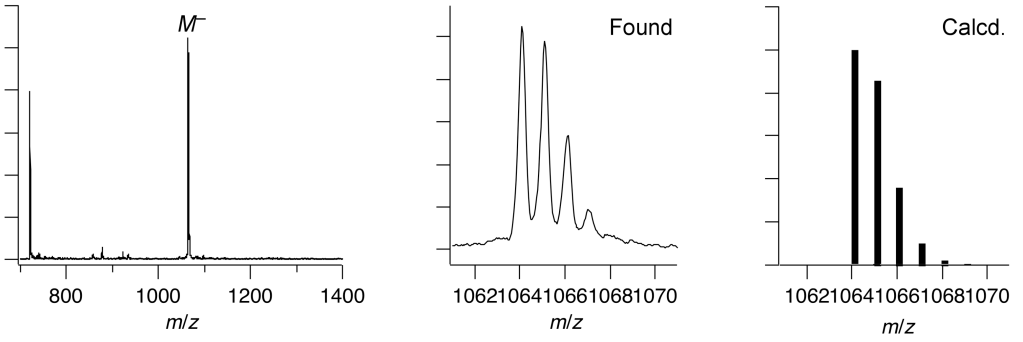

Figure 27 (ESI). Negative-mode MALDI-TOF mass spectrum of **2d**.

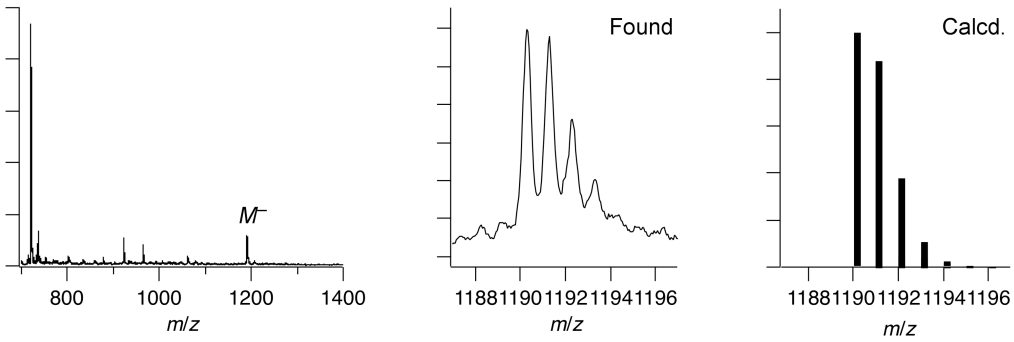

Figure 28 (ESI). Negative-mode MALDI-TOF mass spectrum of **2e**.

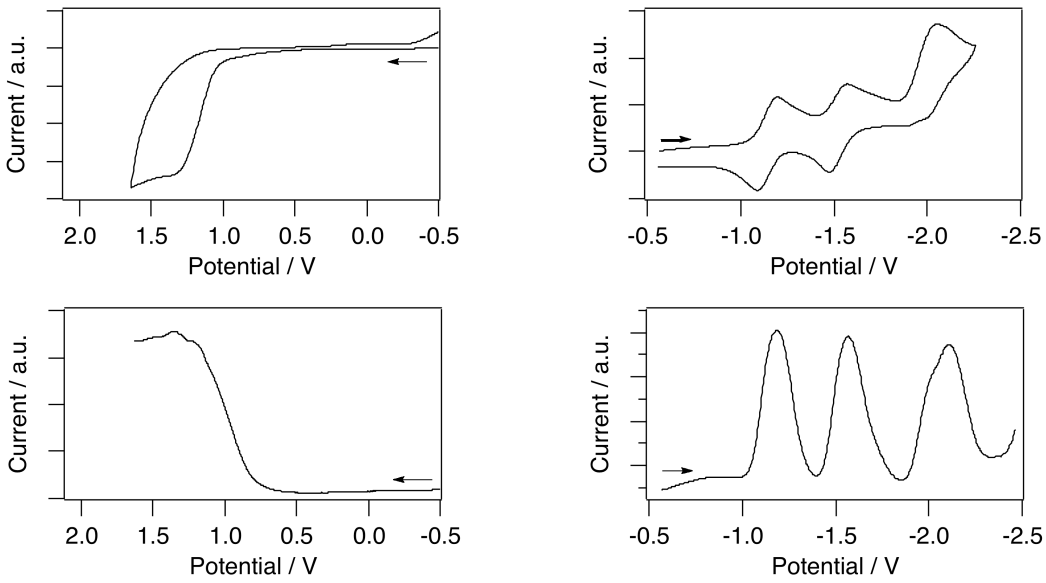

Figure 29 (ESI). CV and DPV curves of **2b**.

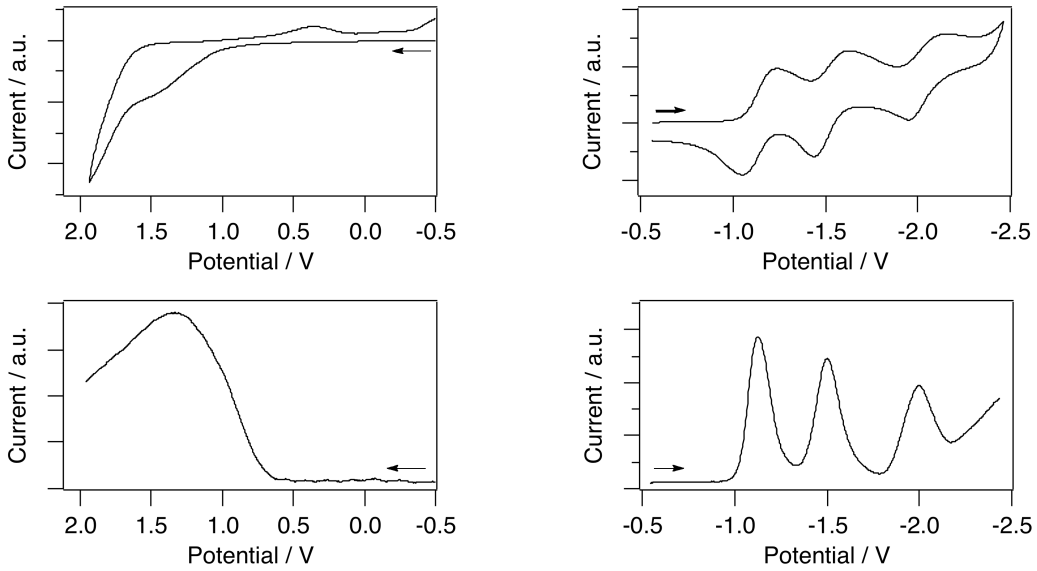

Figure 30 (ESI). CV and DPV curves of **2c**.

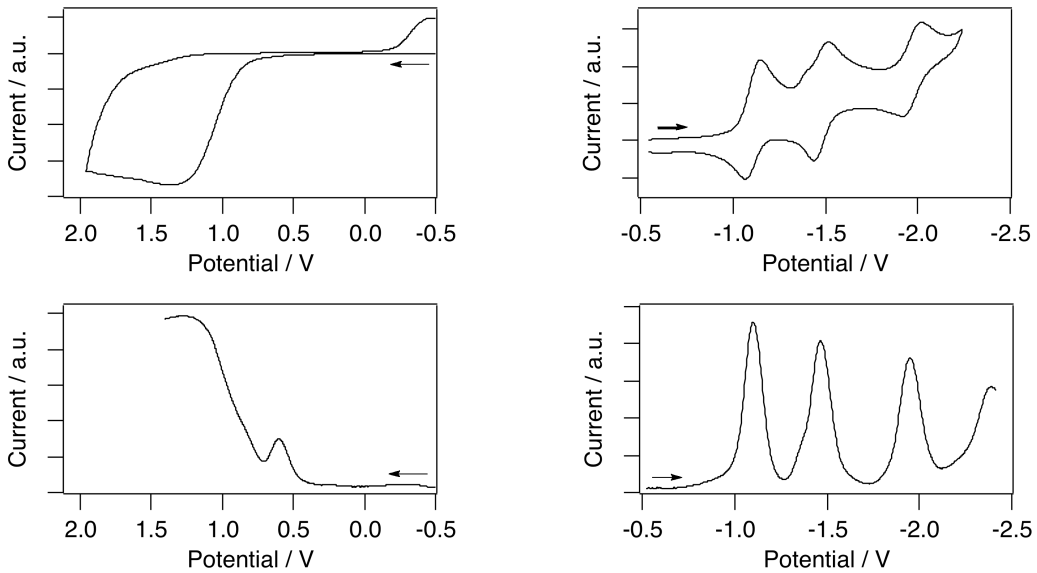

Figure 31 (ESI). CV and DPV curves of **2d**.