Supporting Information 2

Multicomponent, one-pot and expeditous synthesis of highly substituted new spiro[indolo-3,10´-indeno[1,2-b]quinolin]-2,4,11´-triones under micellar catalytic effect of CTAB in water

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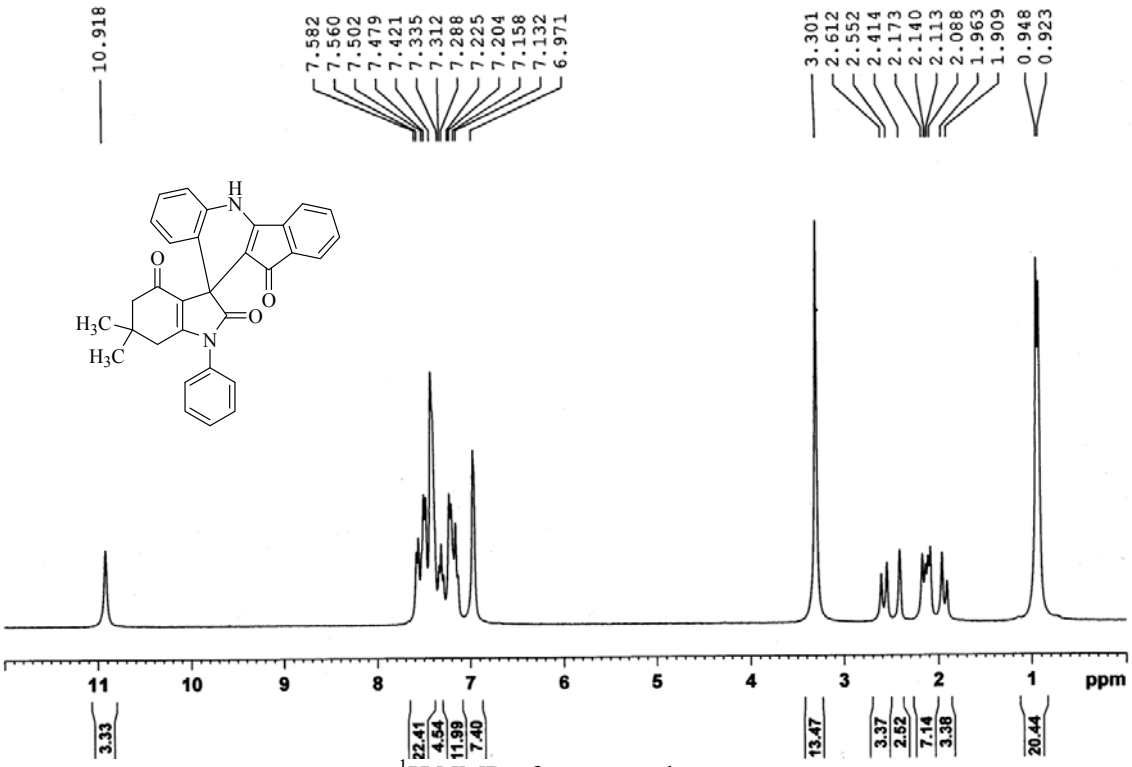
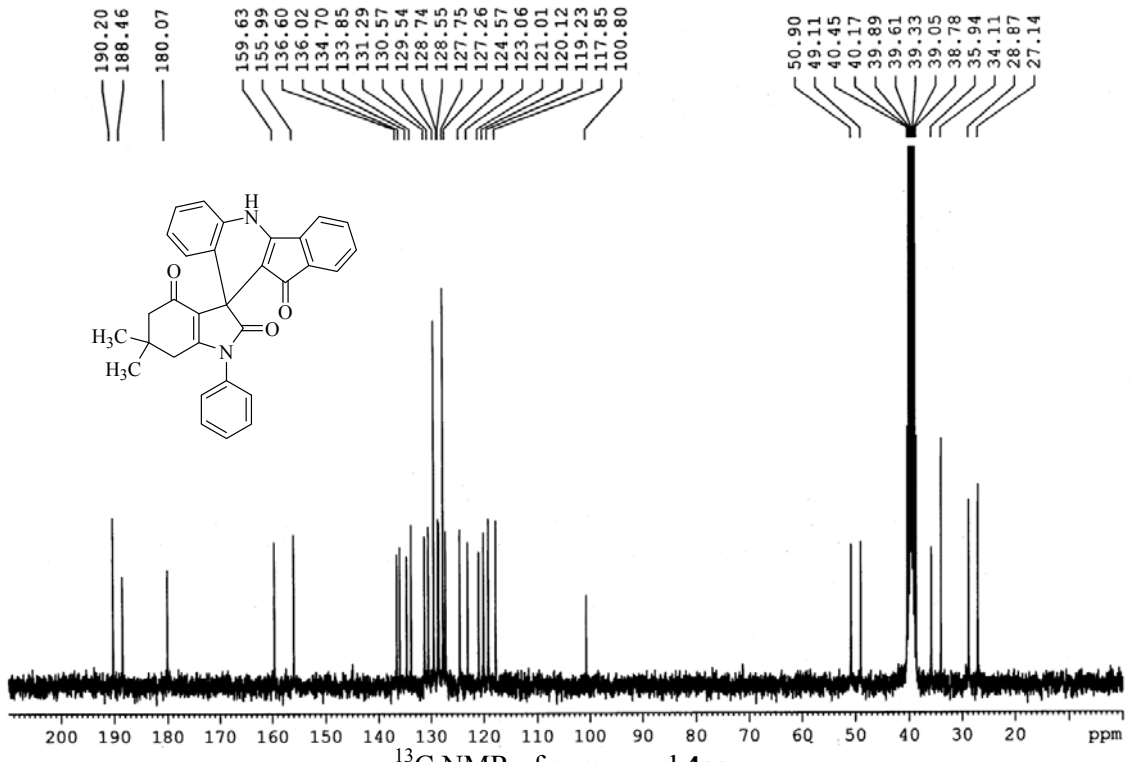


^{1}H NMR of compound **4aa**



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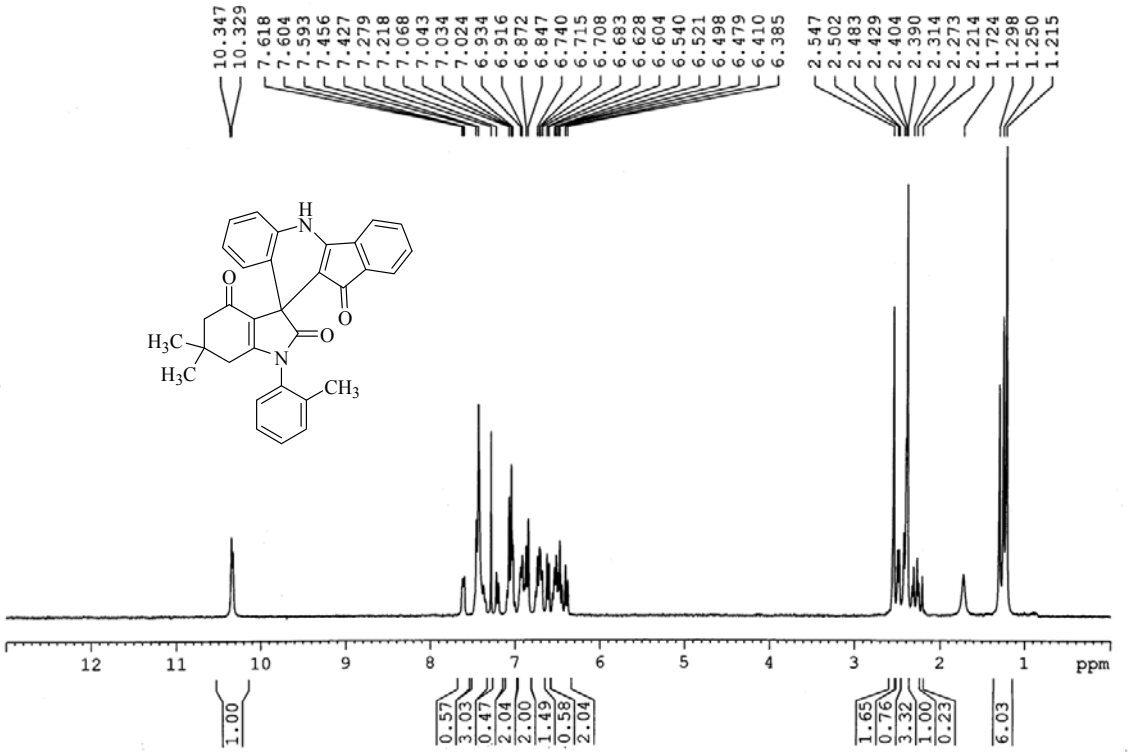

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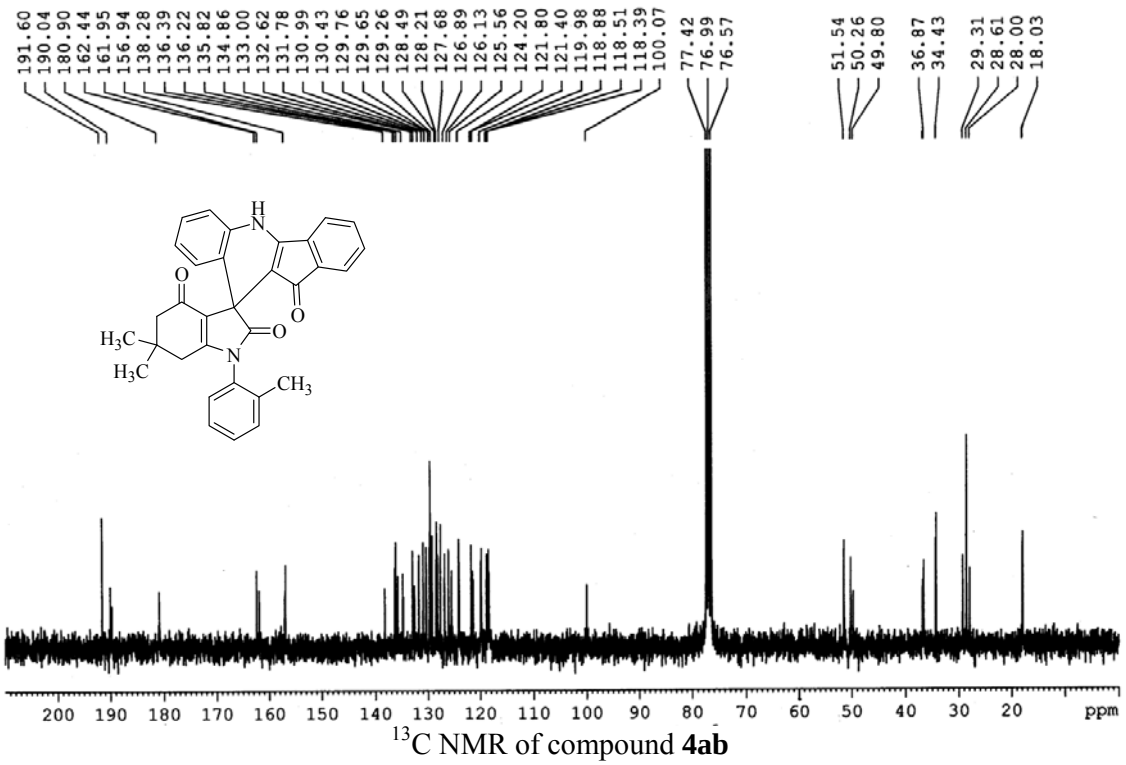

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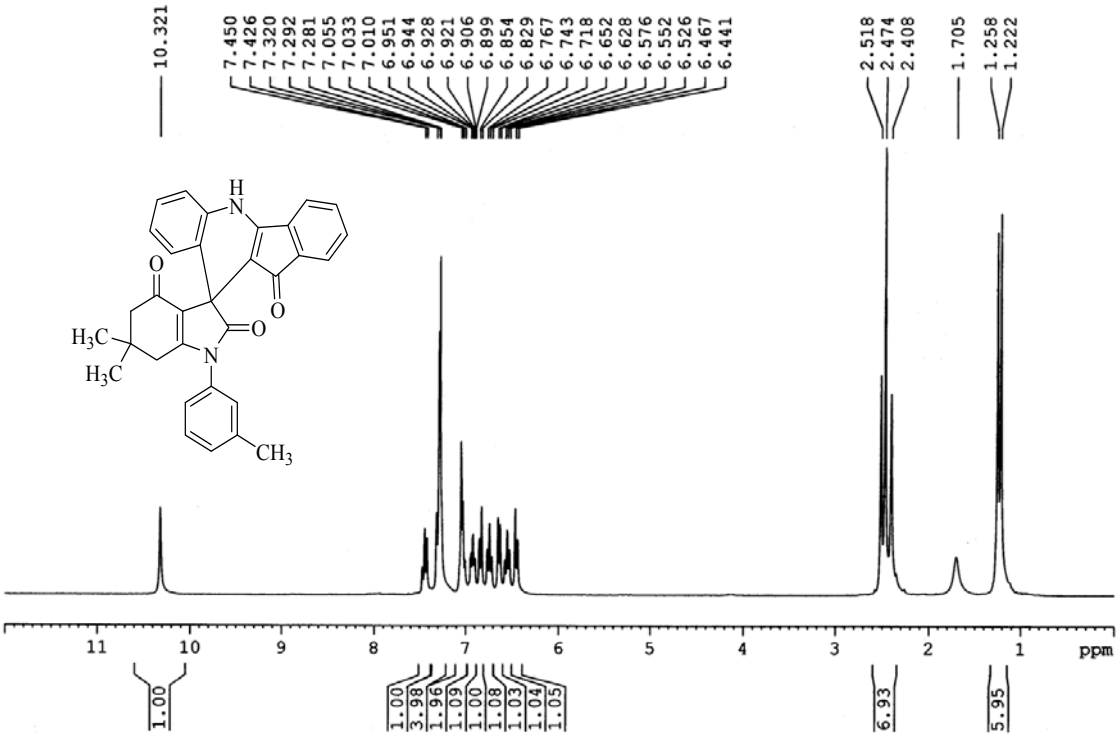

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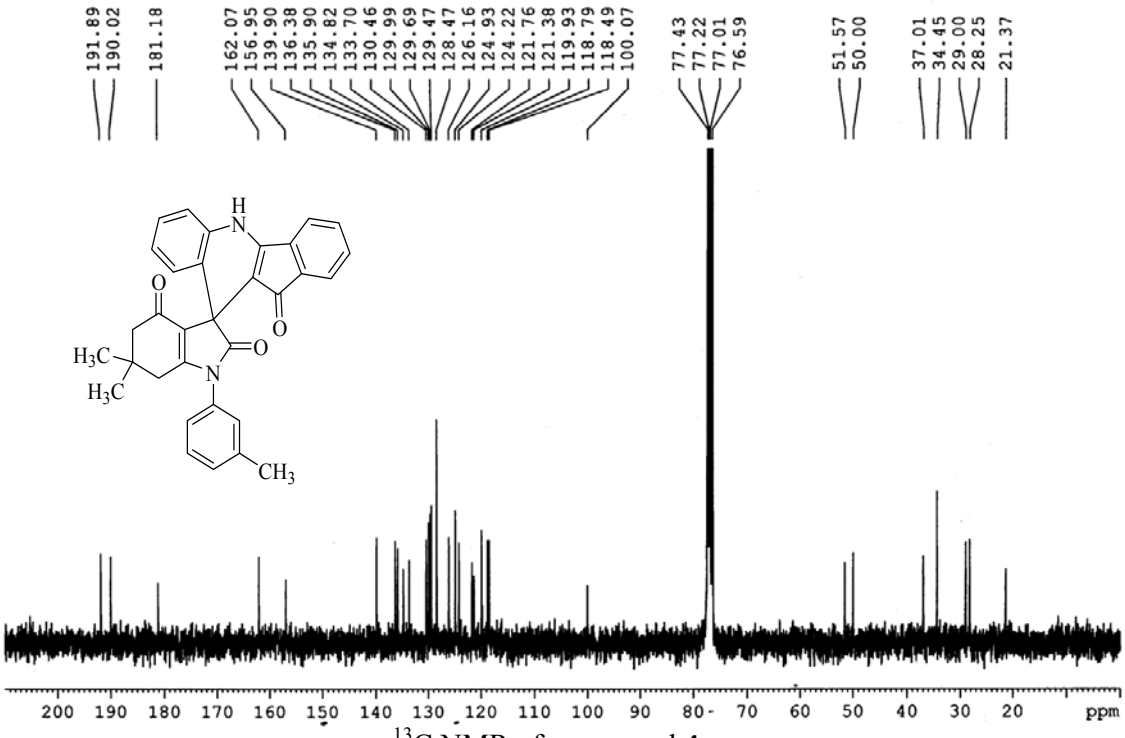

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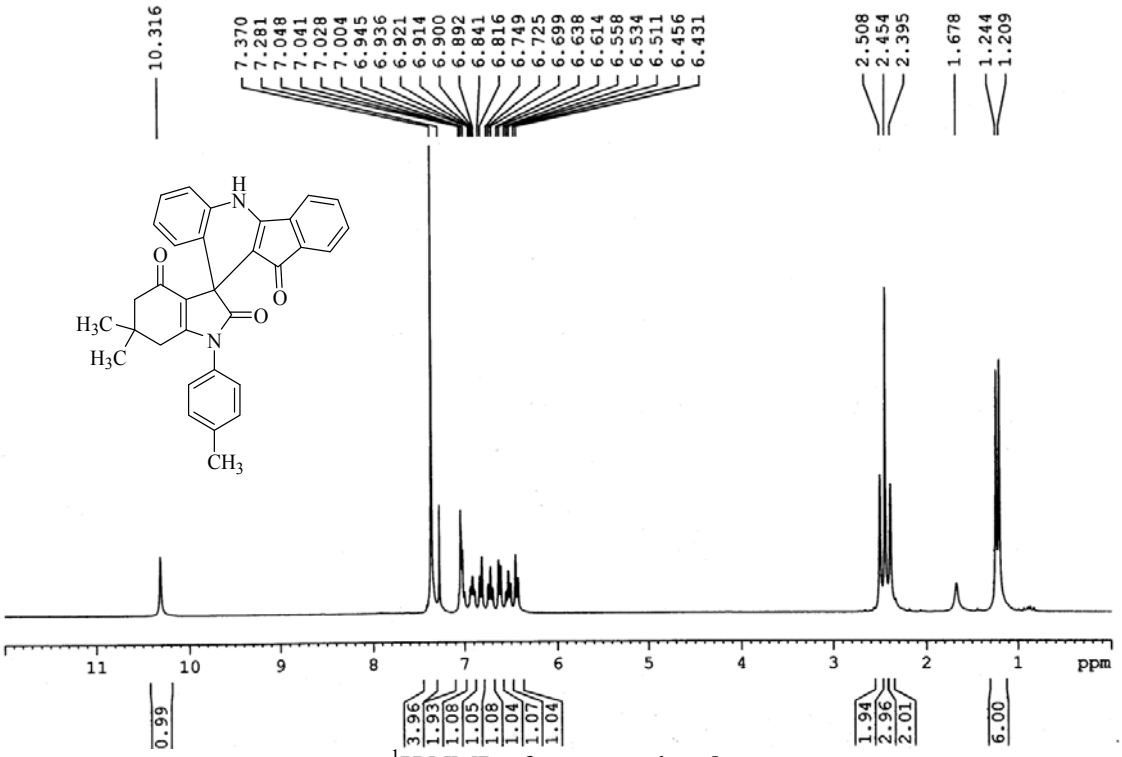

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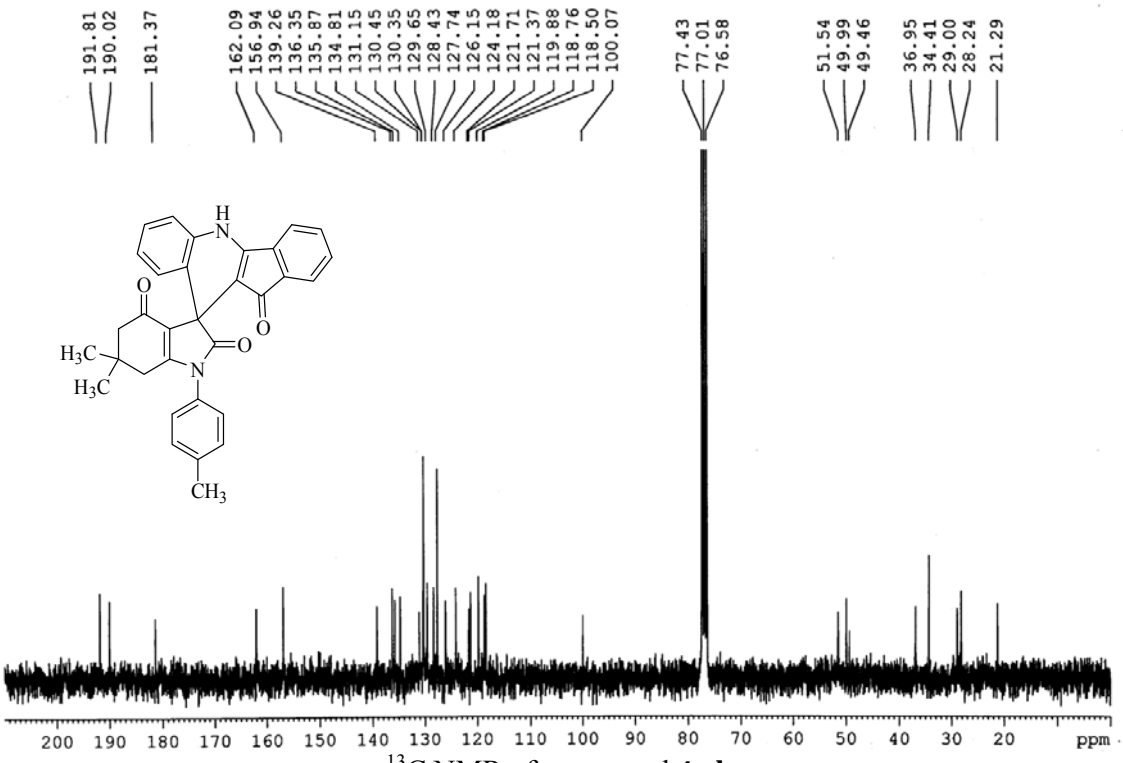

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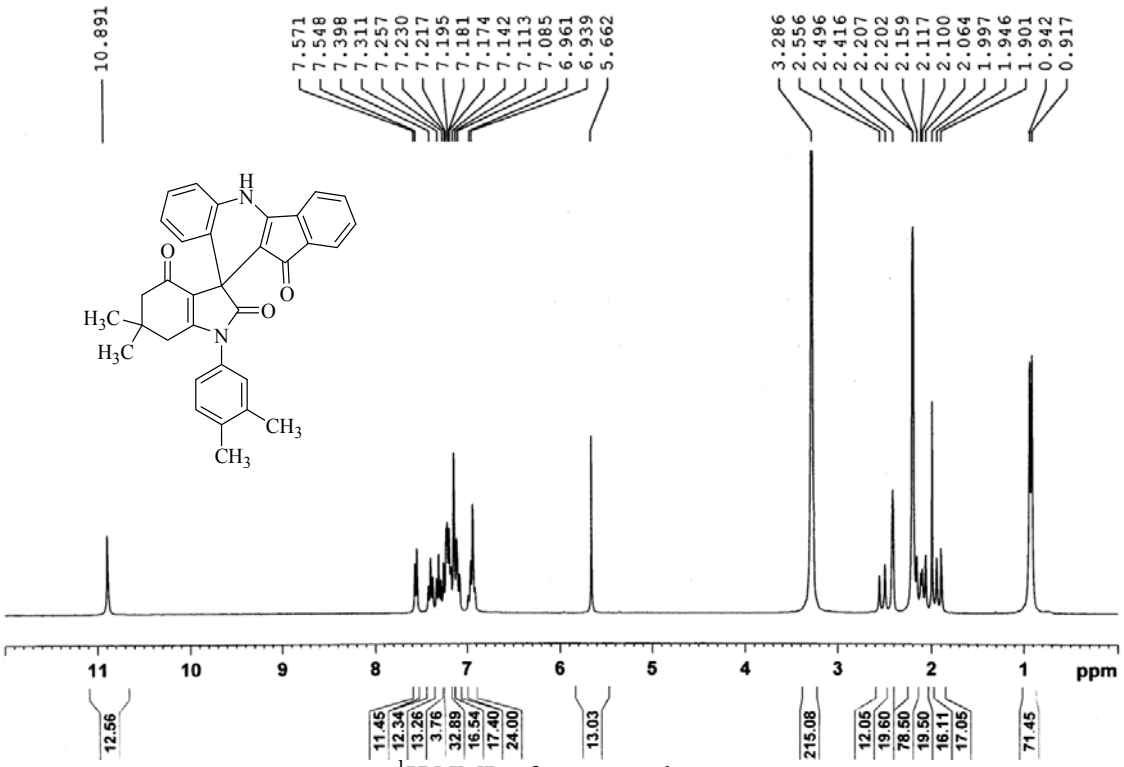

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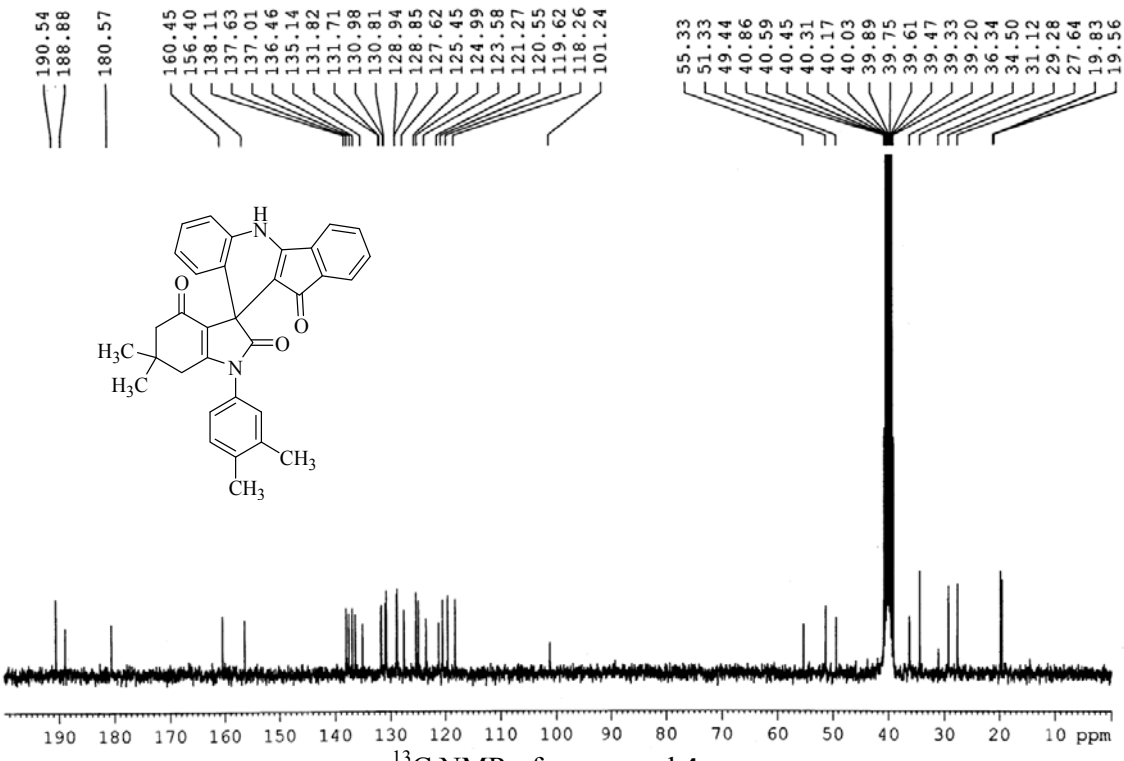

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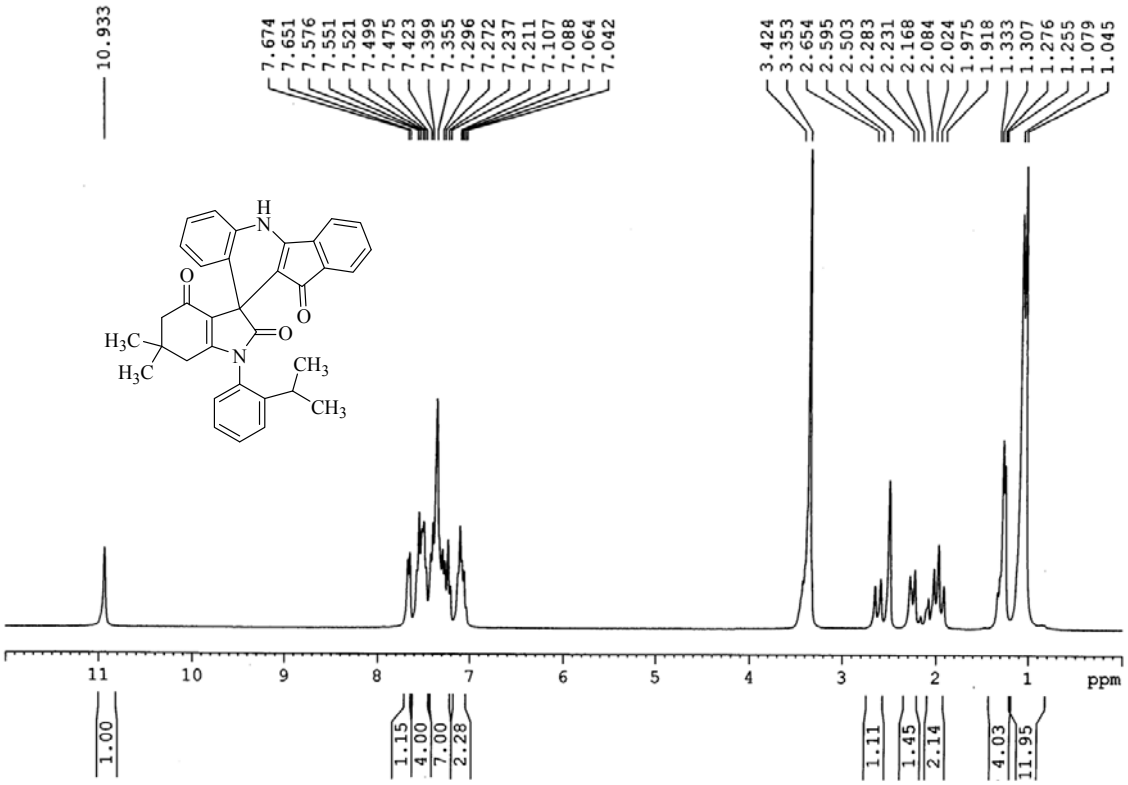

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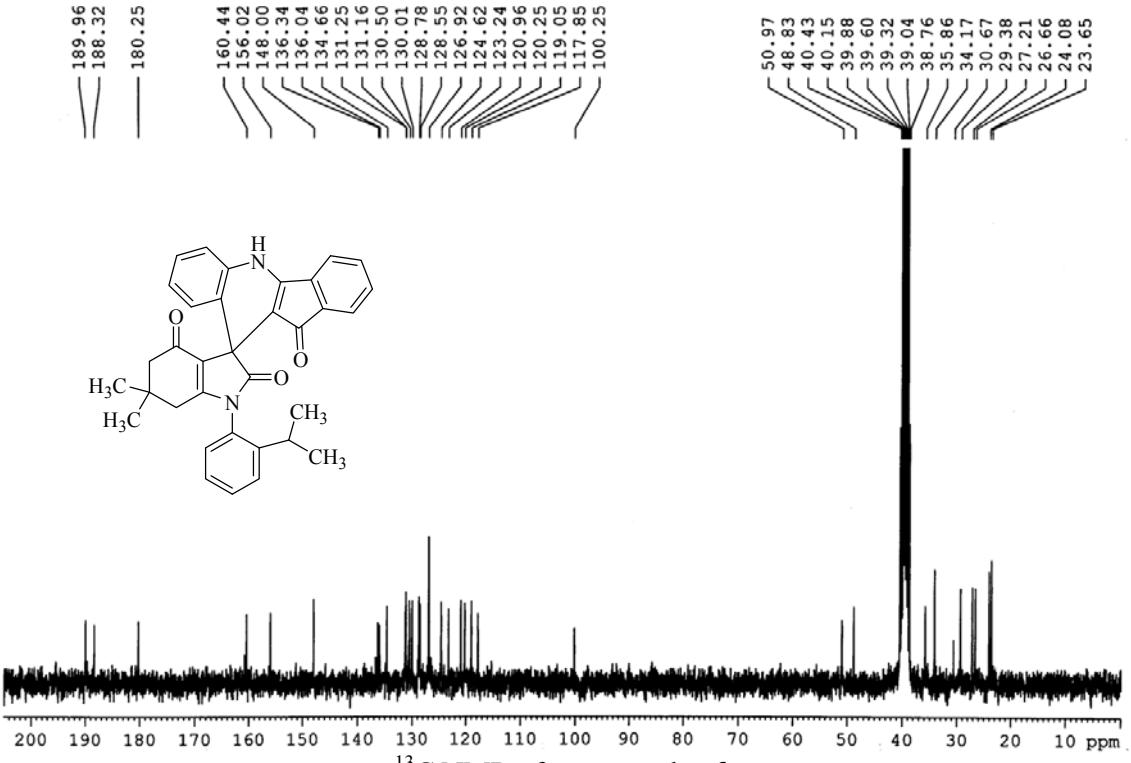

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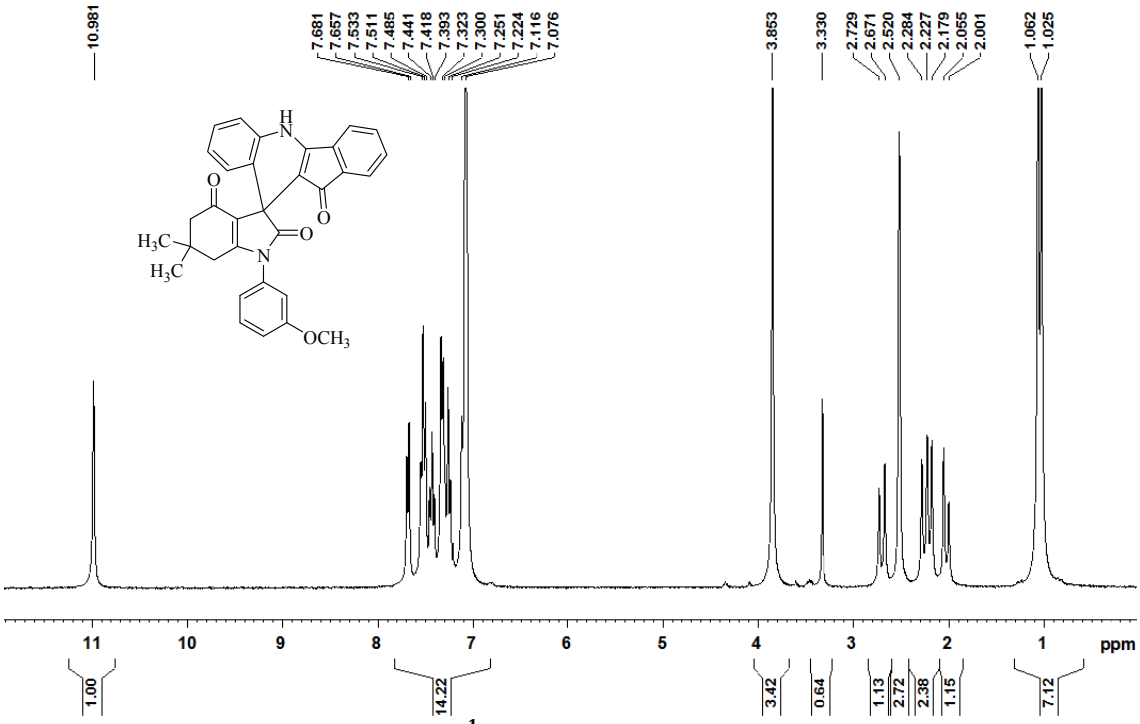

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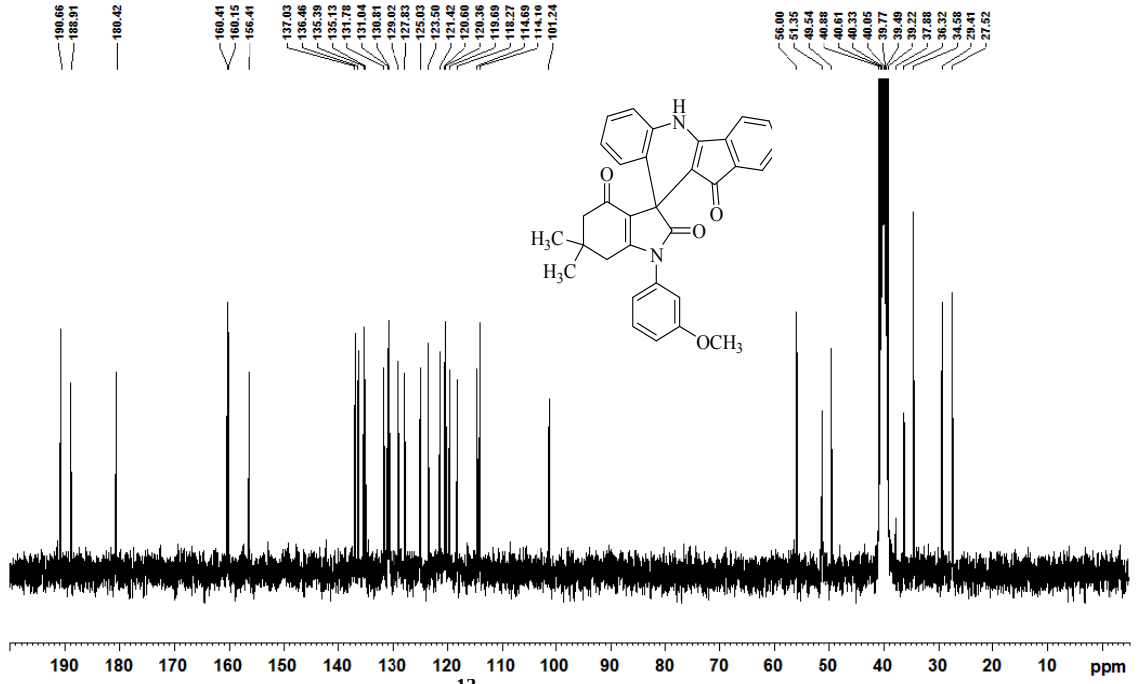

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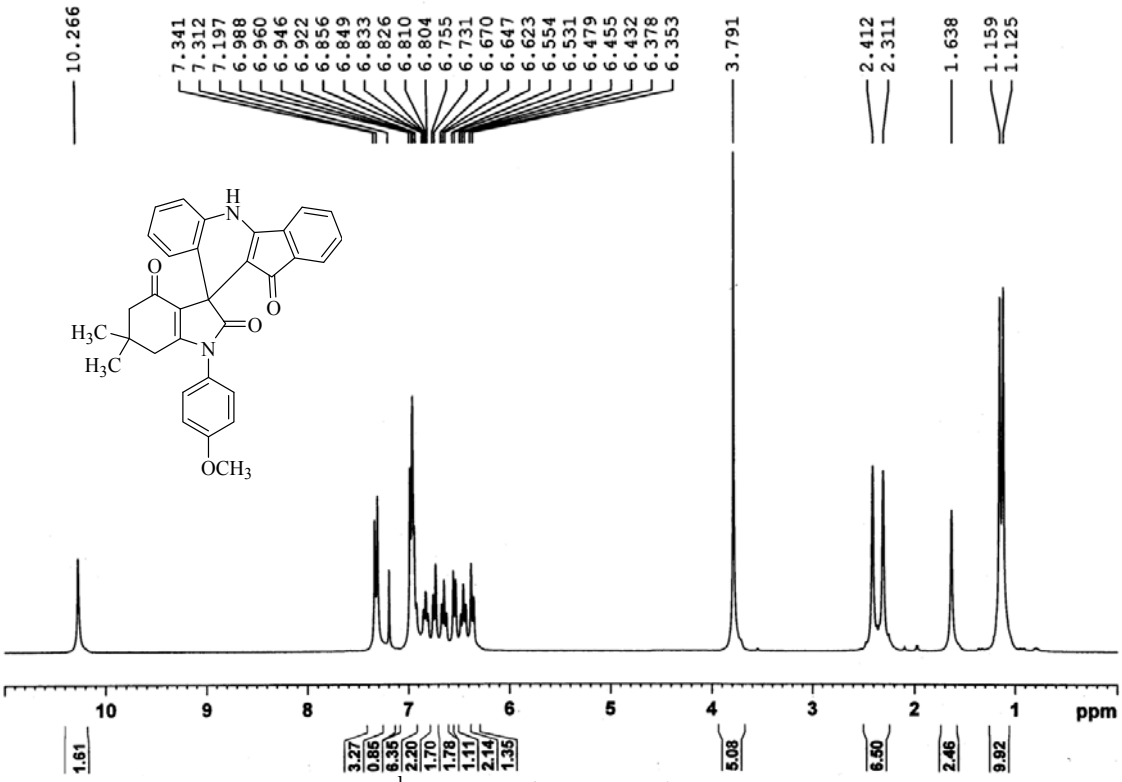

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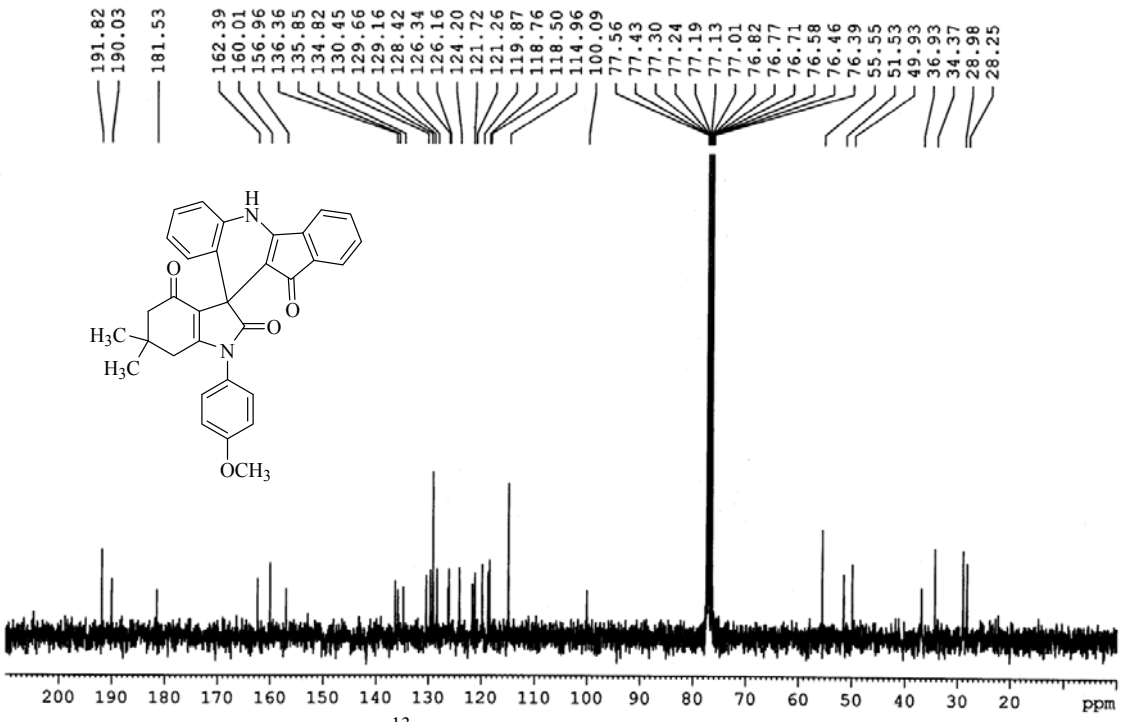

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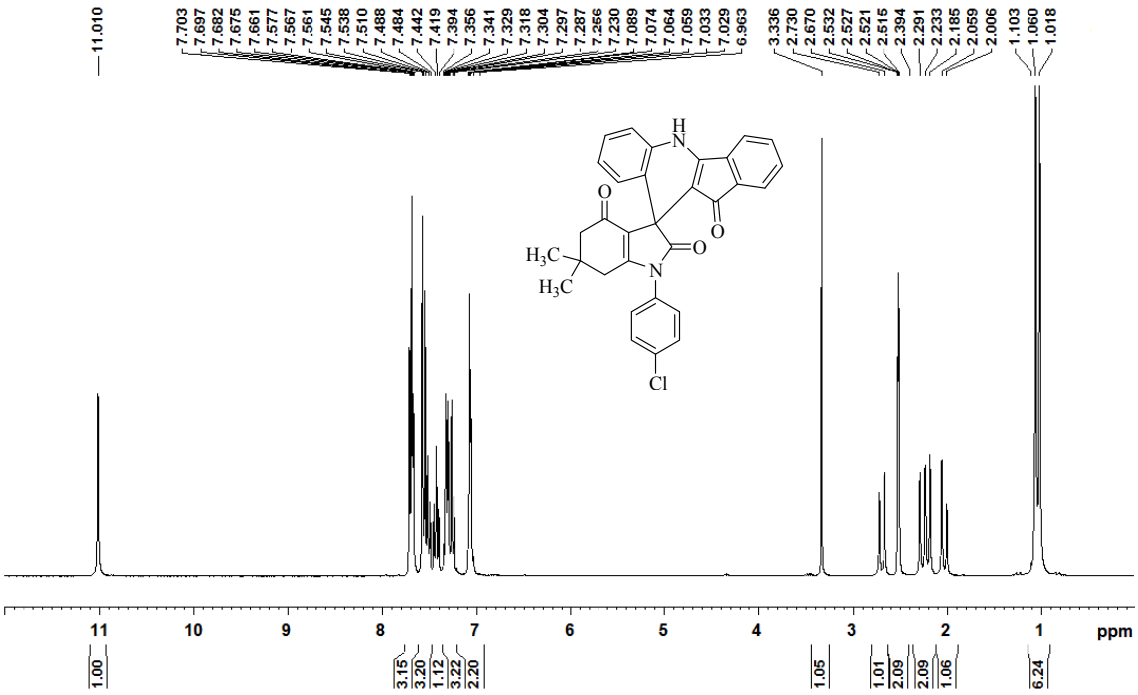

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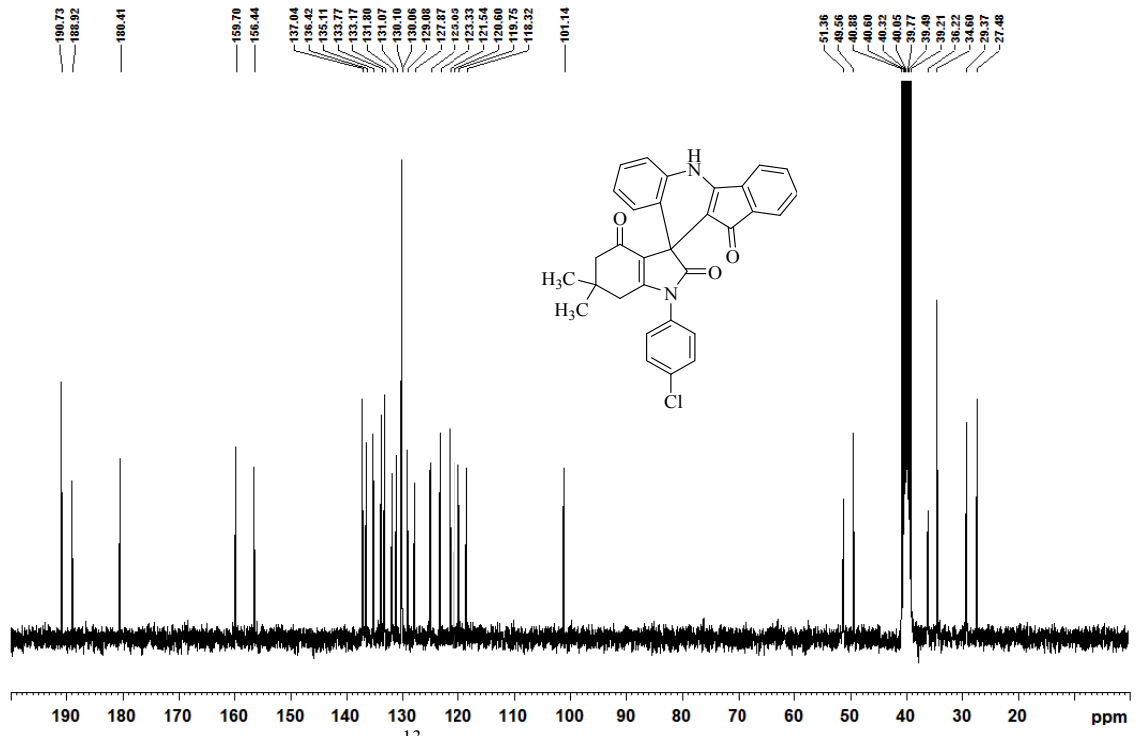

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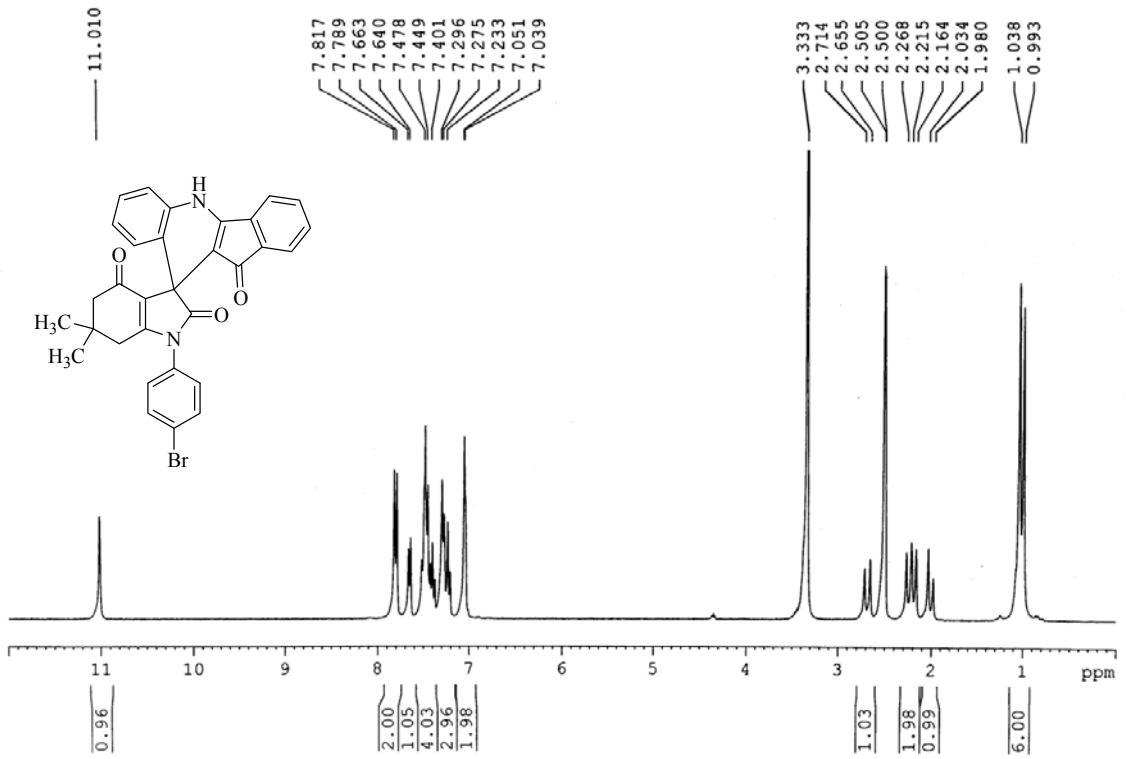

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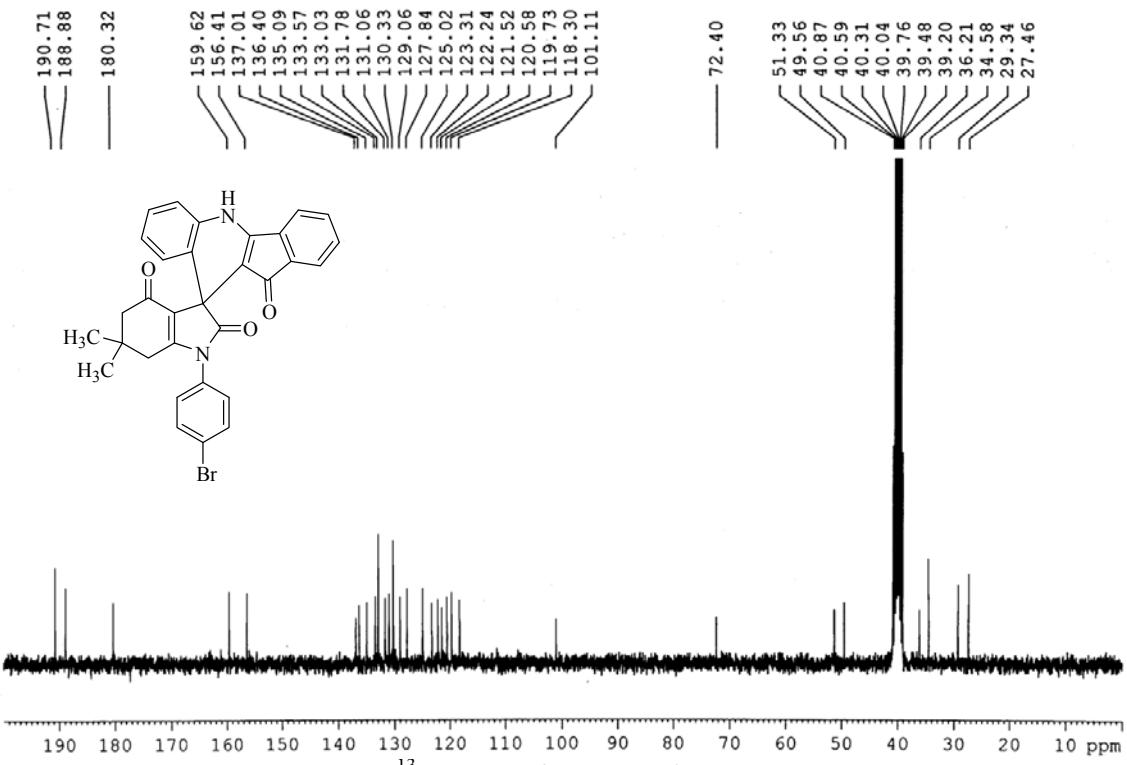

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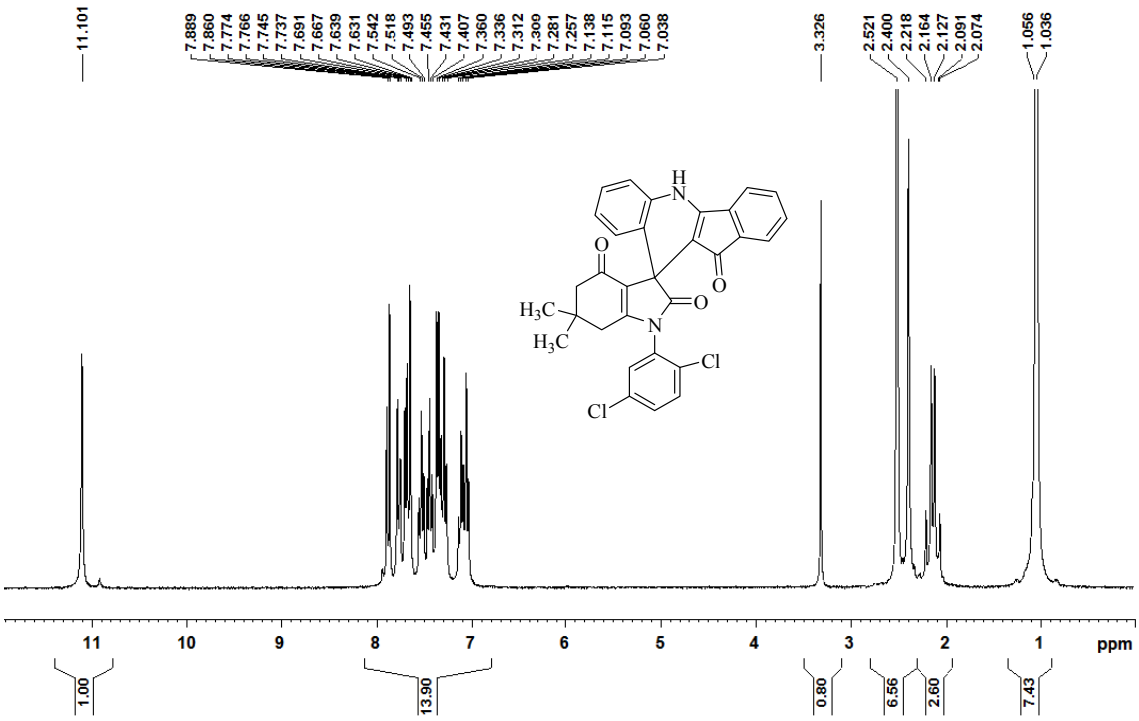

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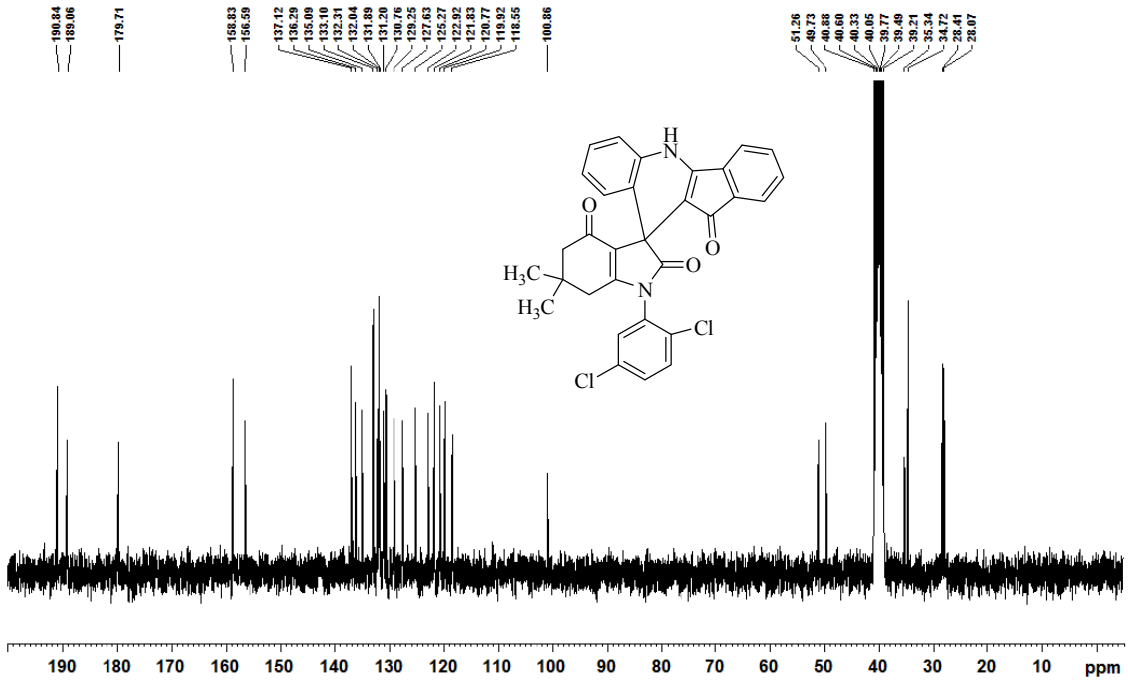

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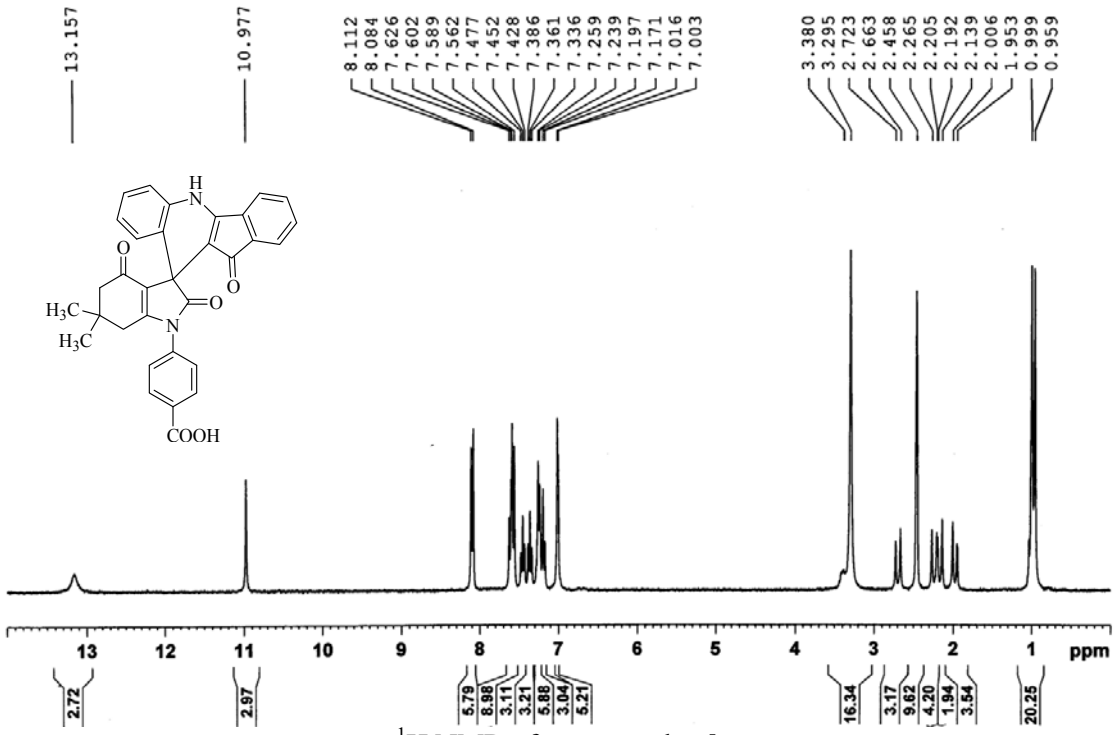

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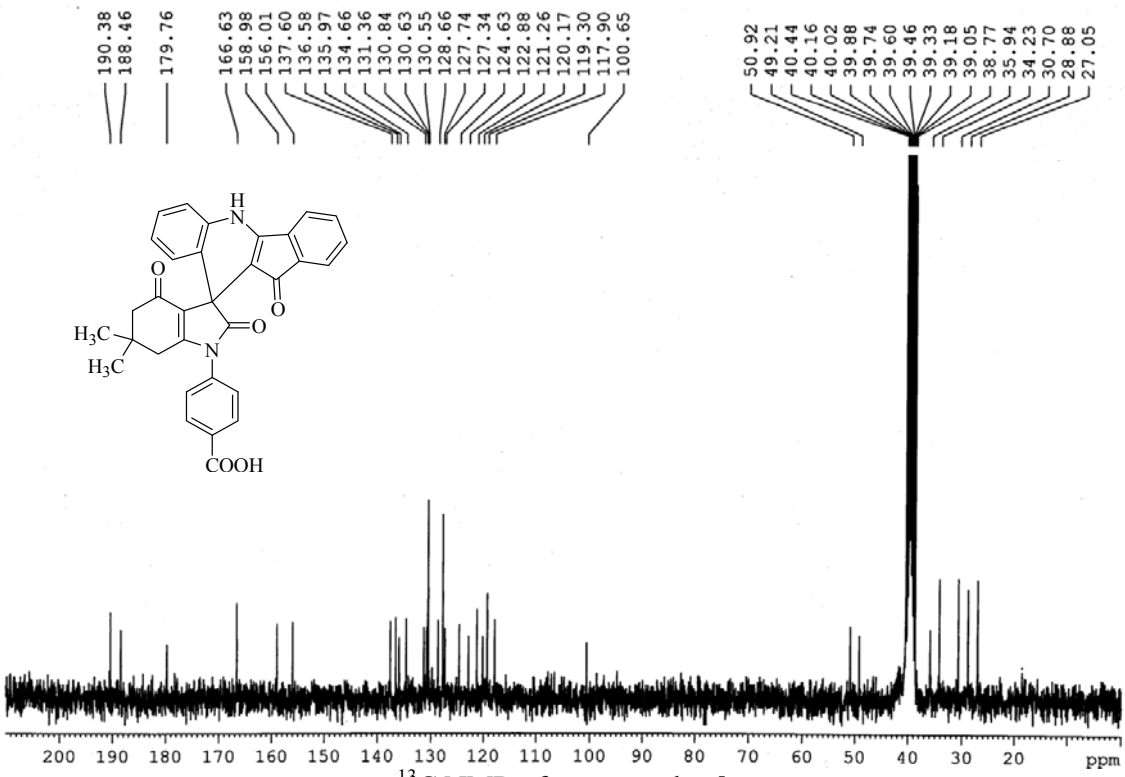

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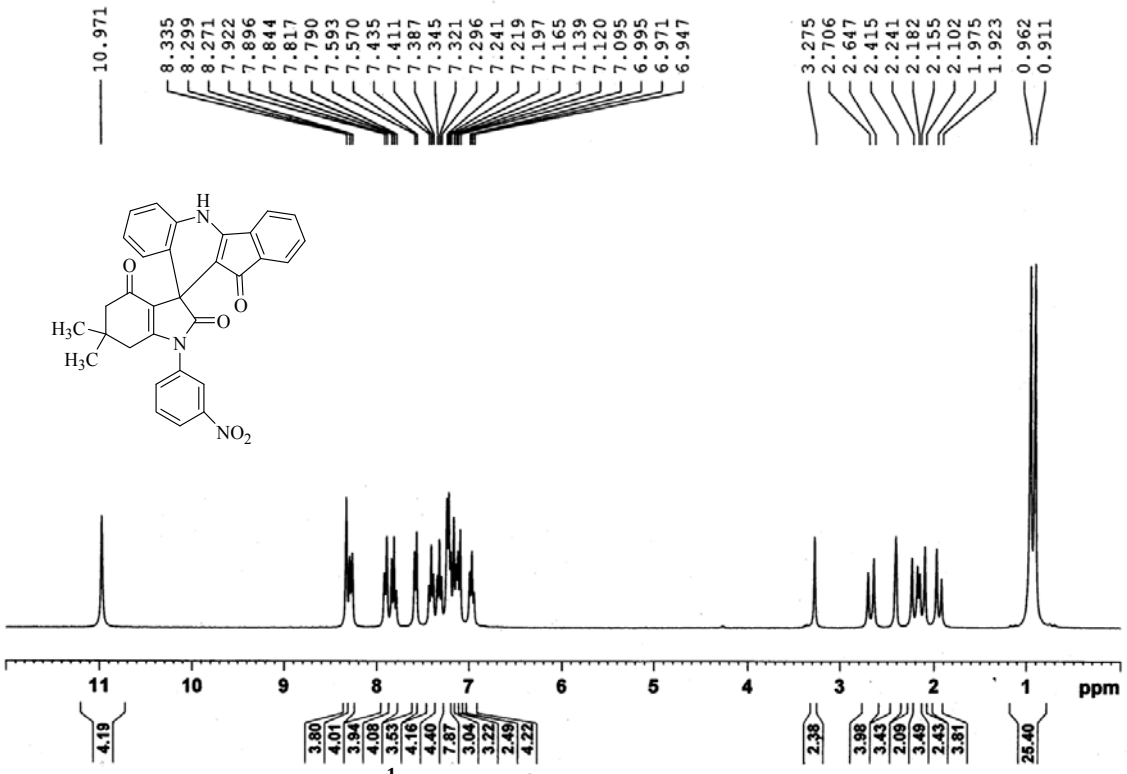

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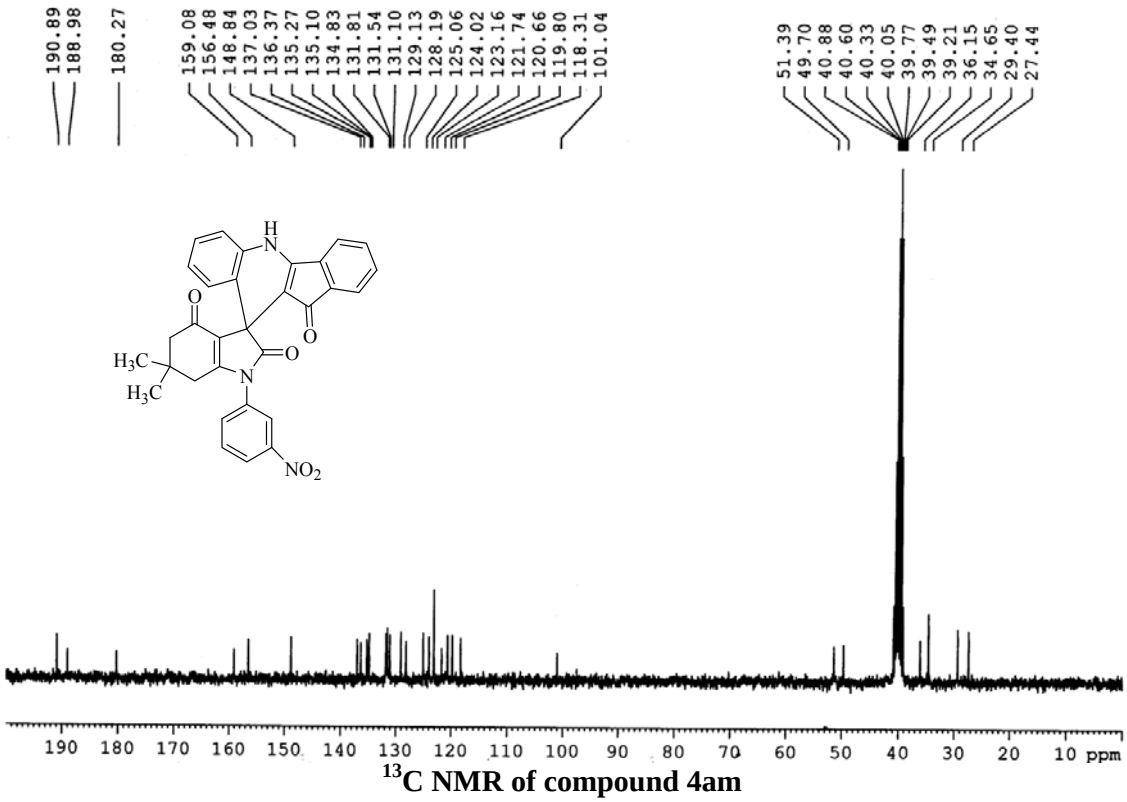

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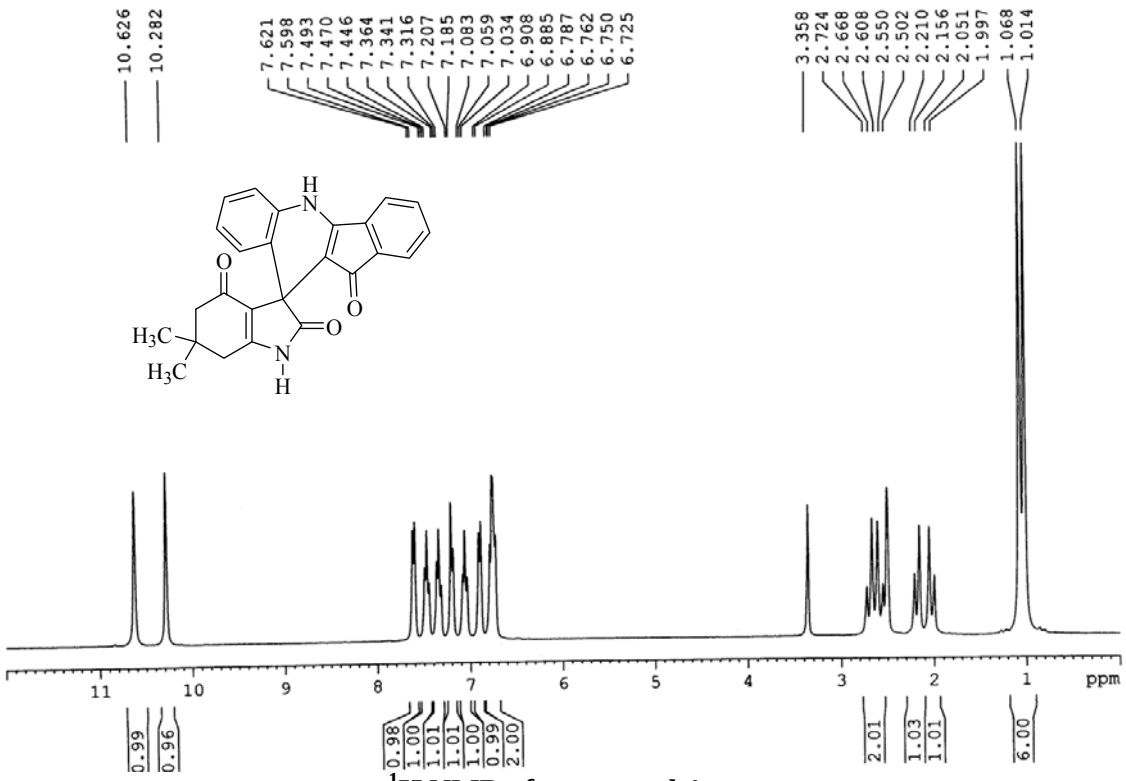

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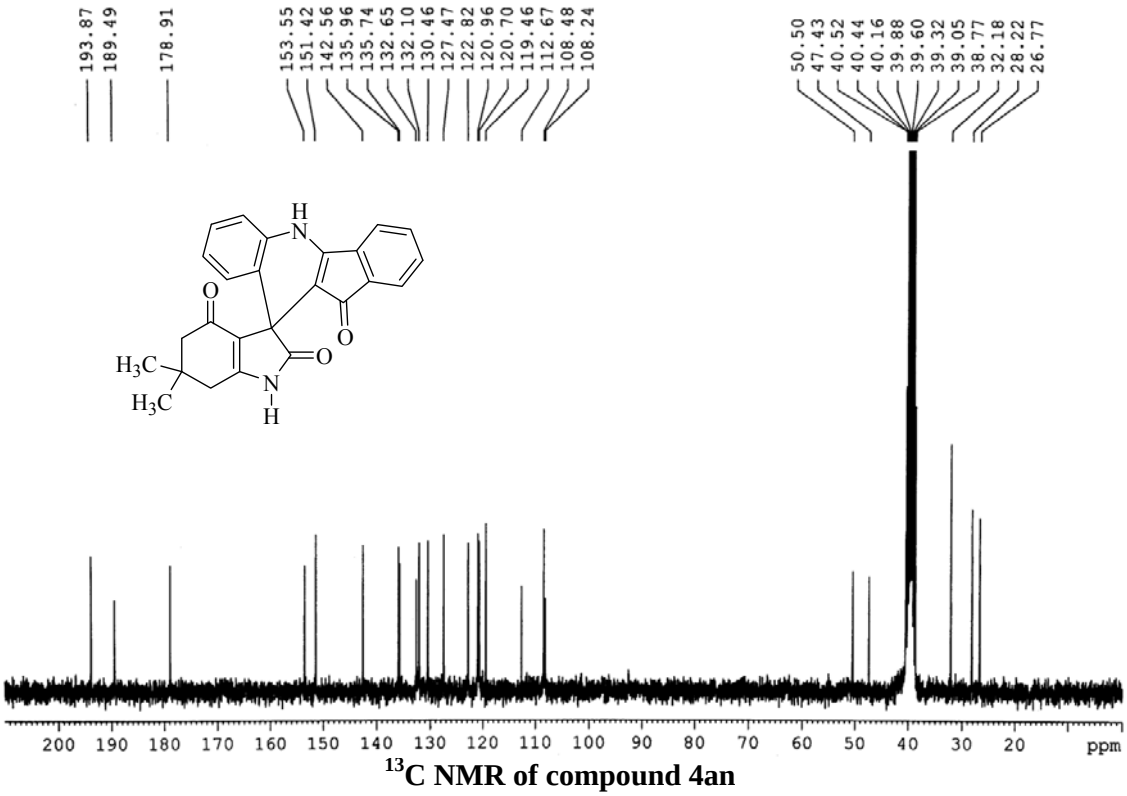

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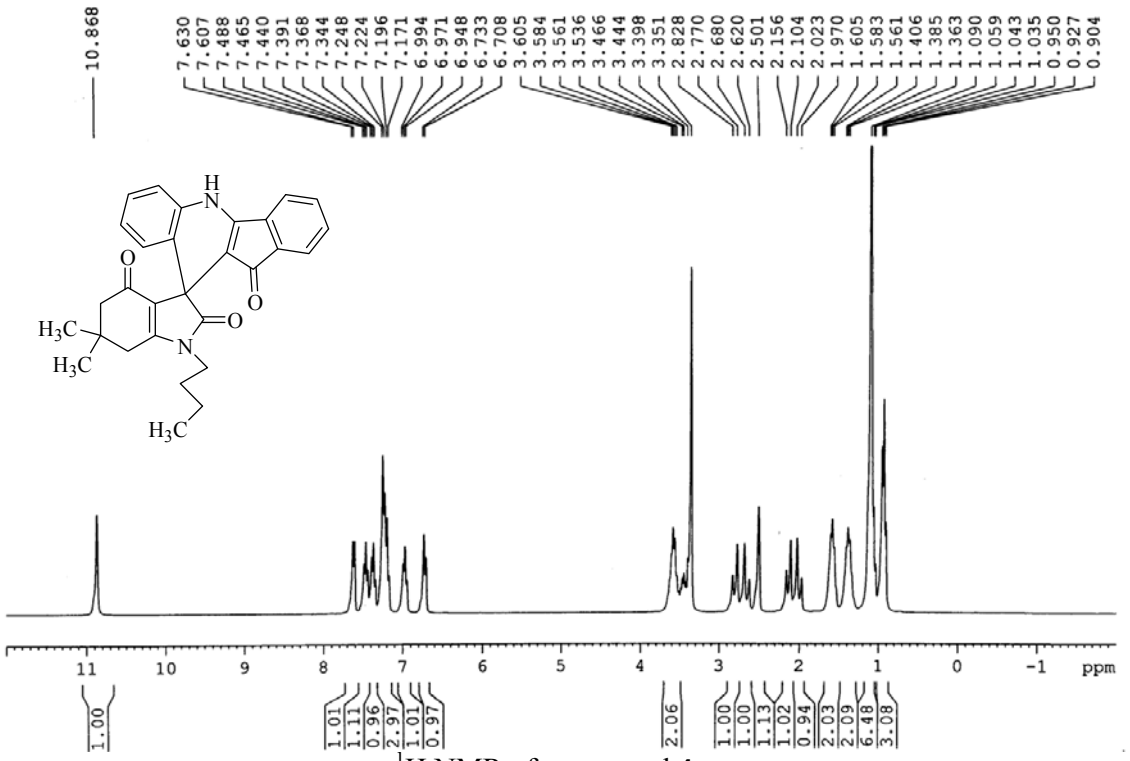

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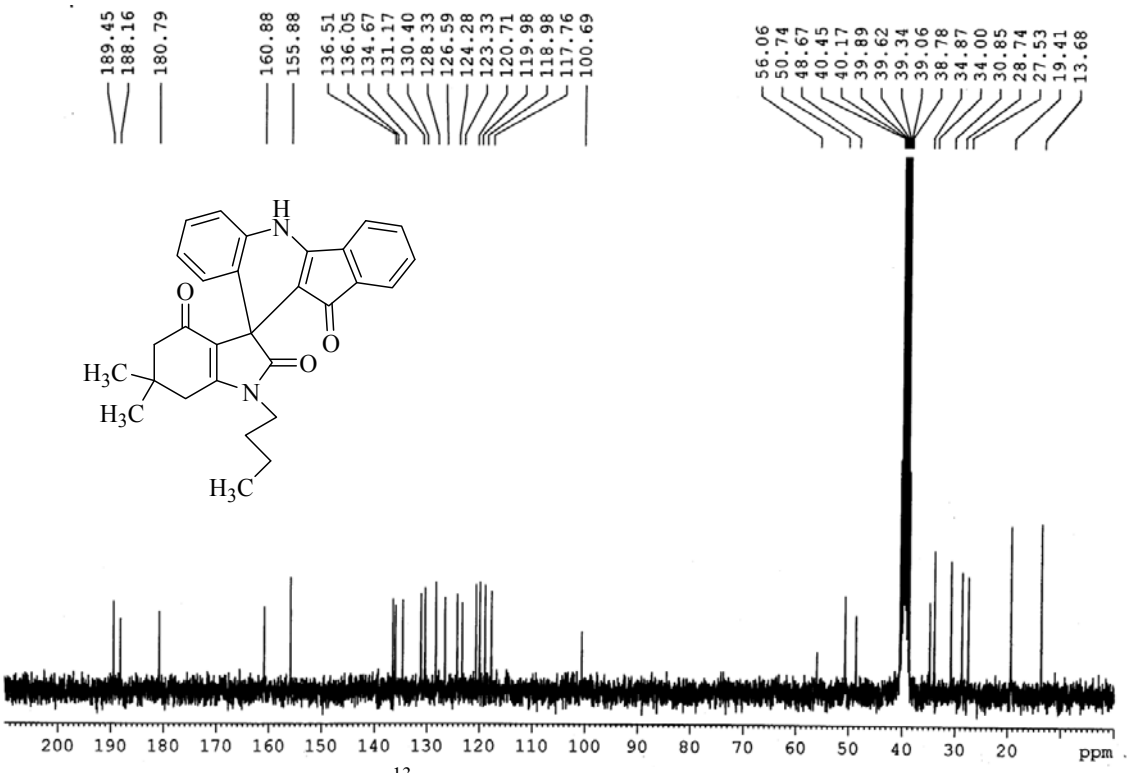

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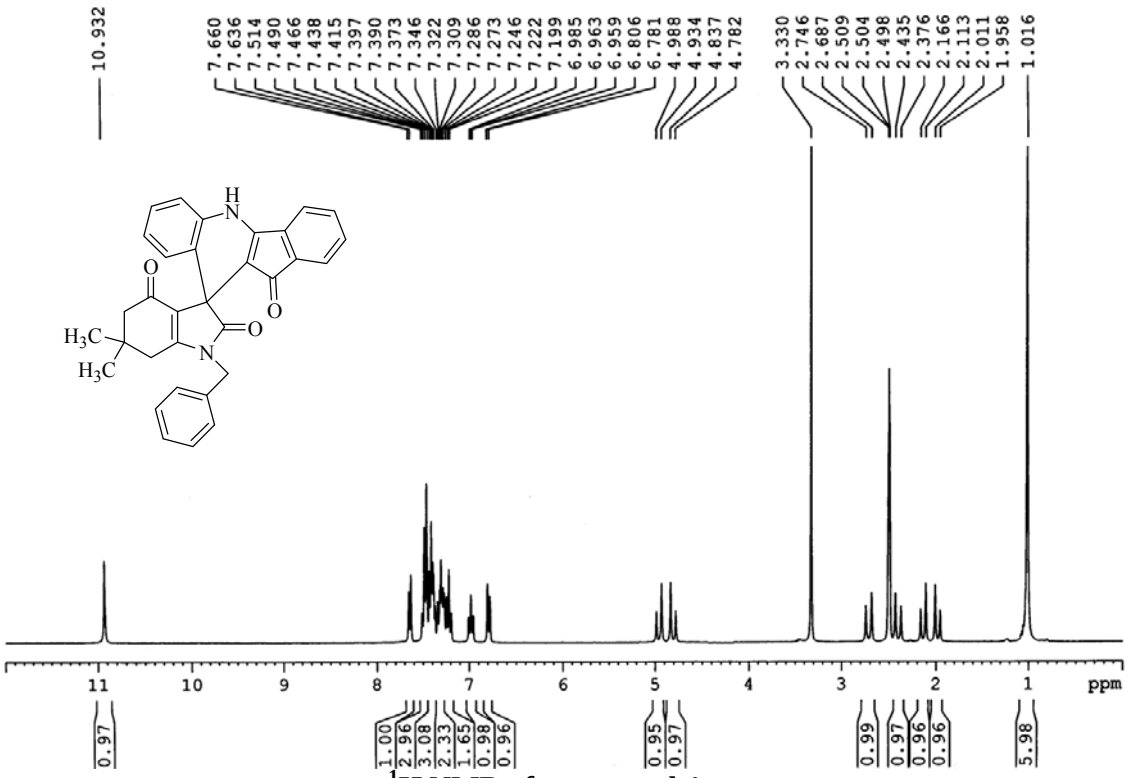

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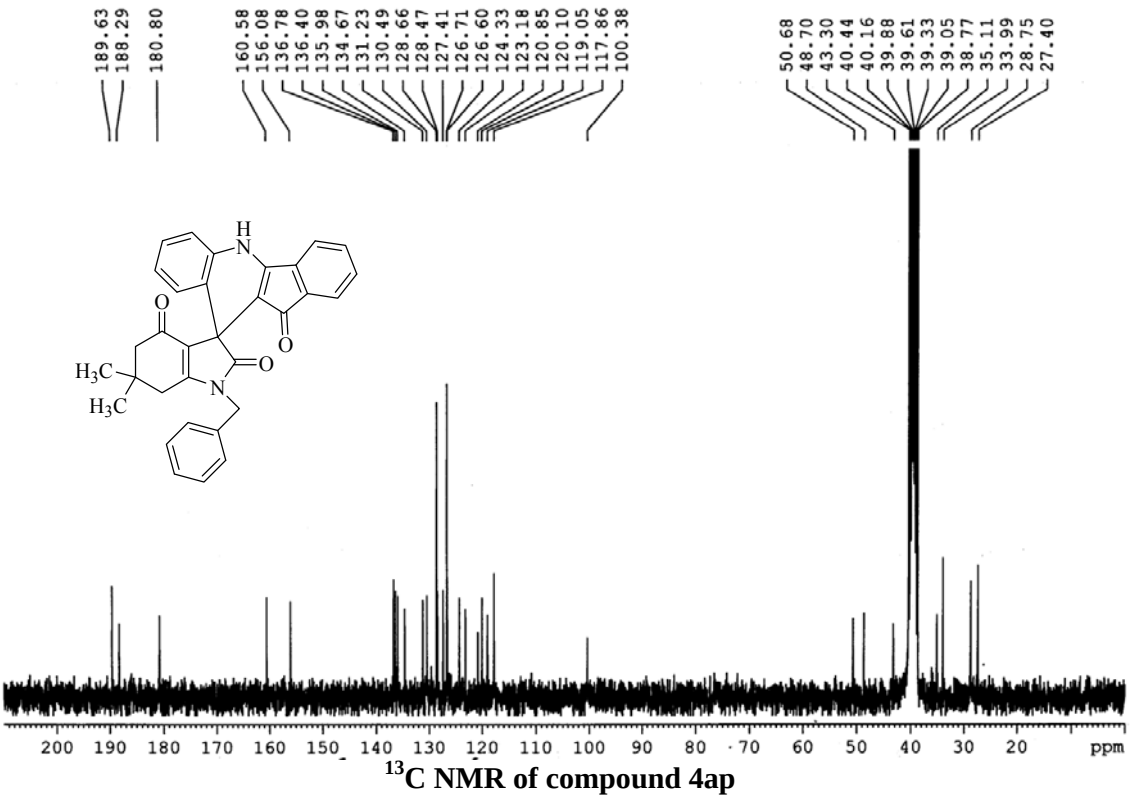

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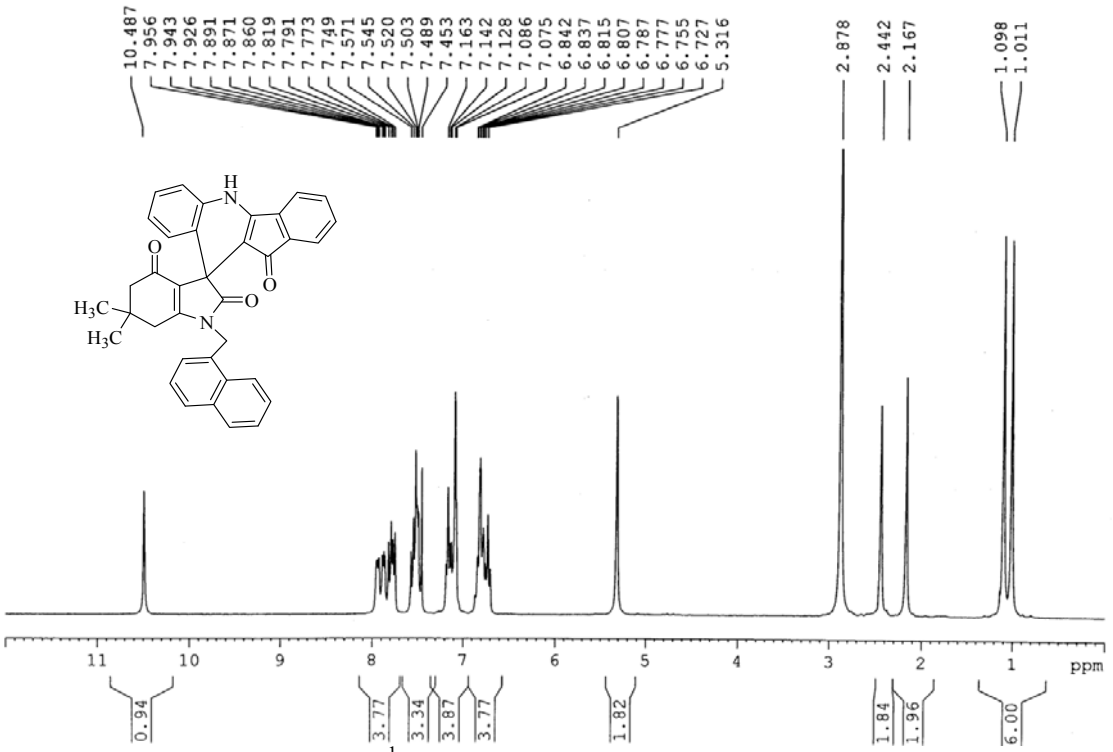

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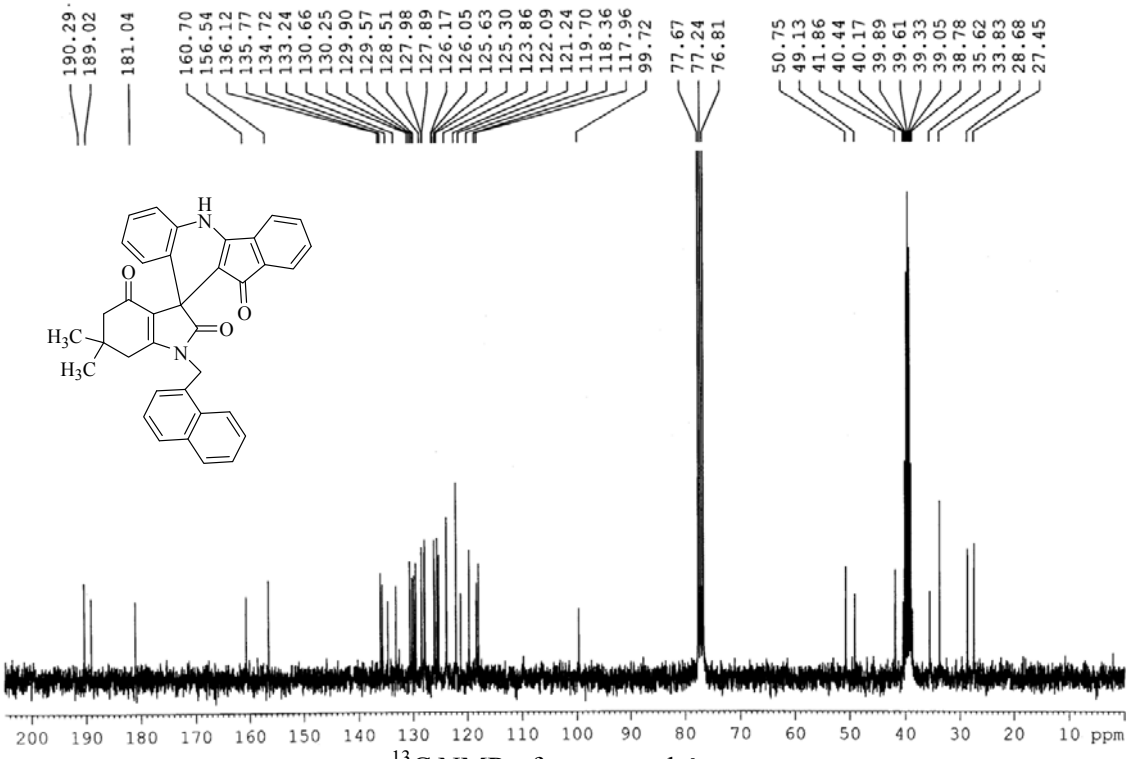

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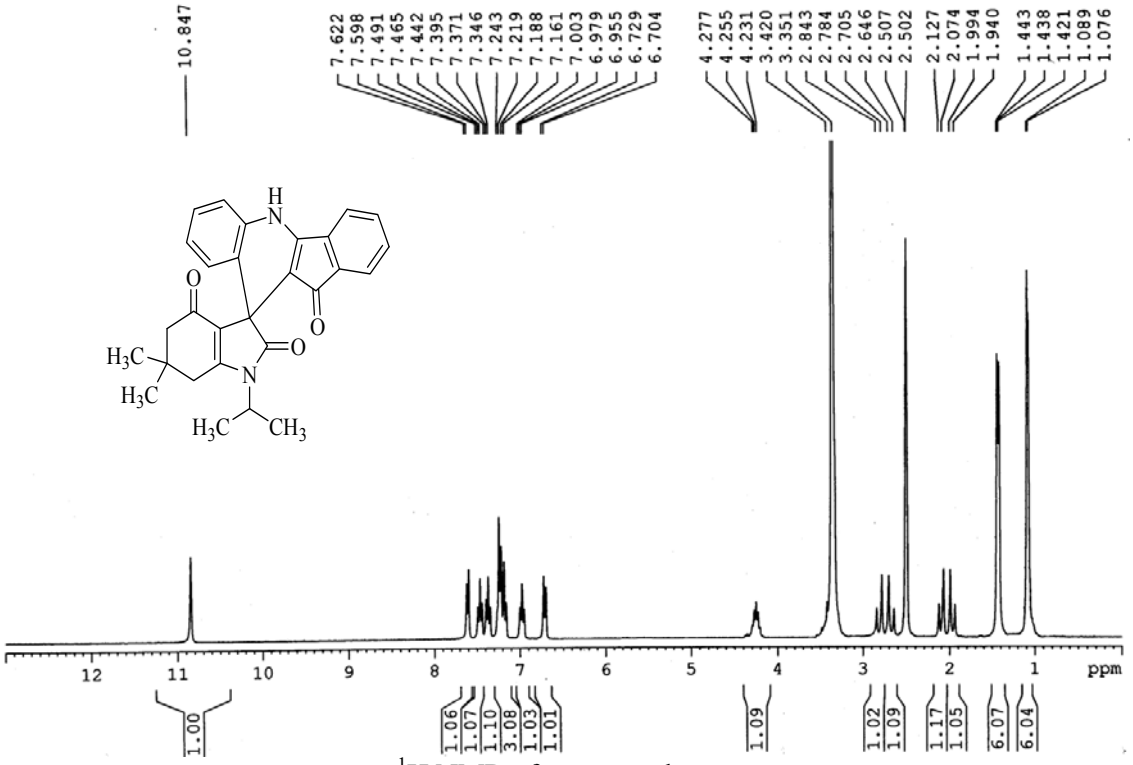

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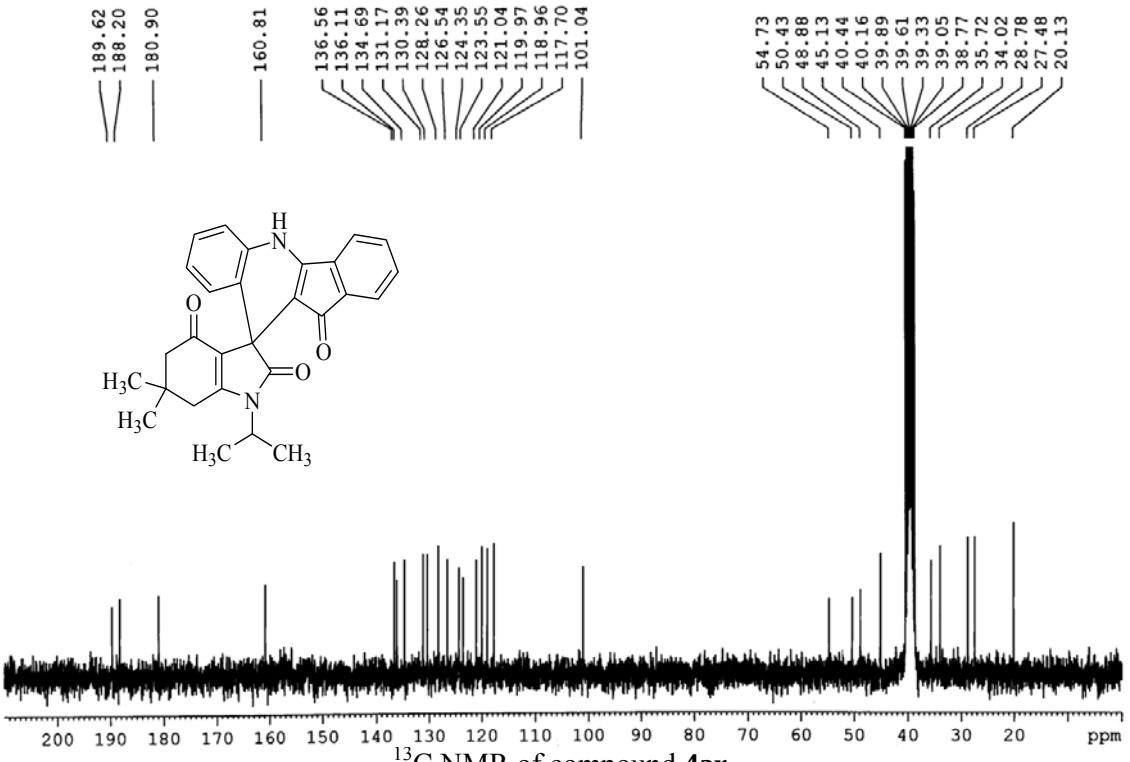

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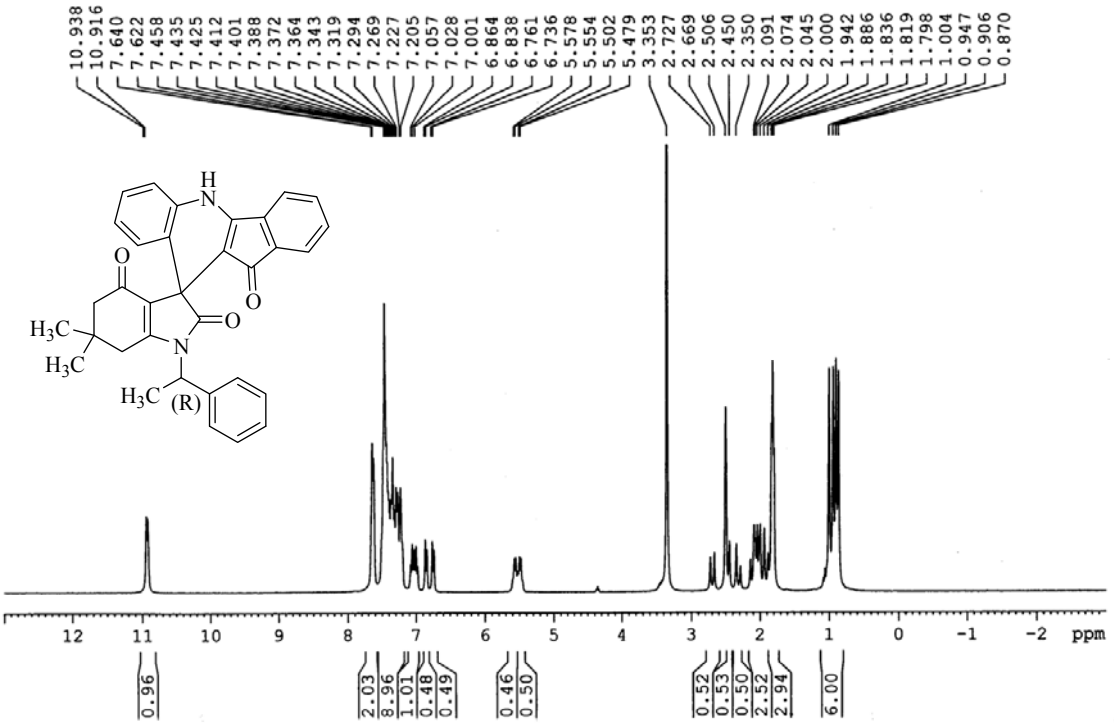

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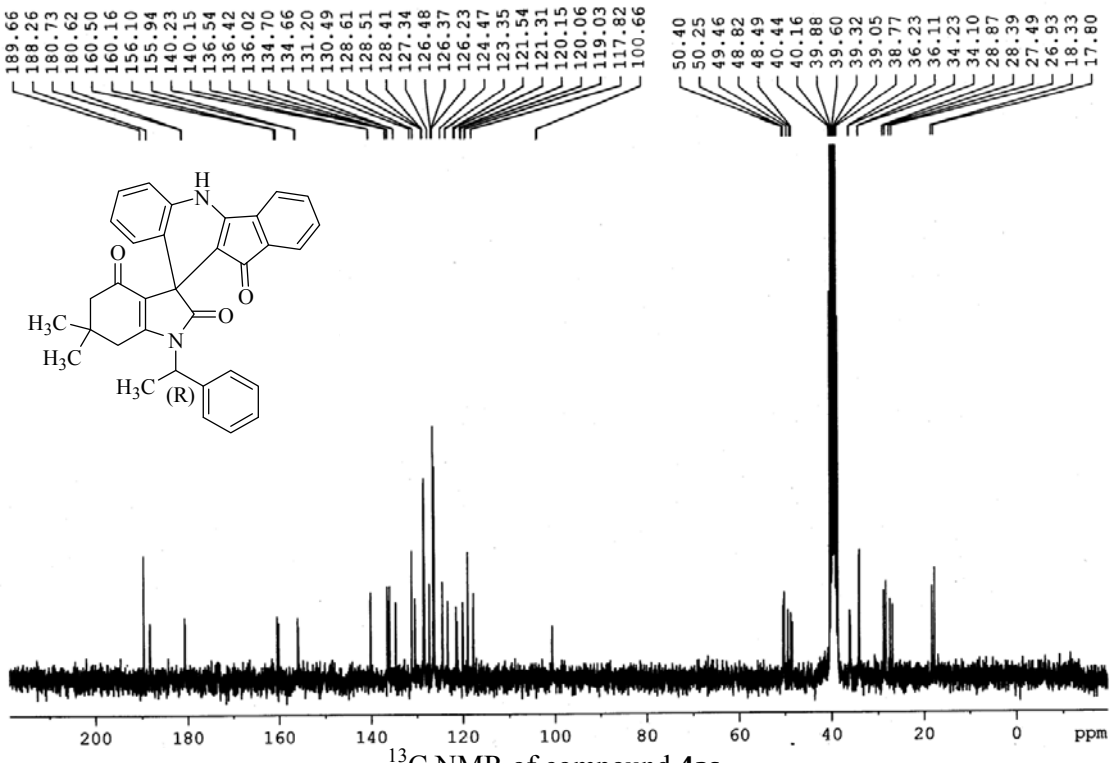

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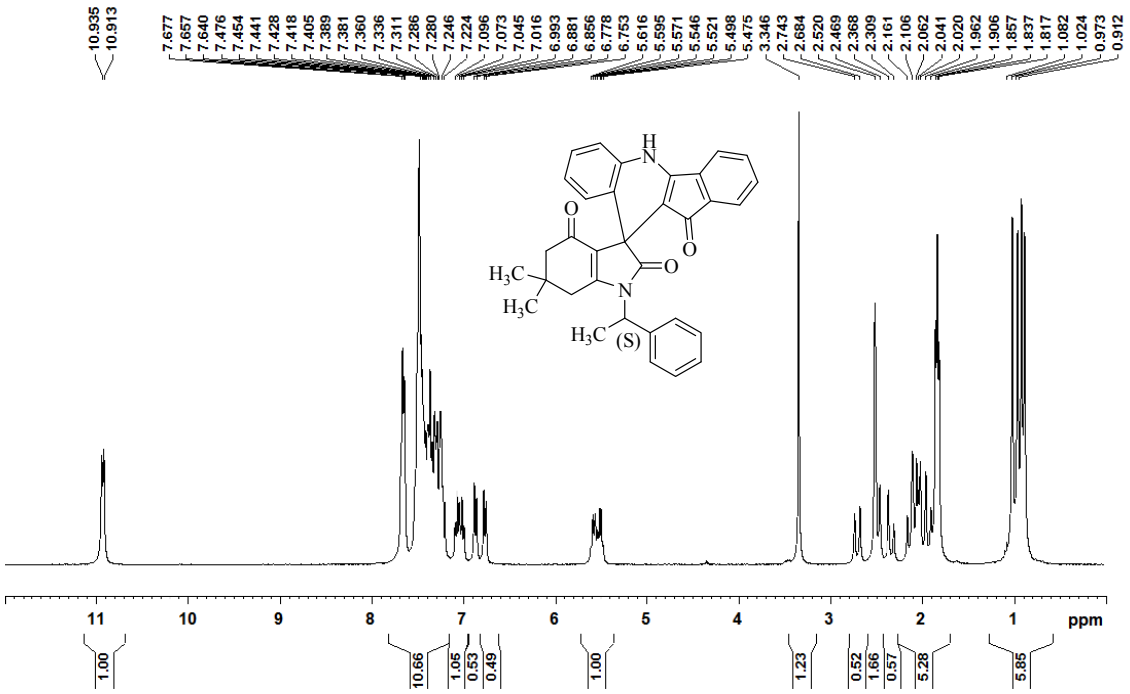

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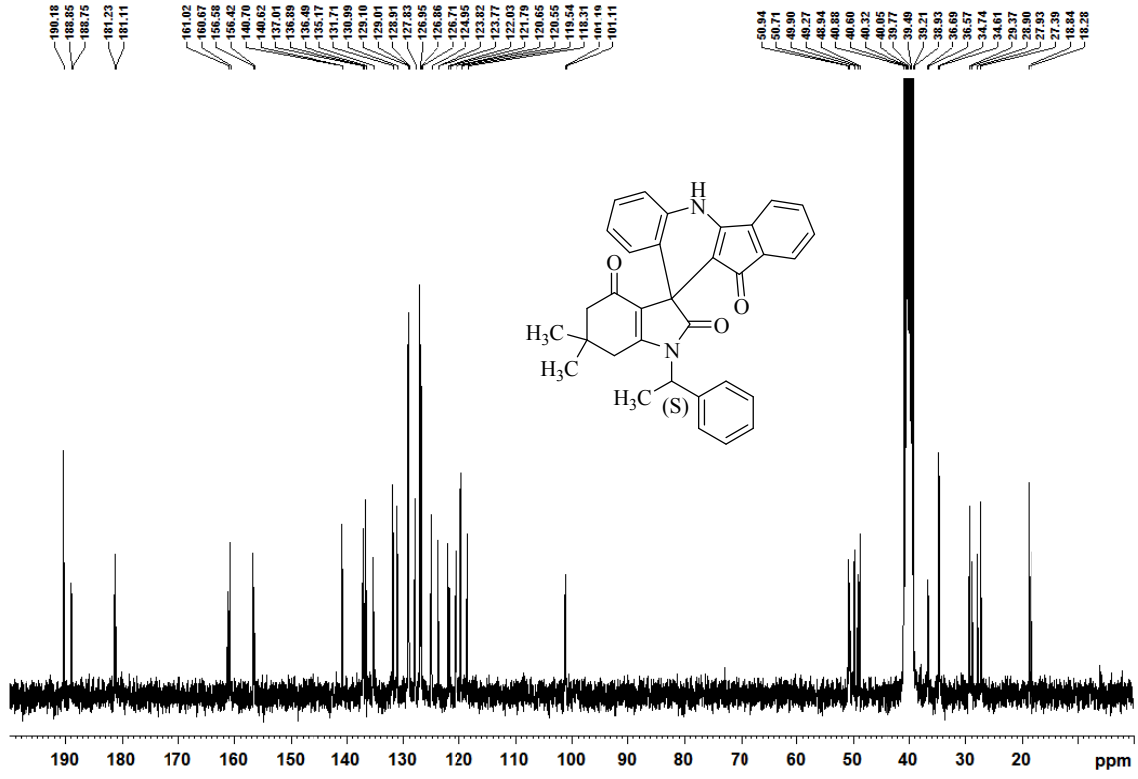

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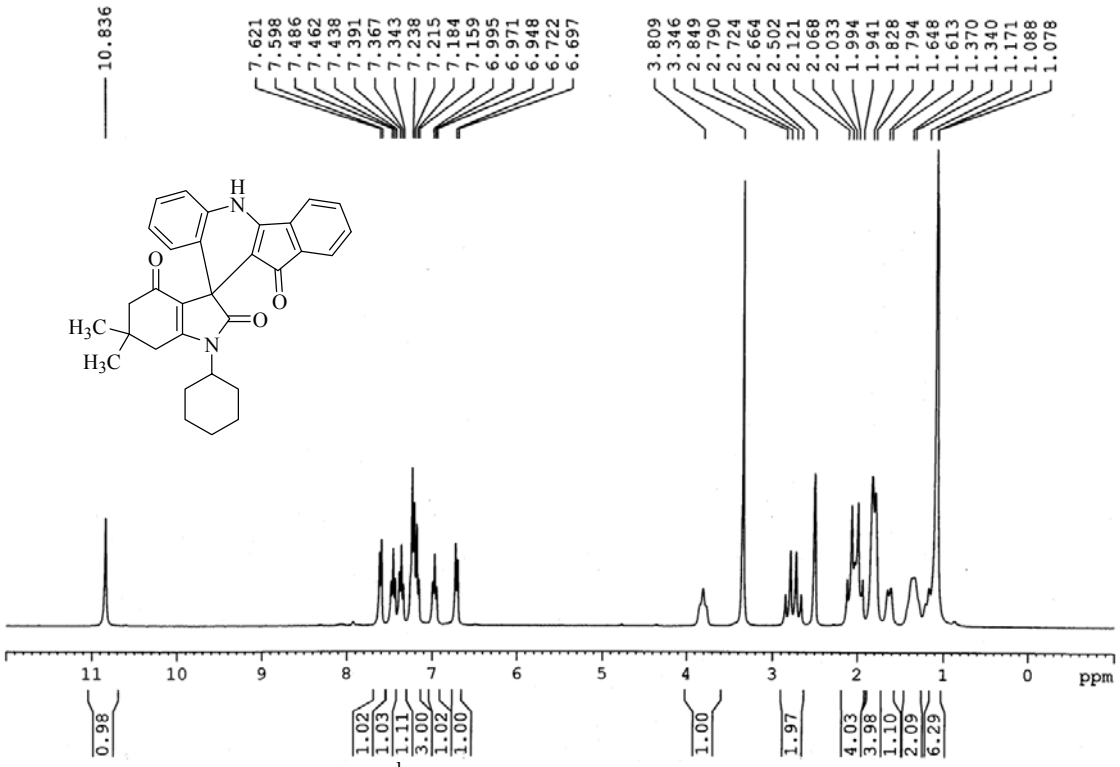

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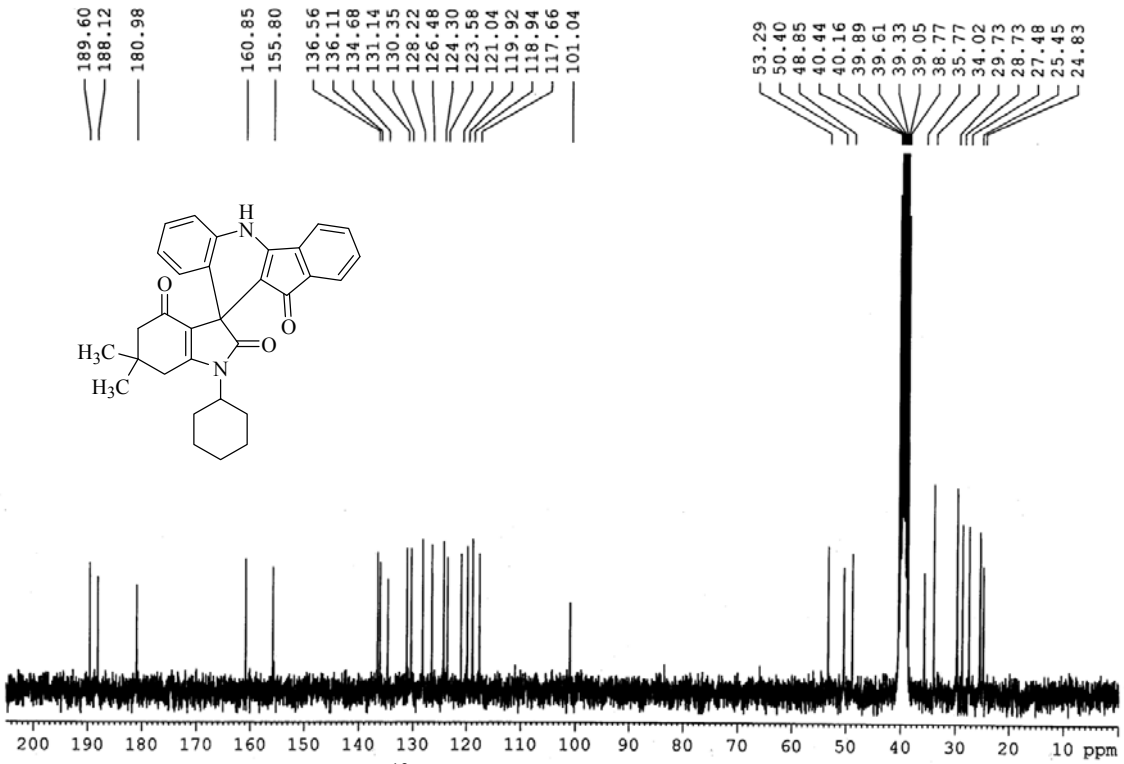

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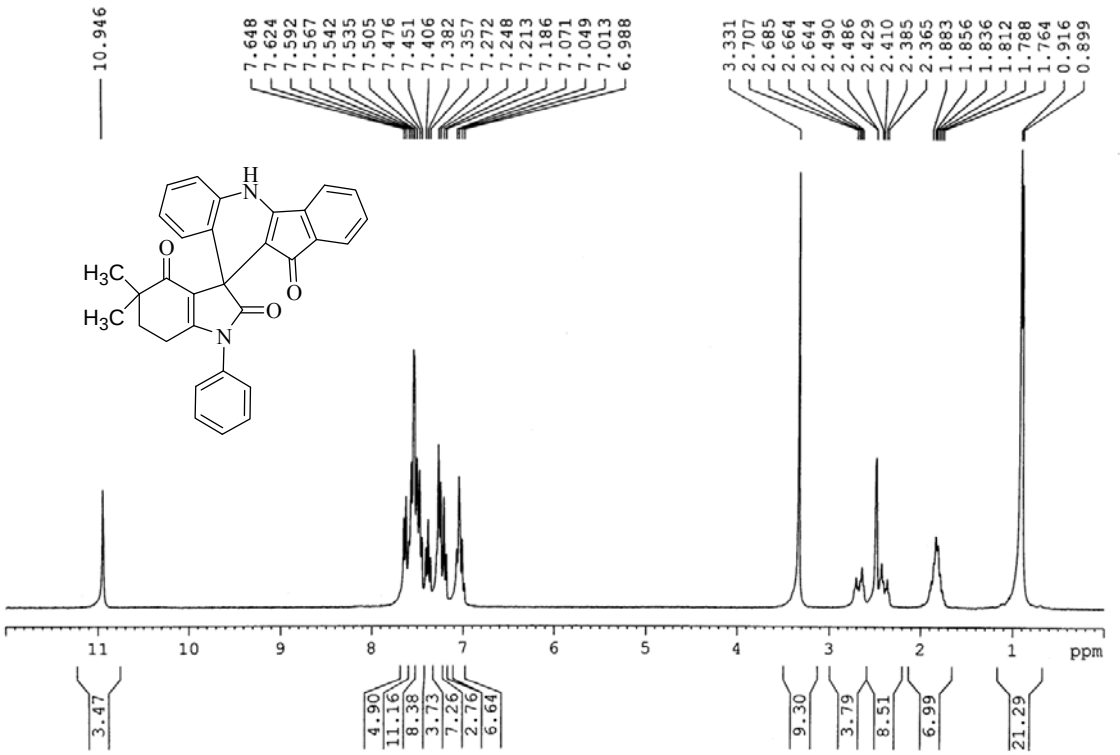

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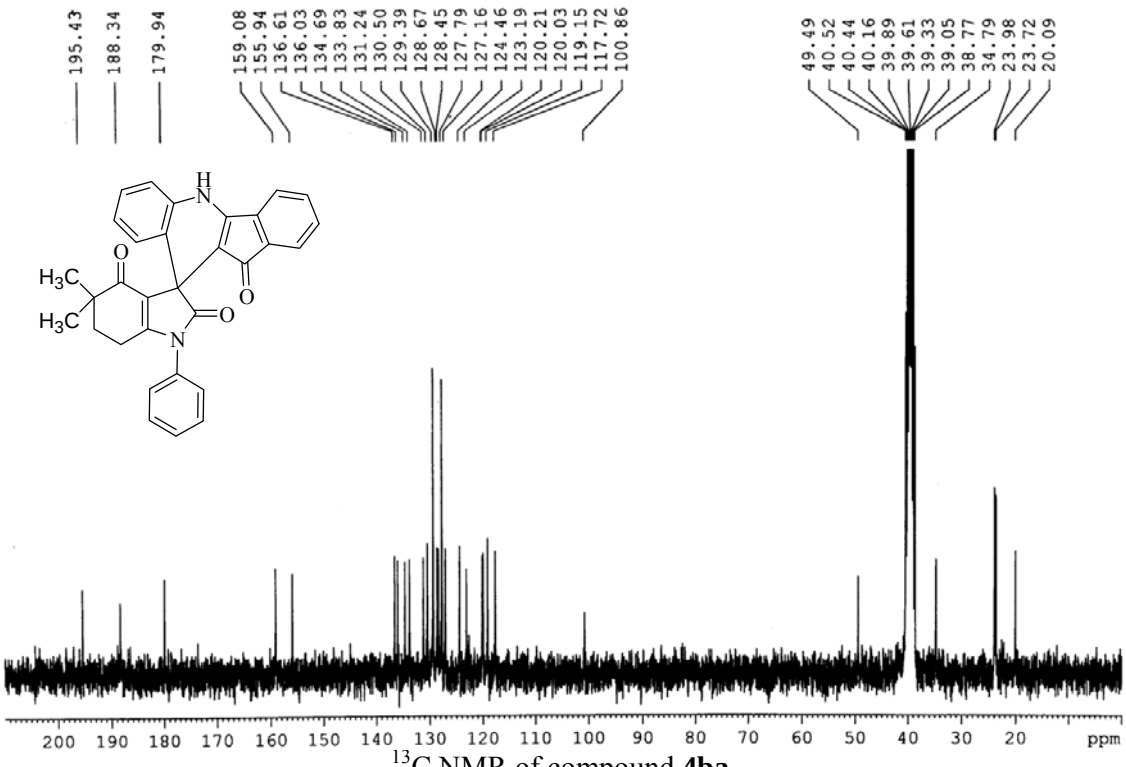

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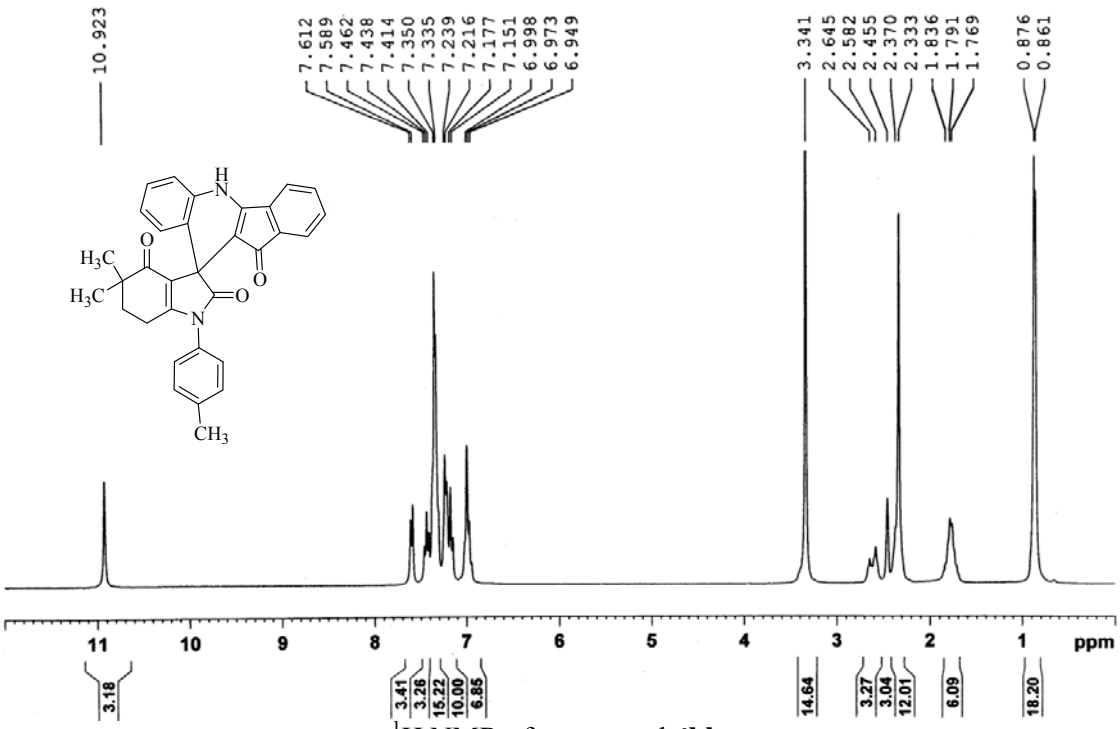

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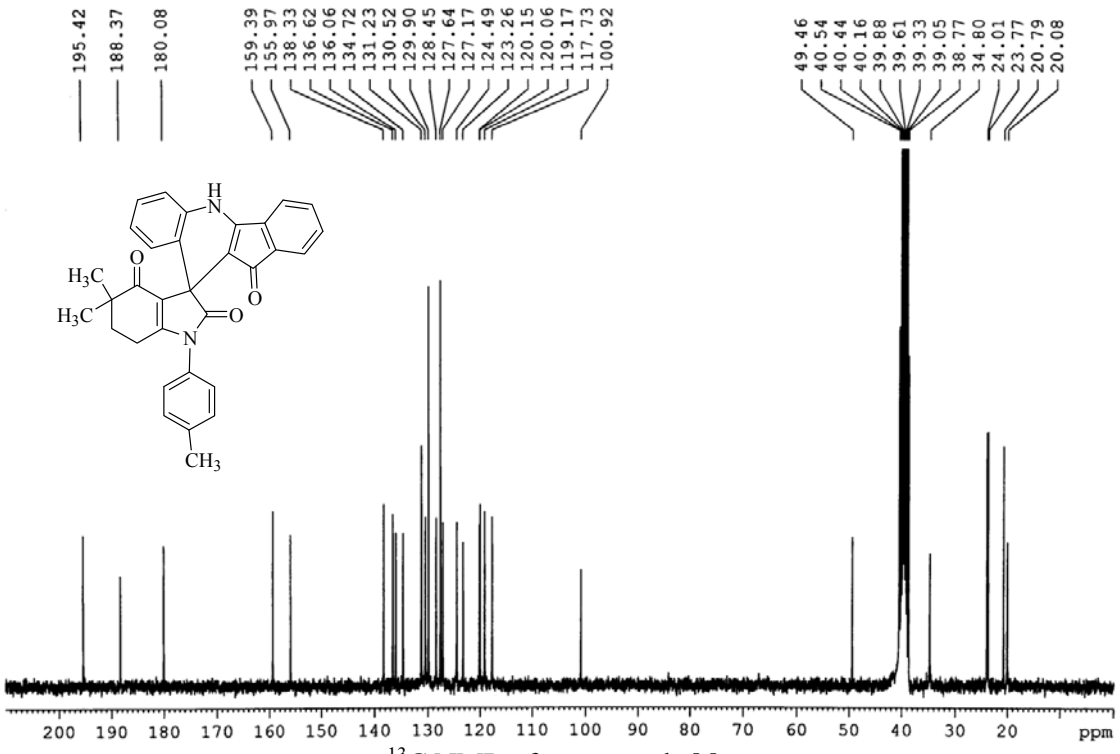

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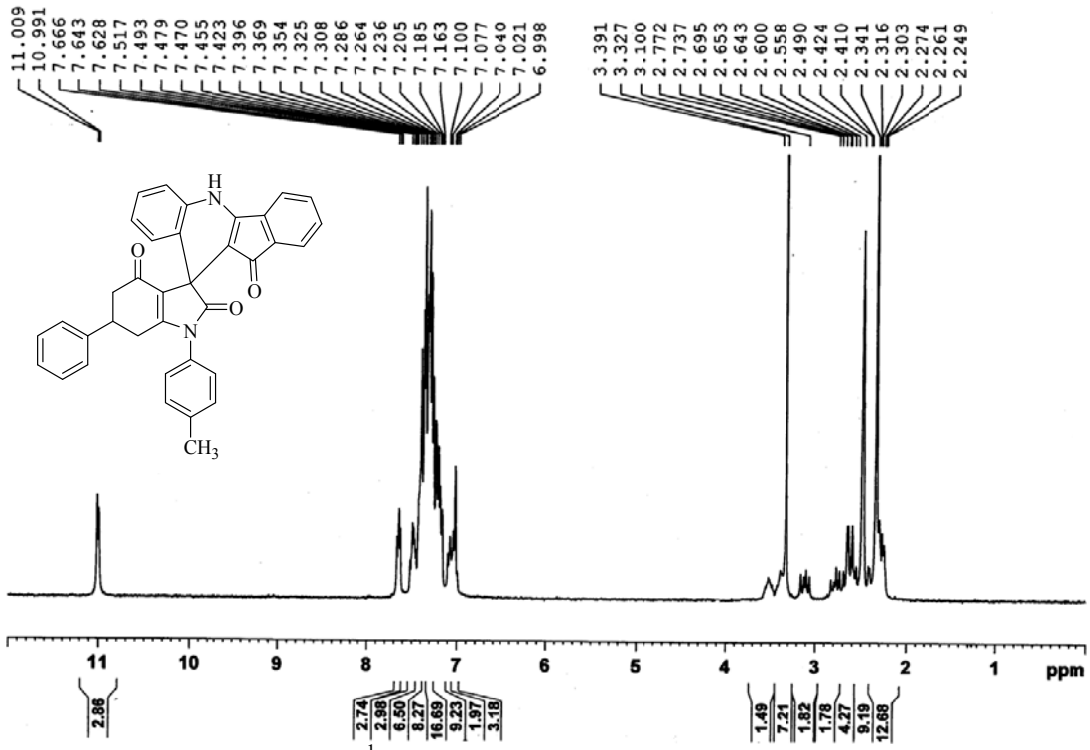

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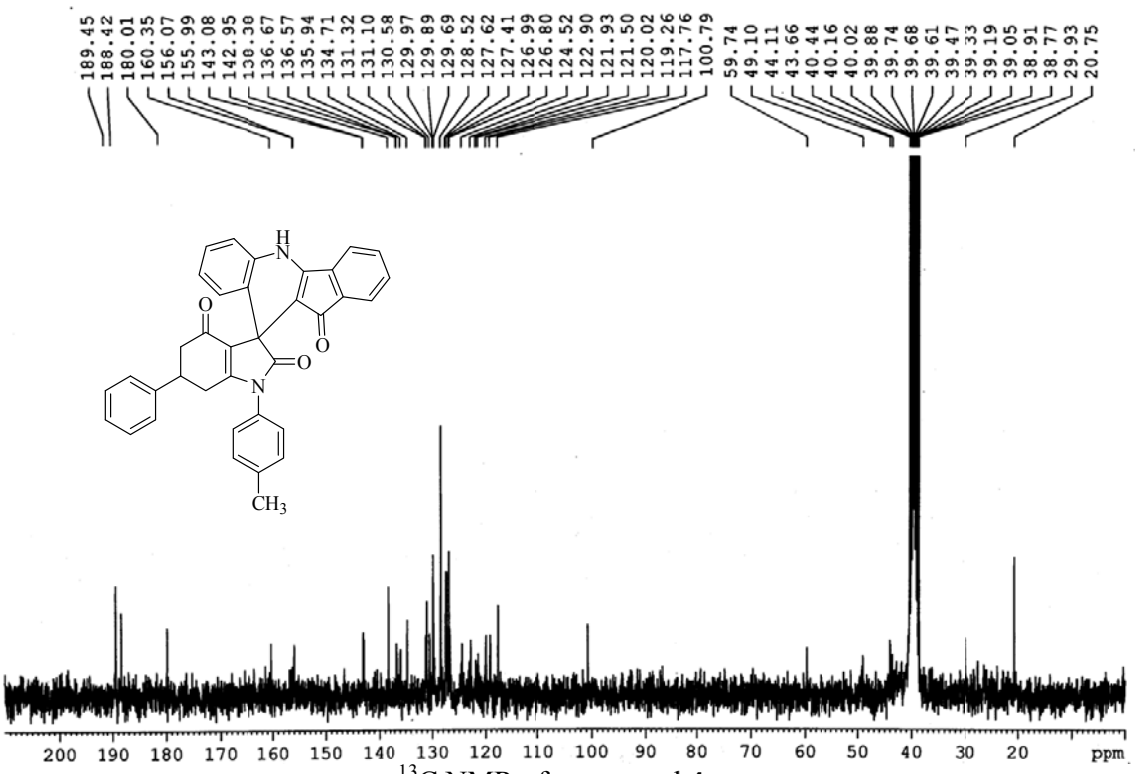

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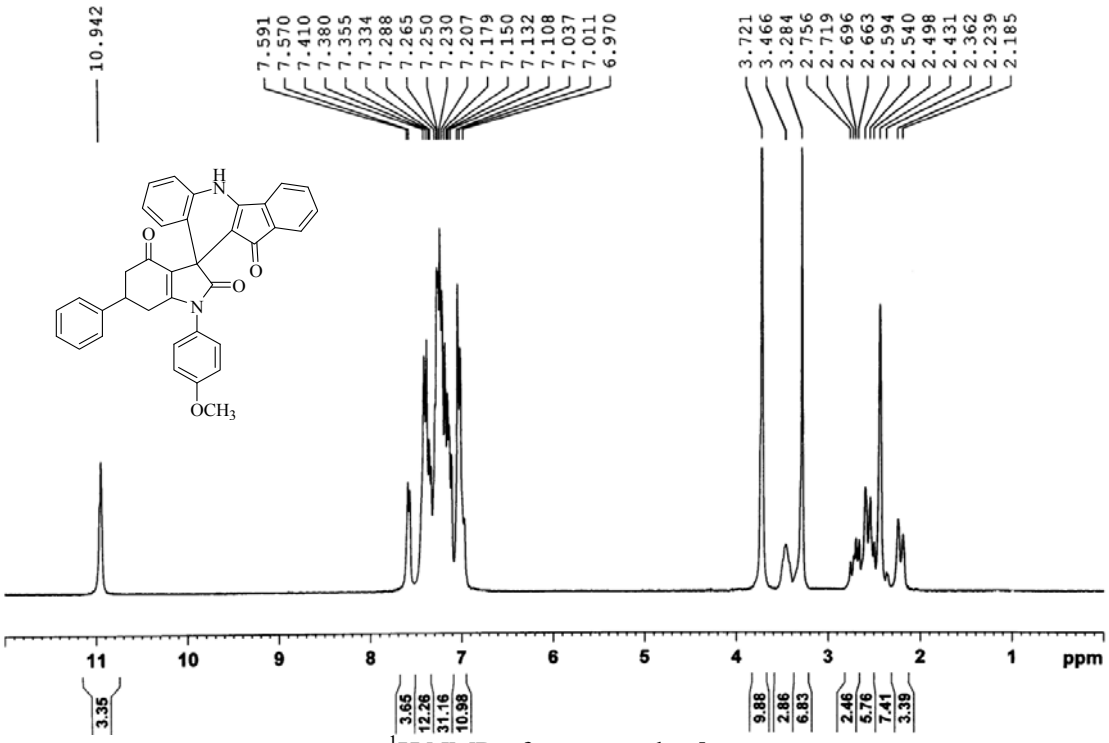

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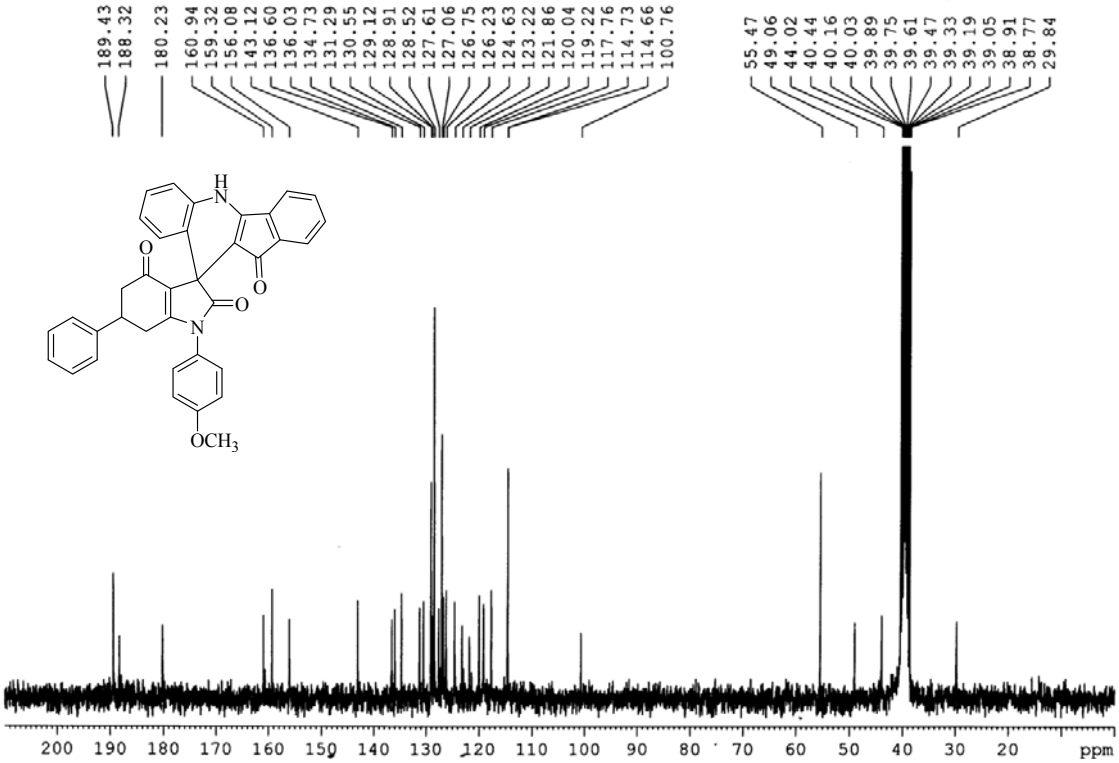

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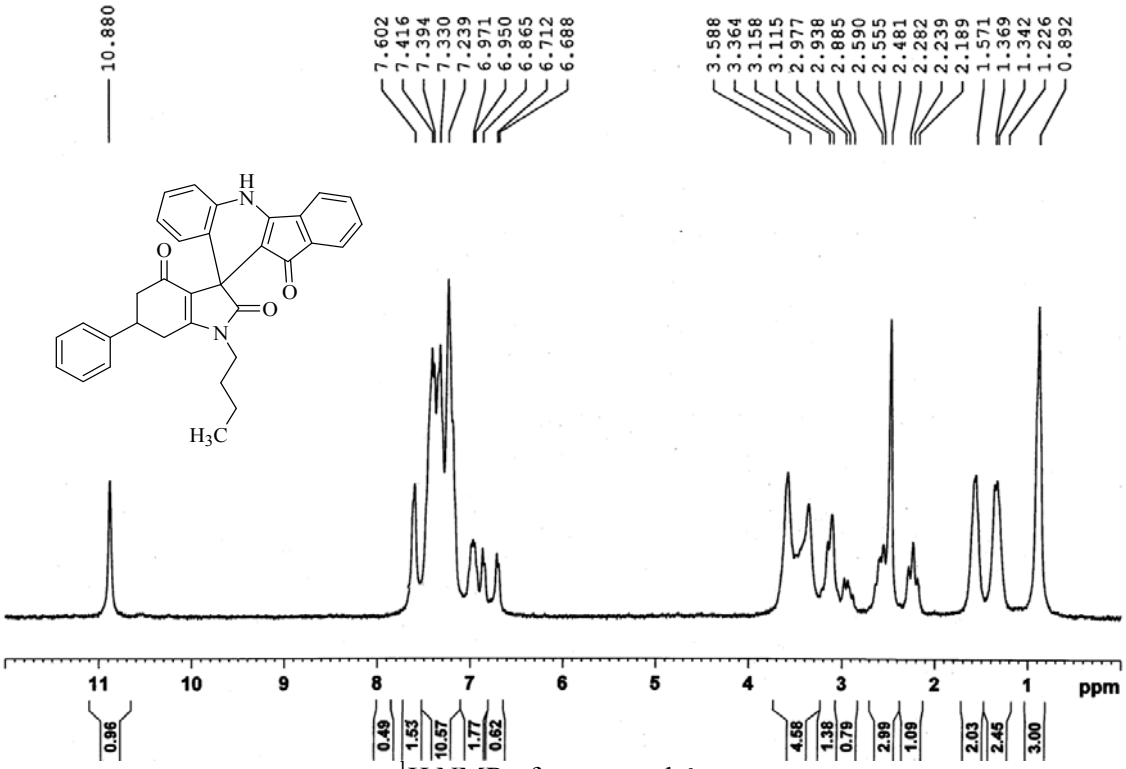

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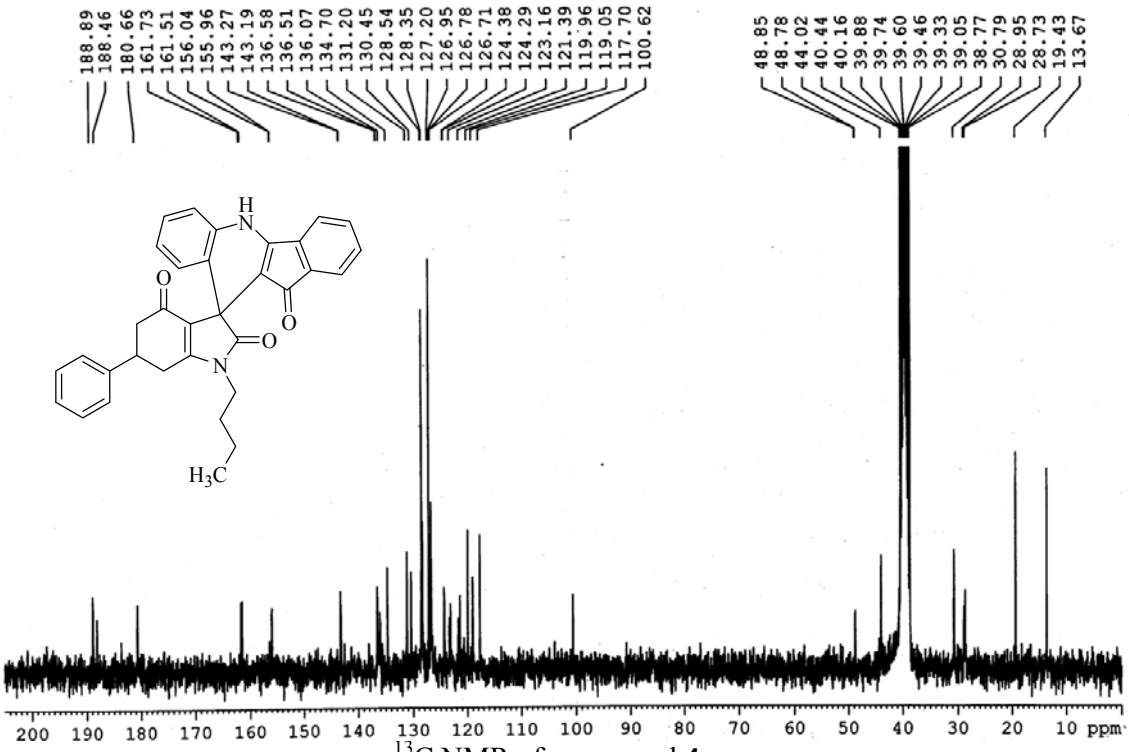

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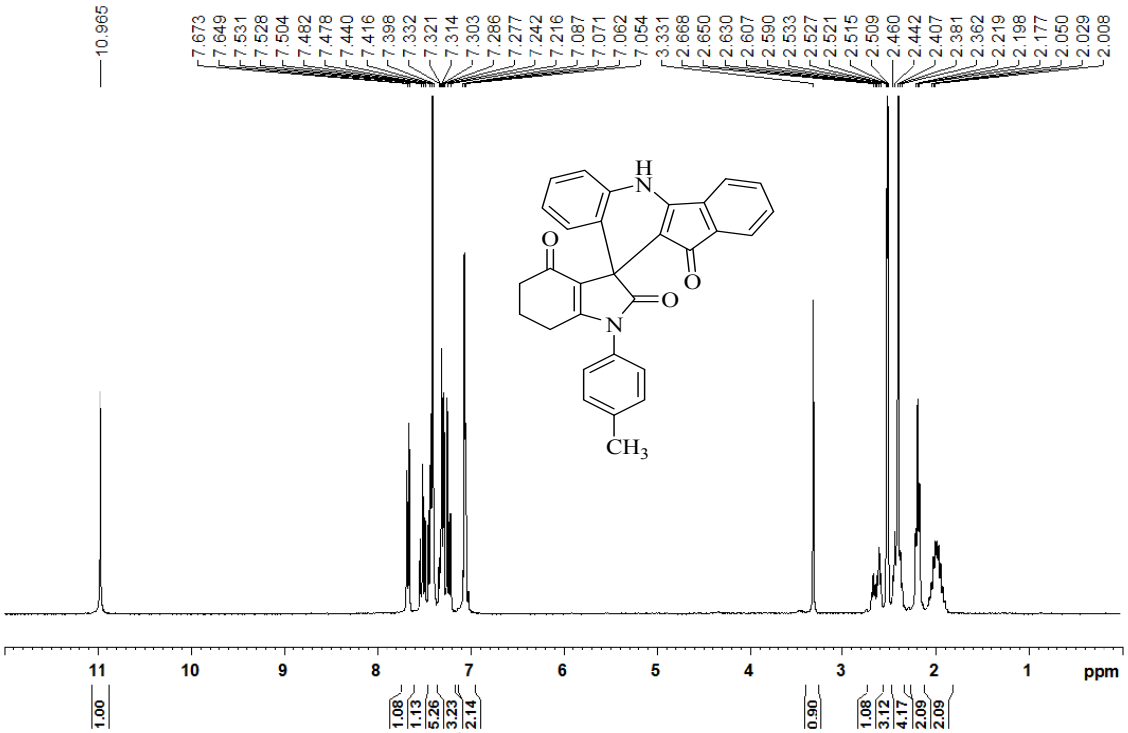

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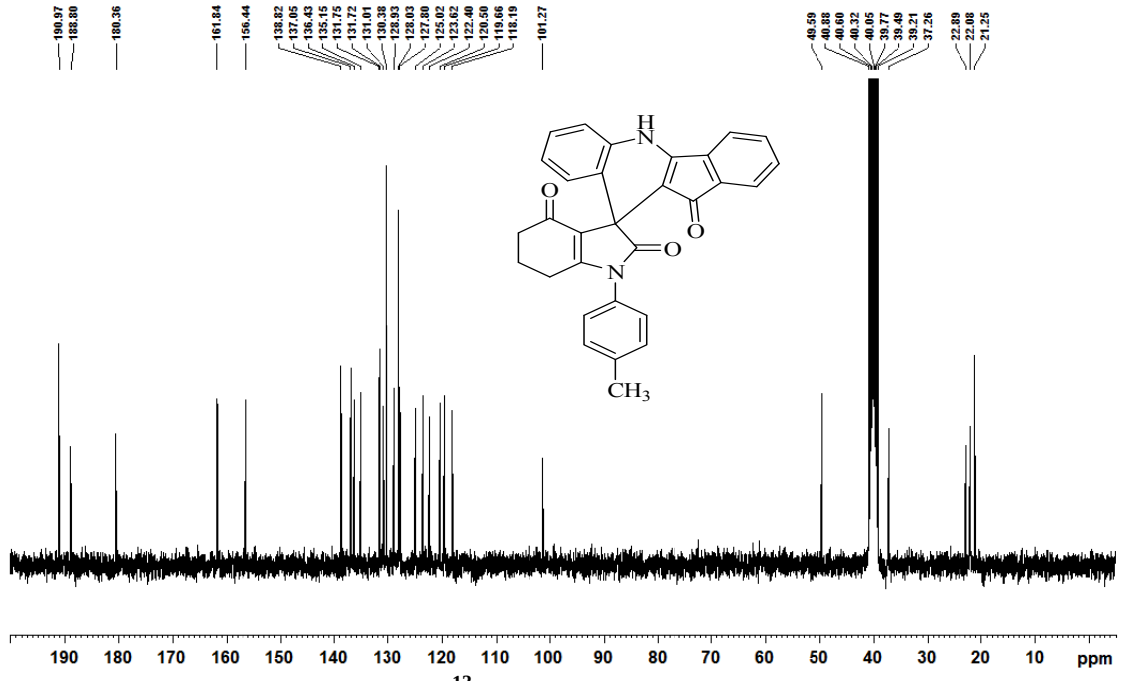

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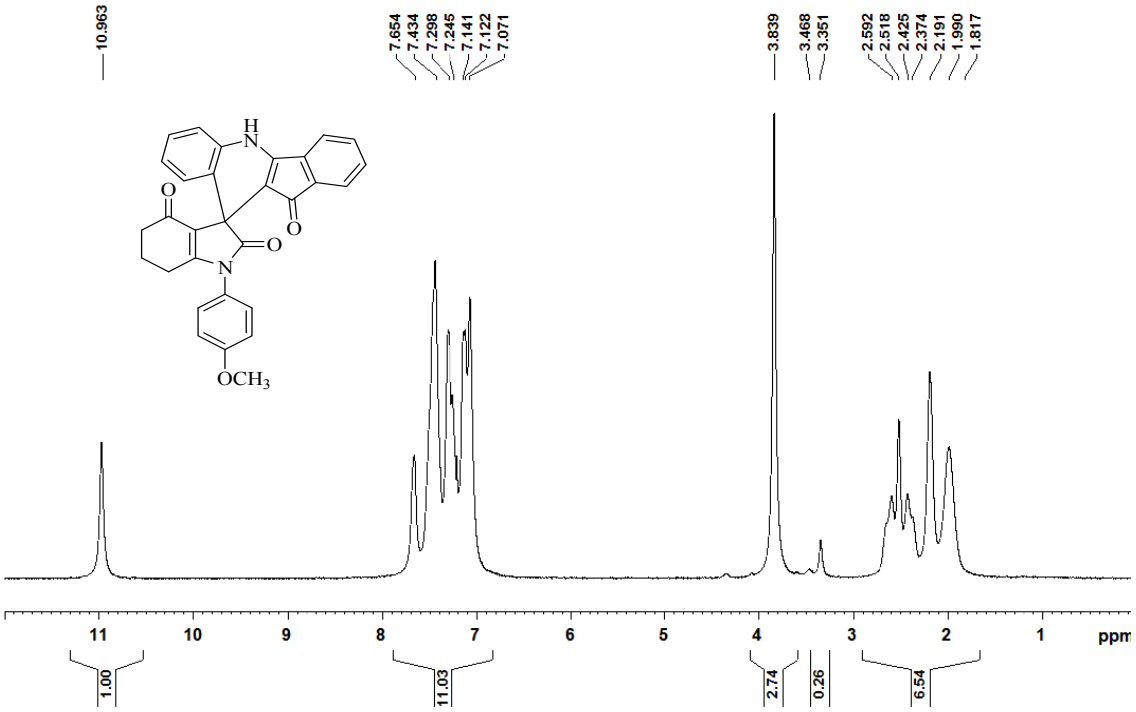
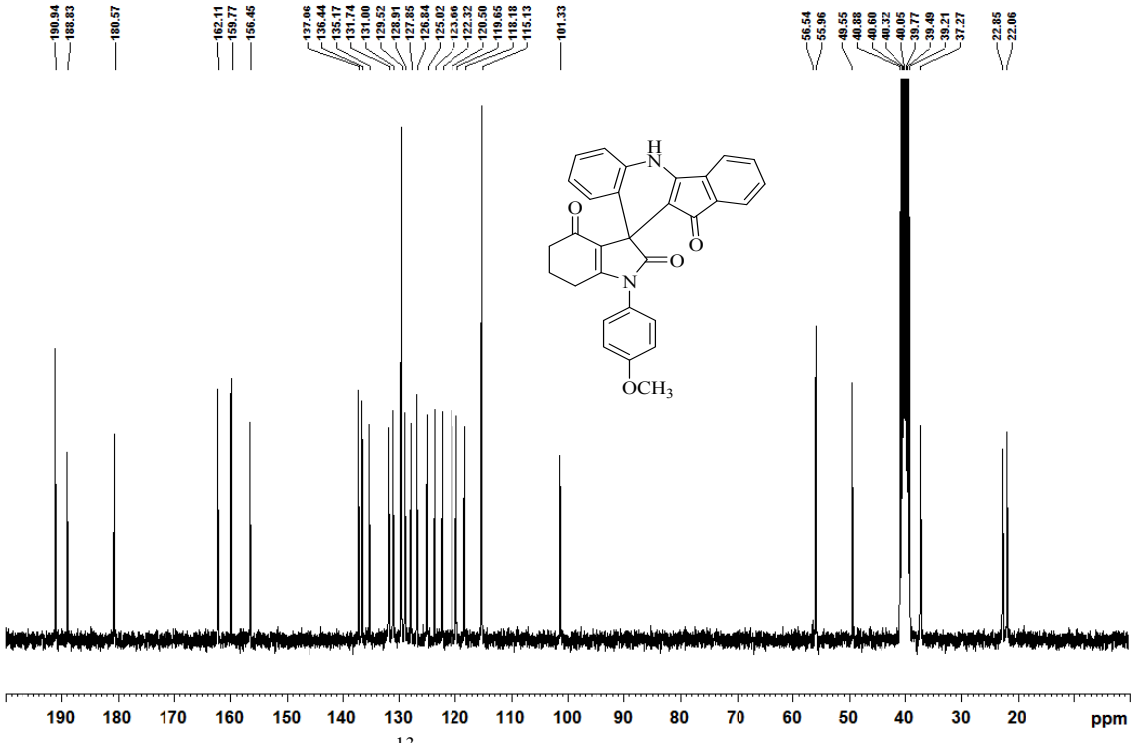
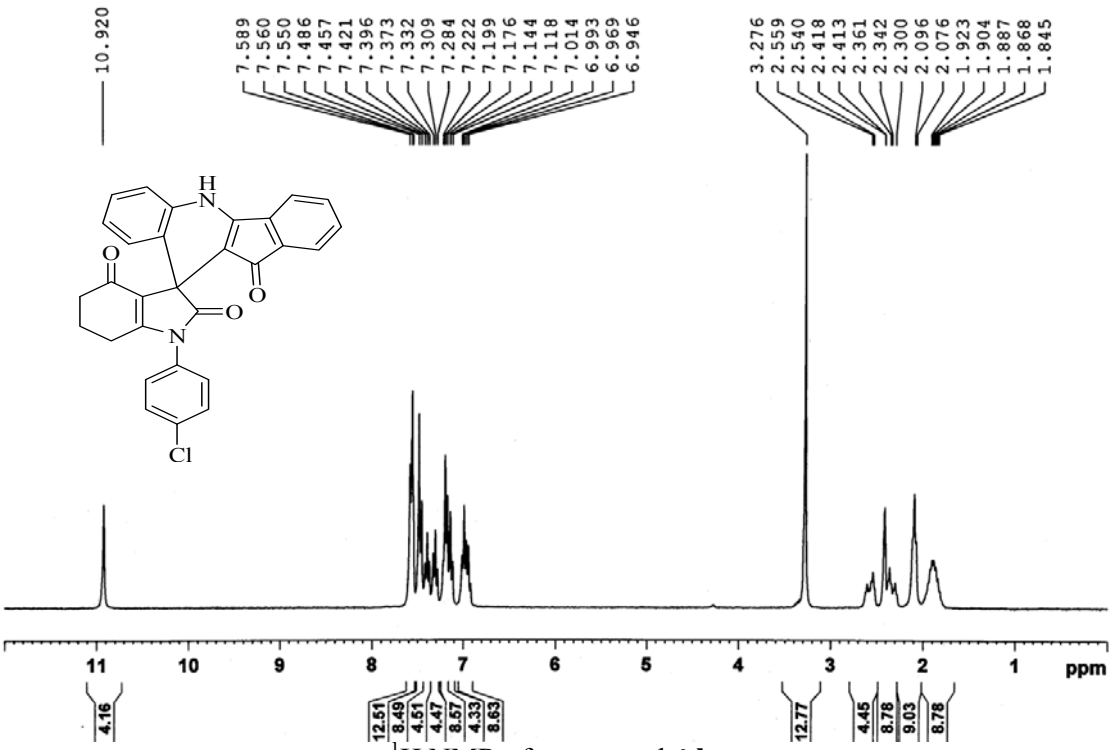


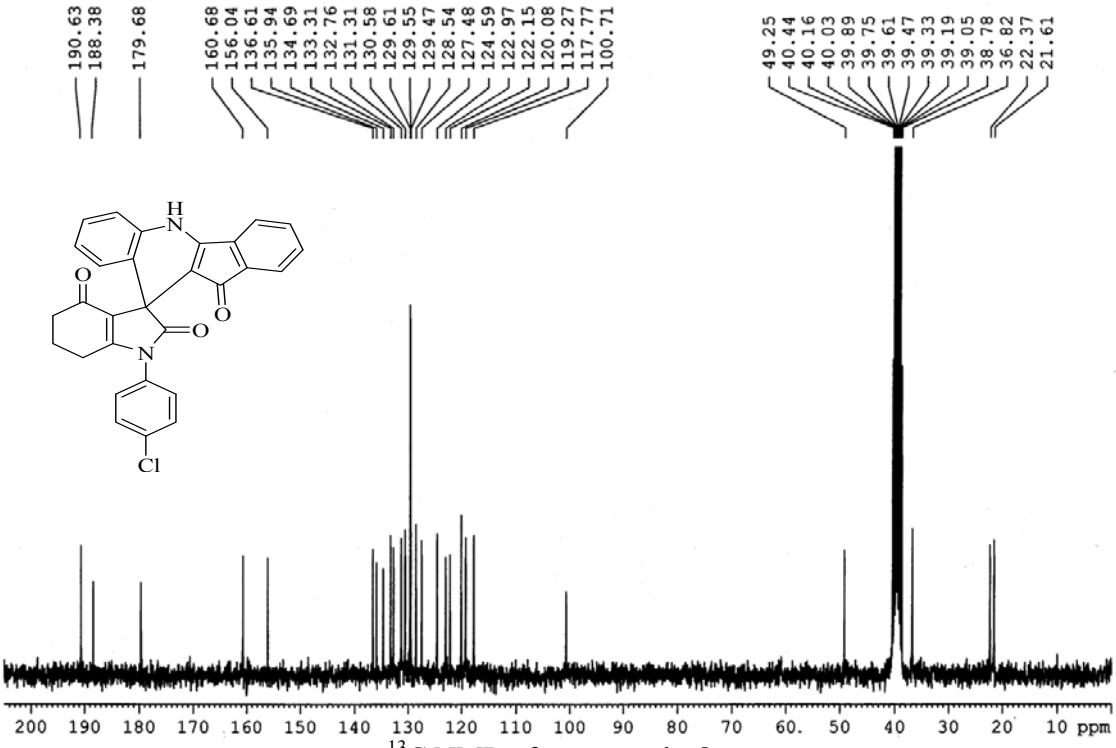
^{1}H NMR of compound **4db**



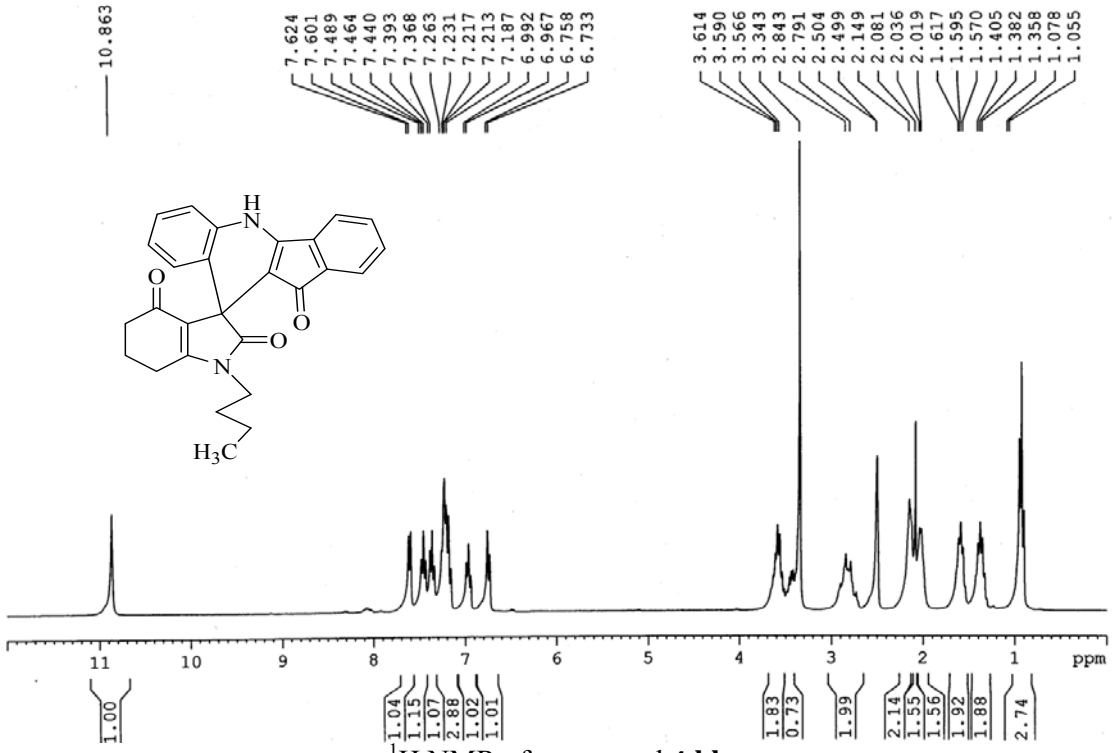
^{13}C NMR of compound **4db**



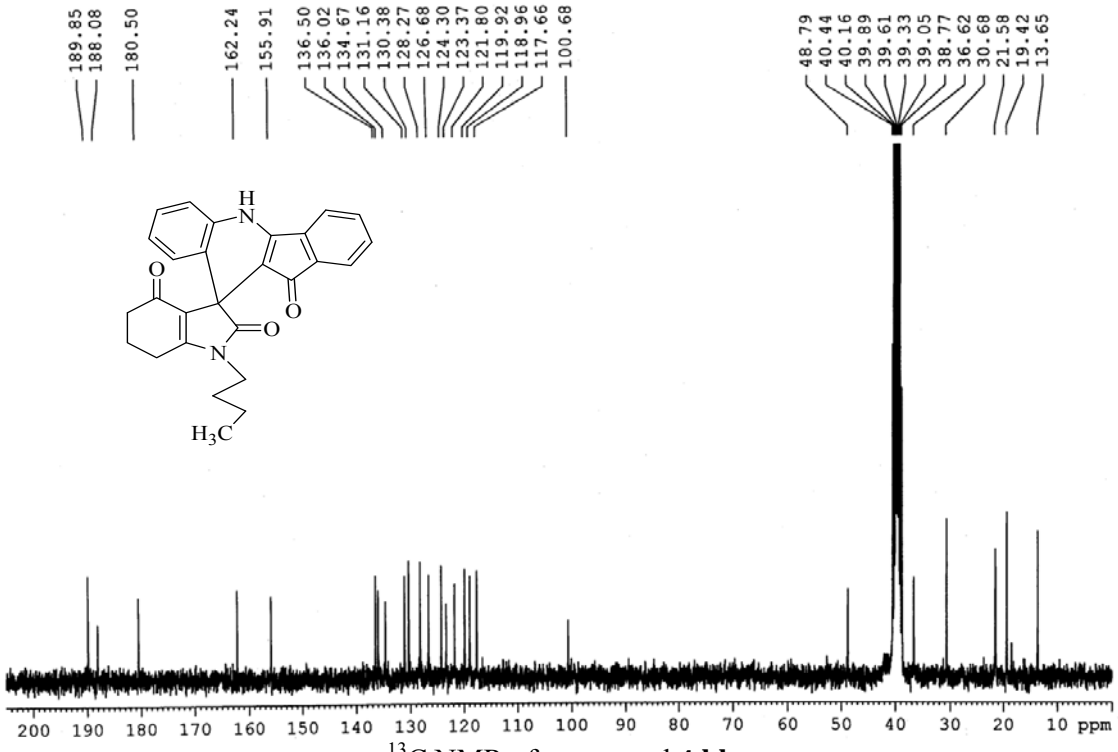
^{1}H NMR of compound **4dc**



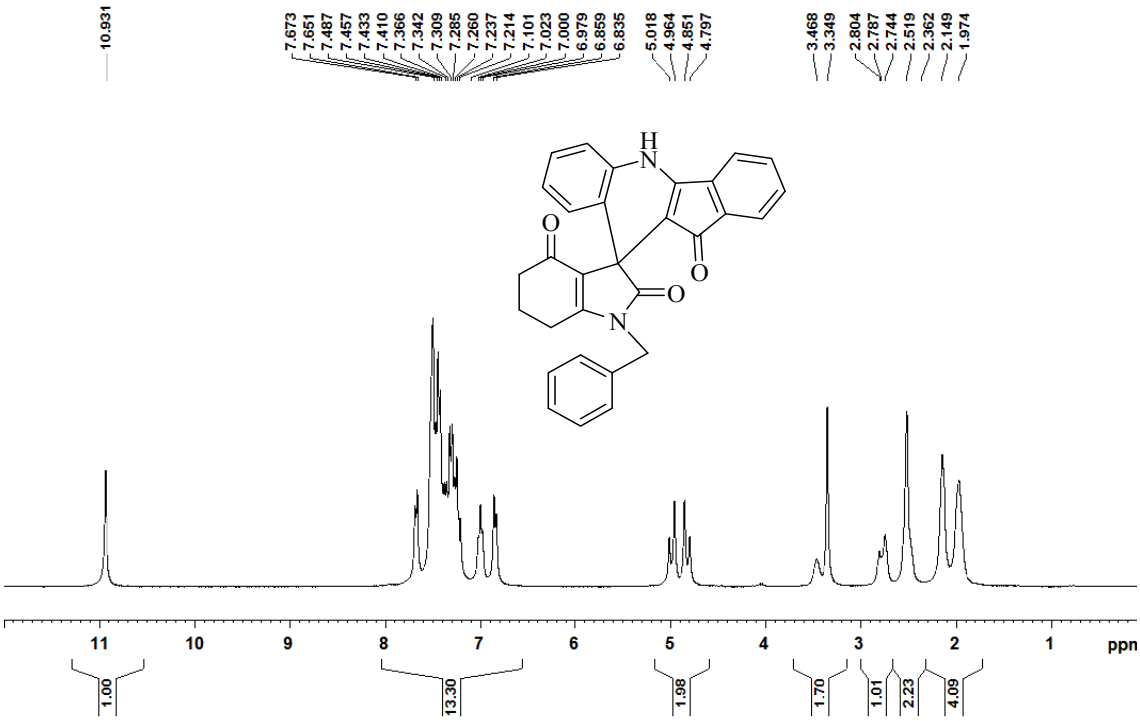
^{13}C NMR of compound **4dc**



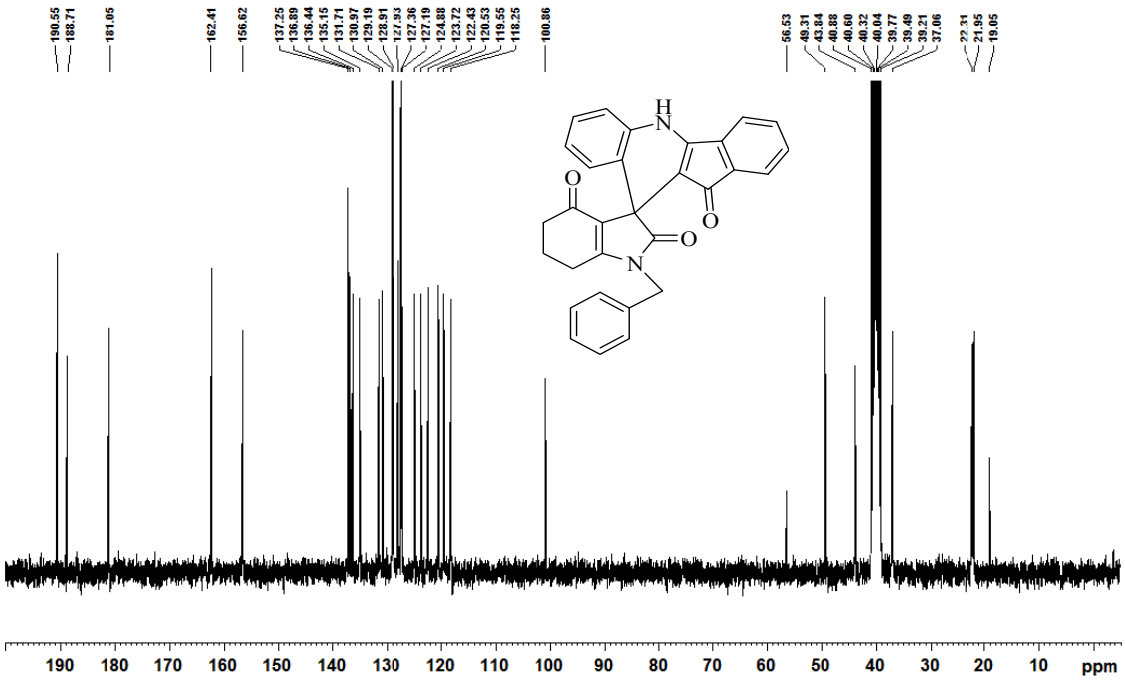
^{1}H NMR of compound **4dd**



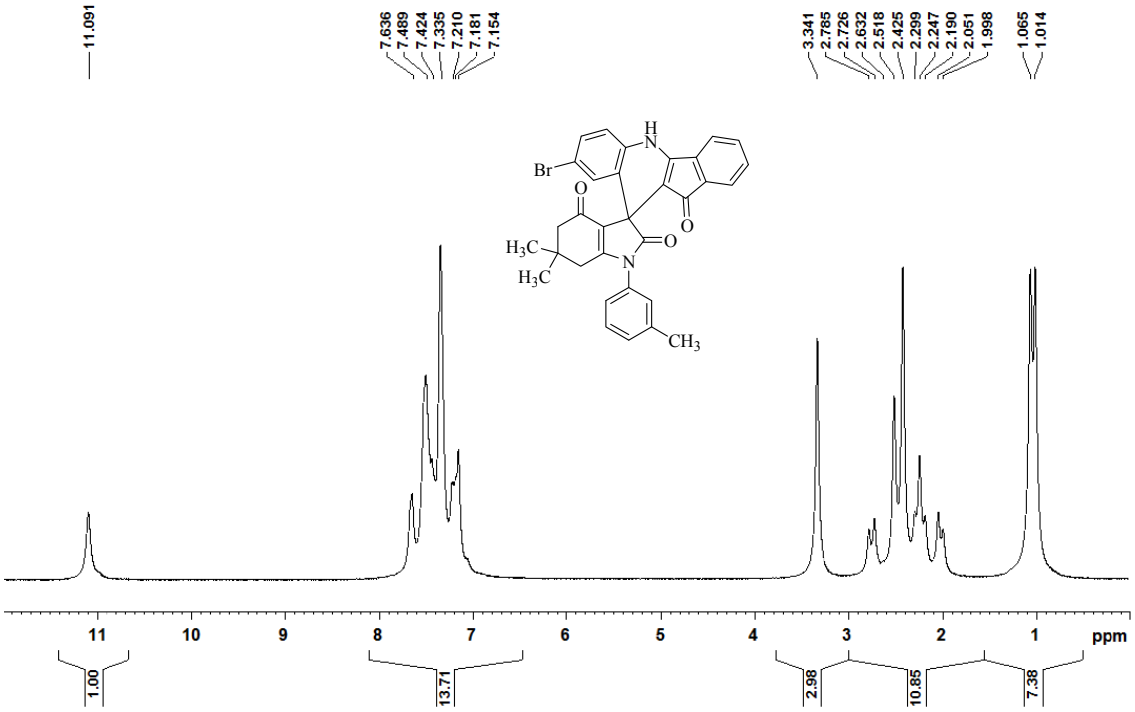
^{13}C NMR of compound **4dd**



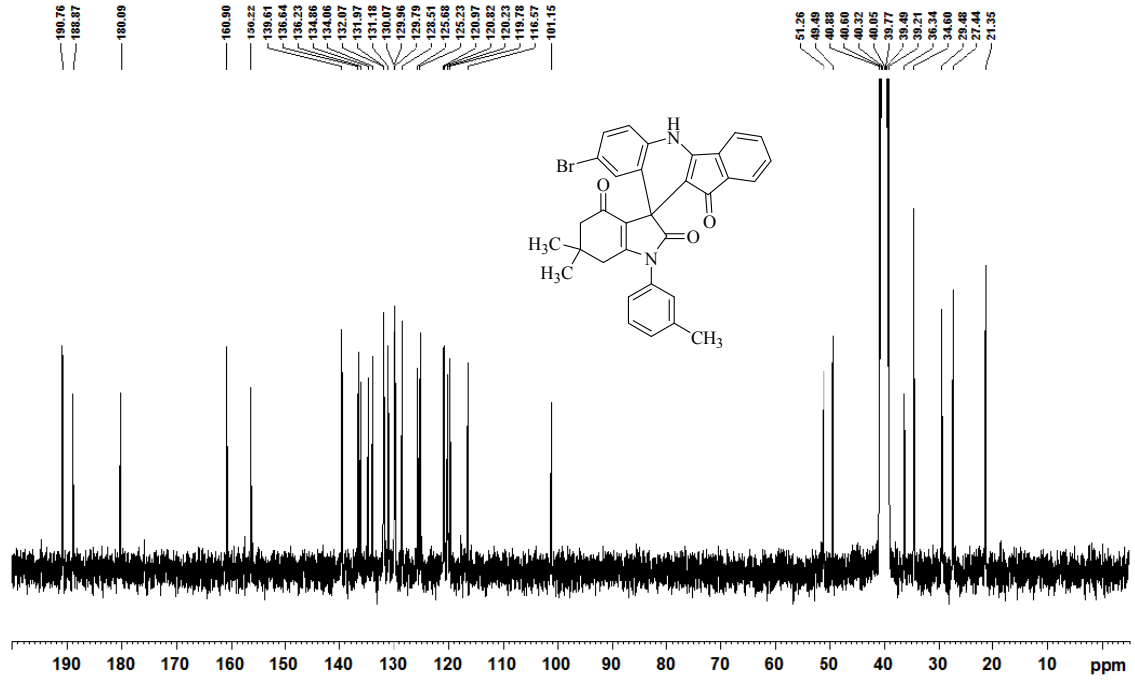
^{1}H NMR of compound 4de



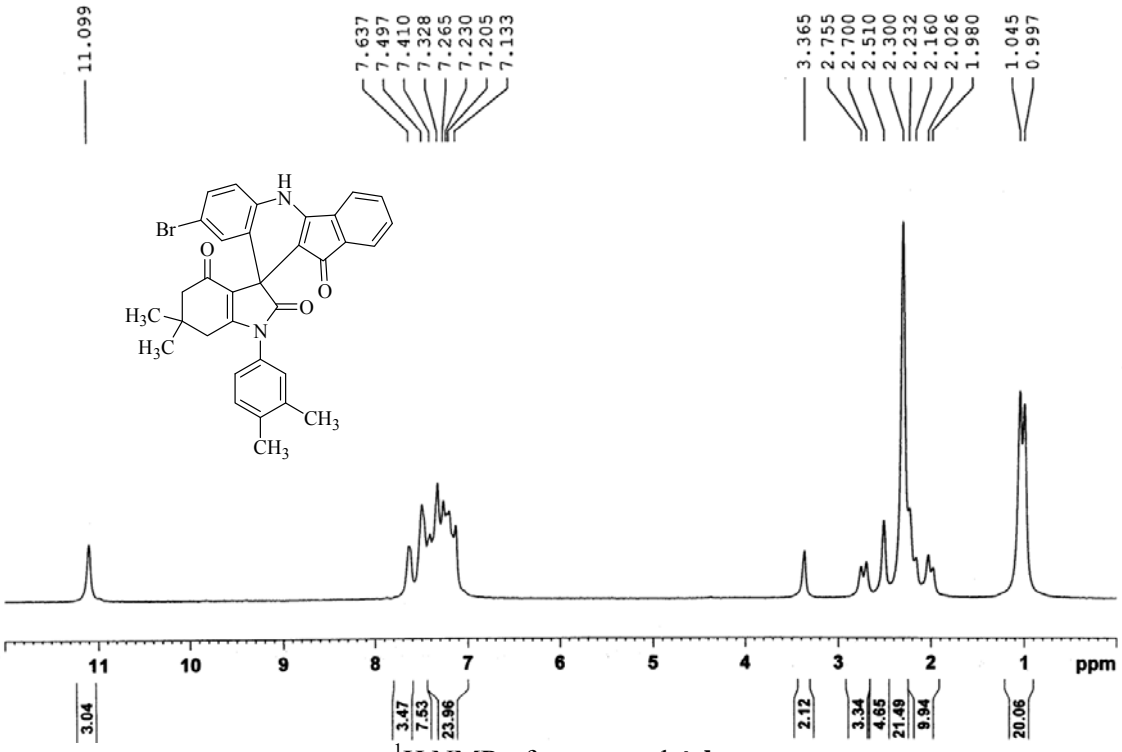
^{13}C NMR of compound 4de



^{1}H NMR of compound **4ea**



^{13}C NMR of compound **4ea**



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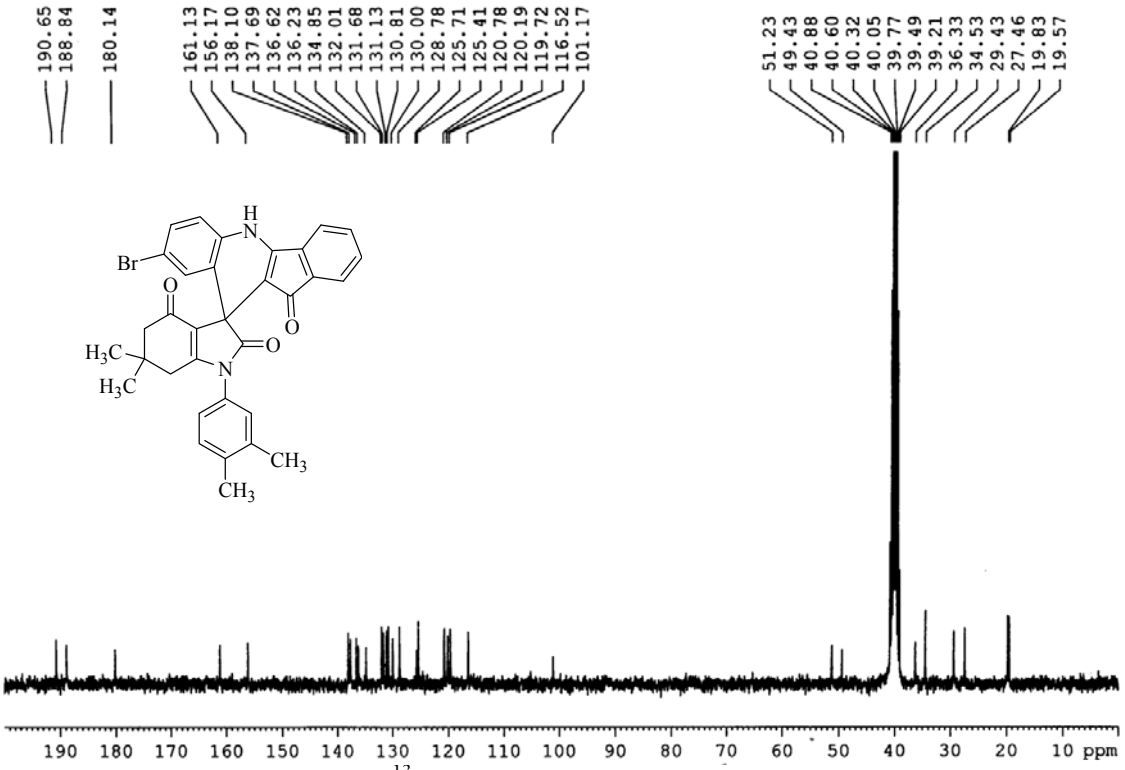
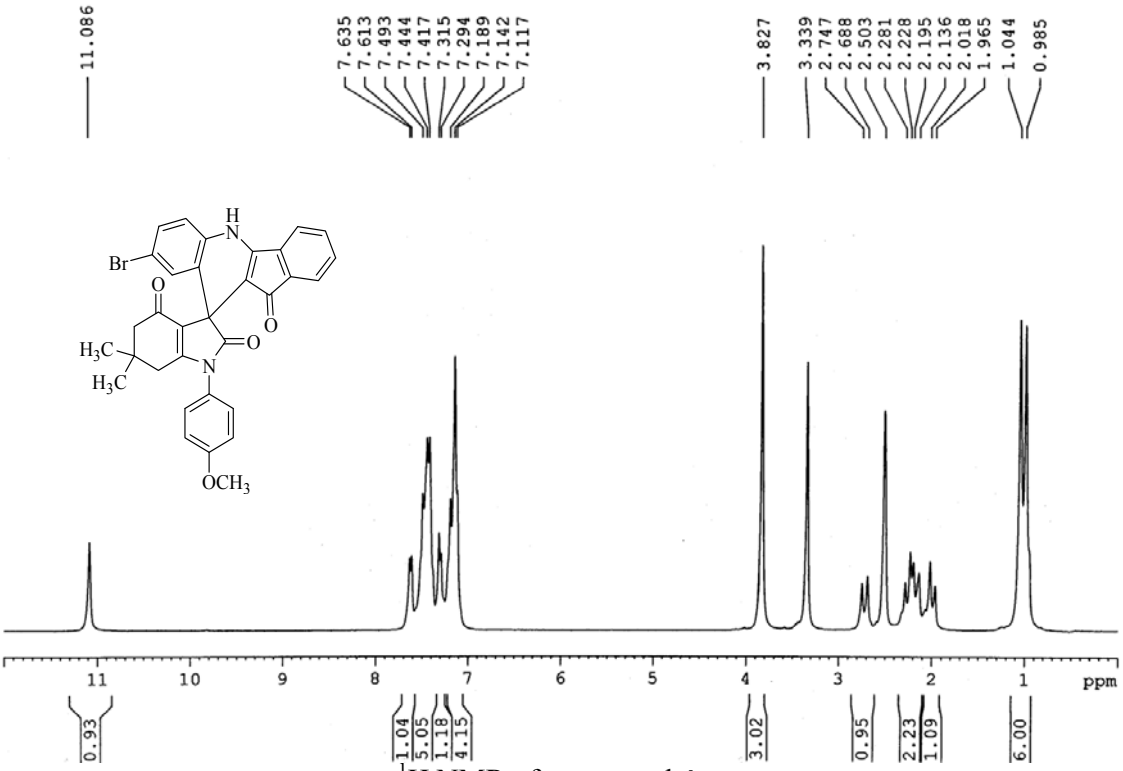
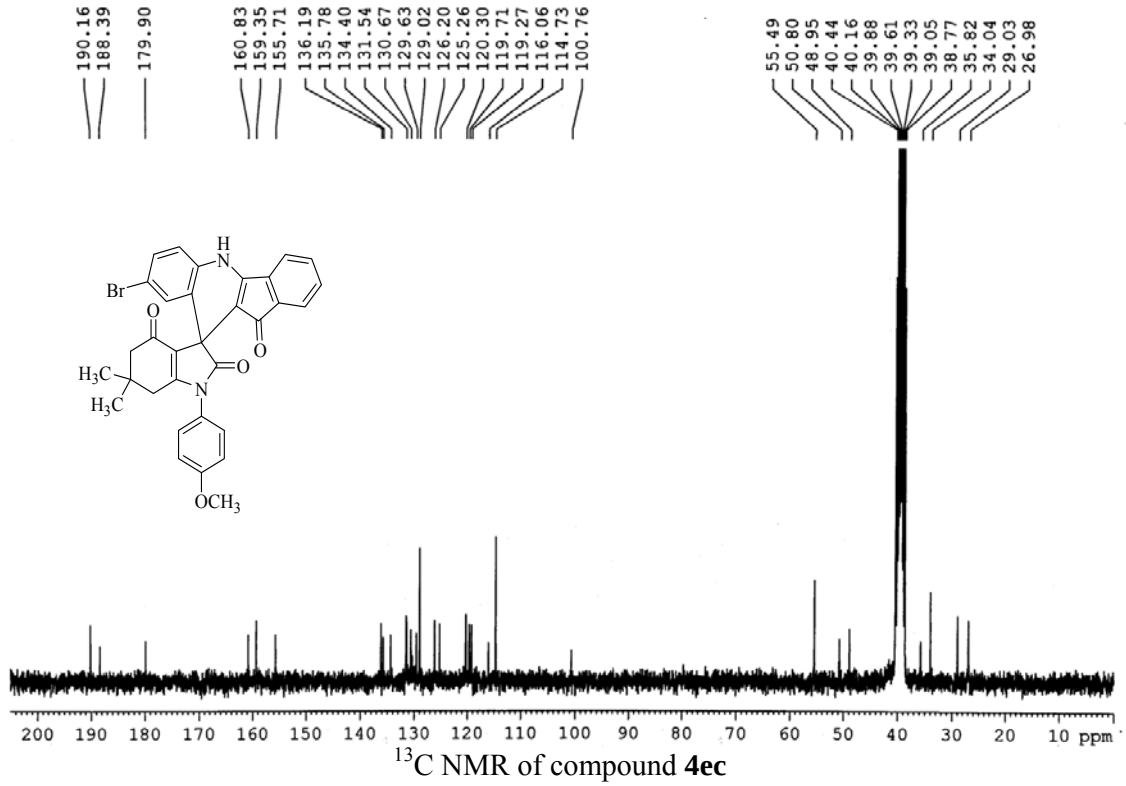


^{13}C NMR of compound **4eb**



^{1}H NMR of compound **4ec**



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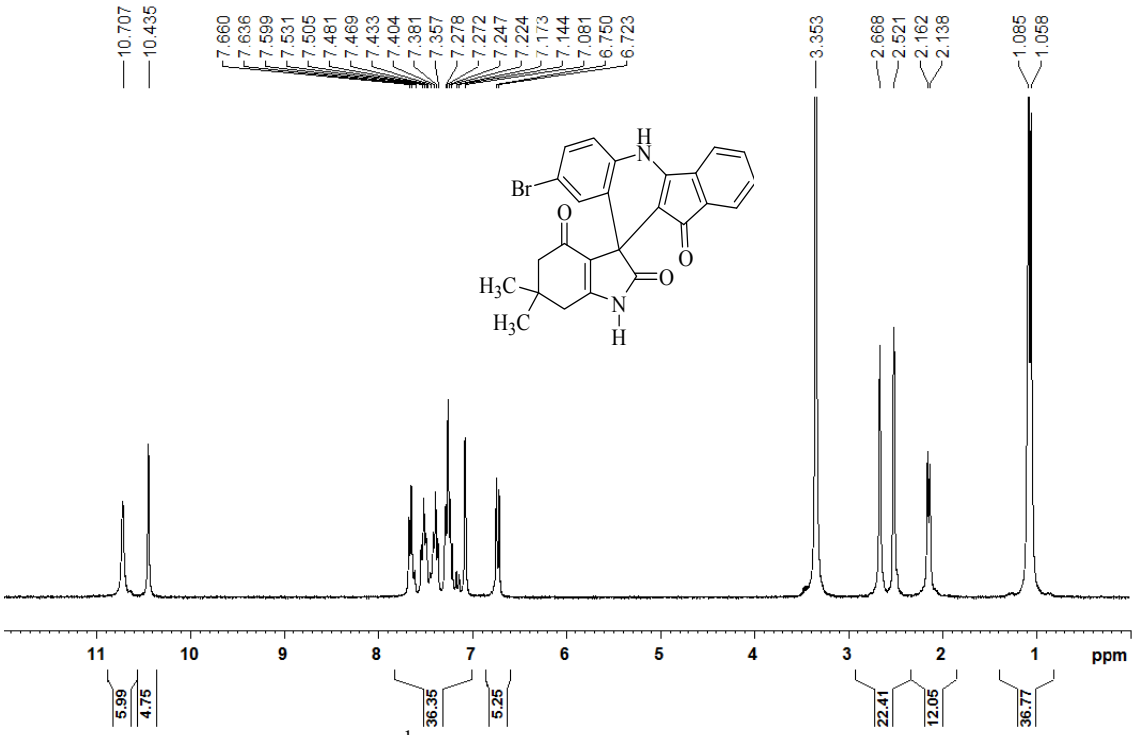

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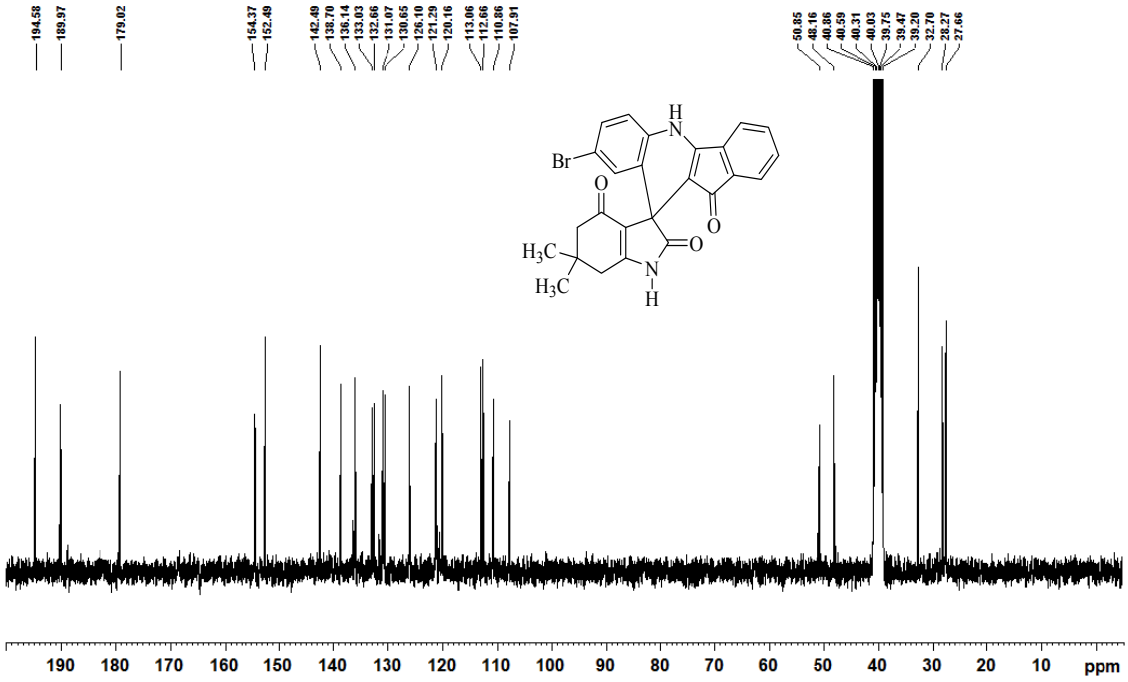
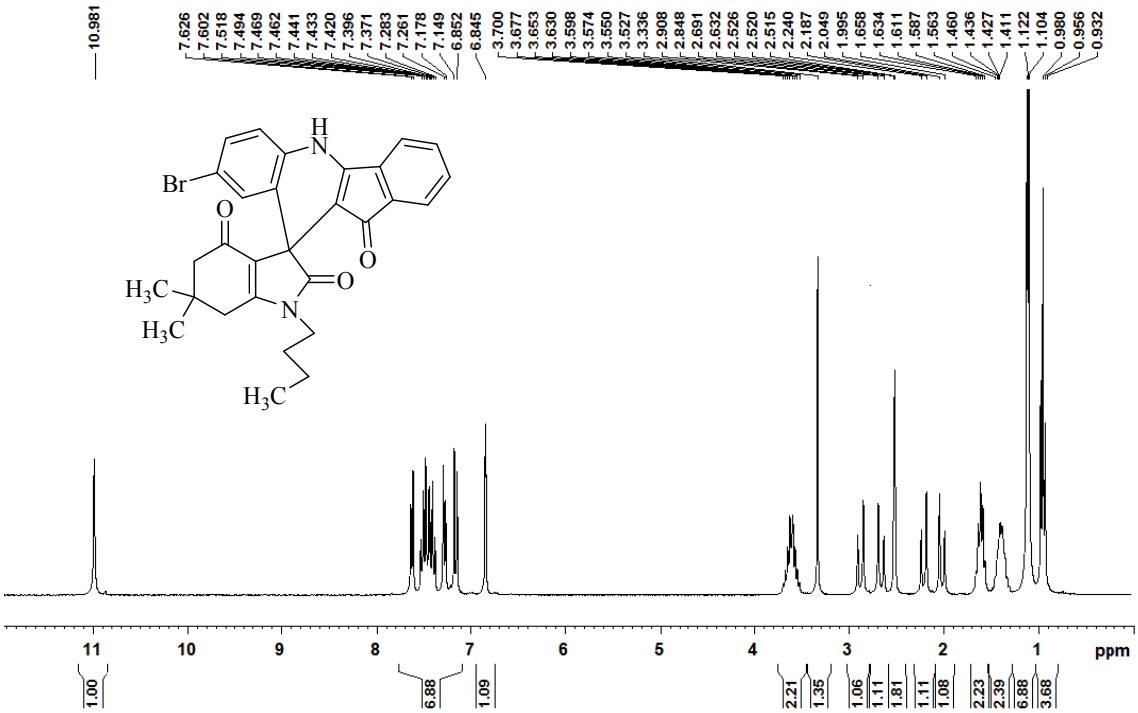
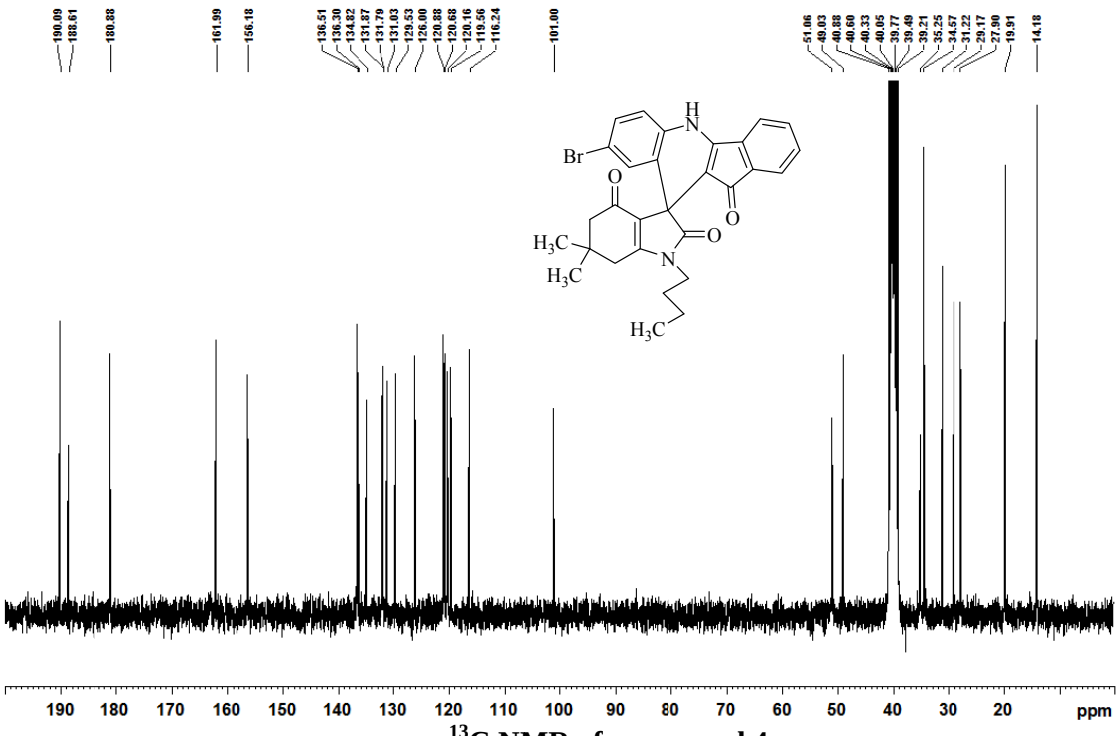


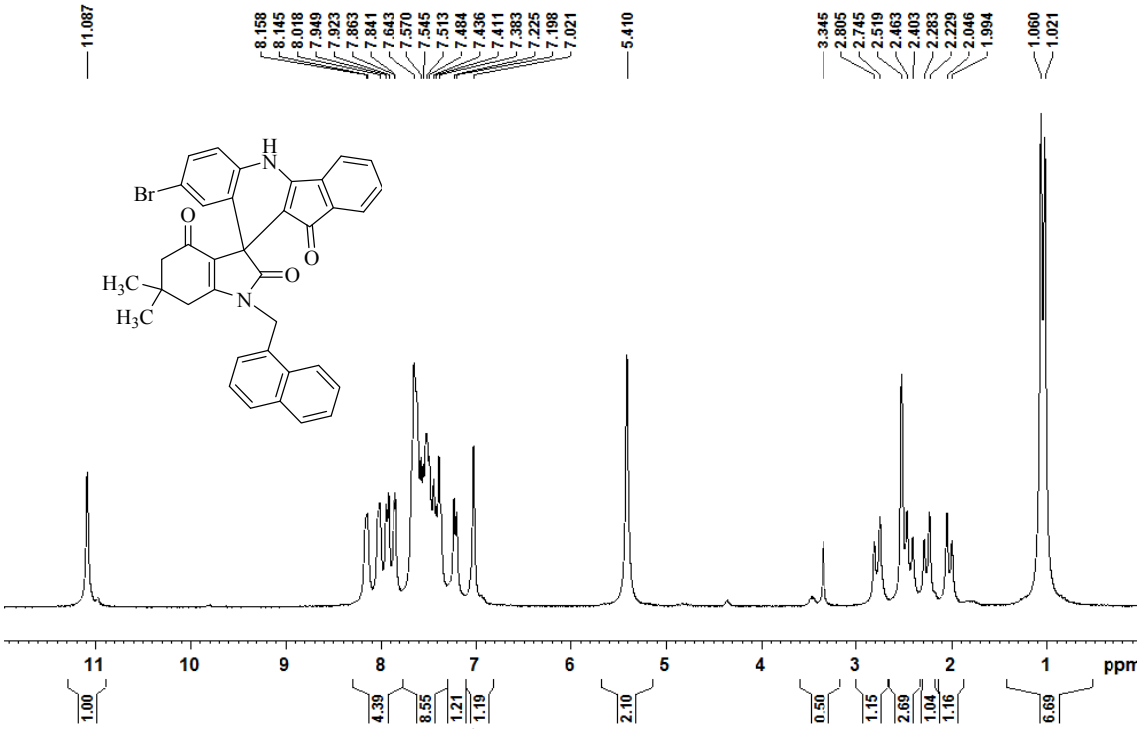
^{13}C NMR of compound **4ed**



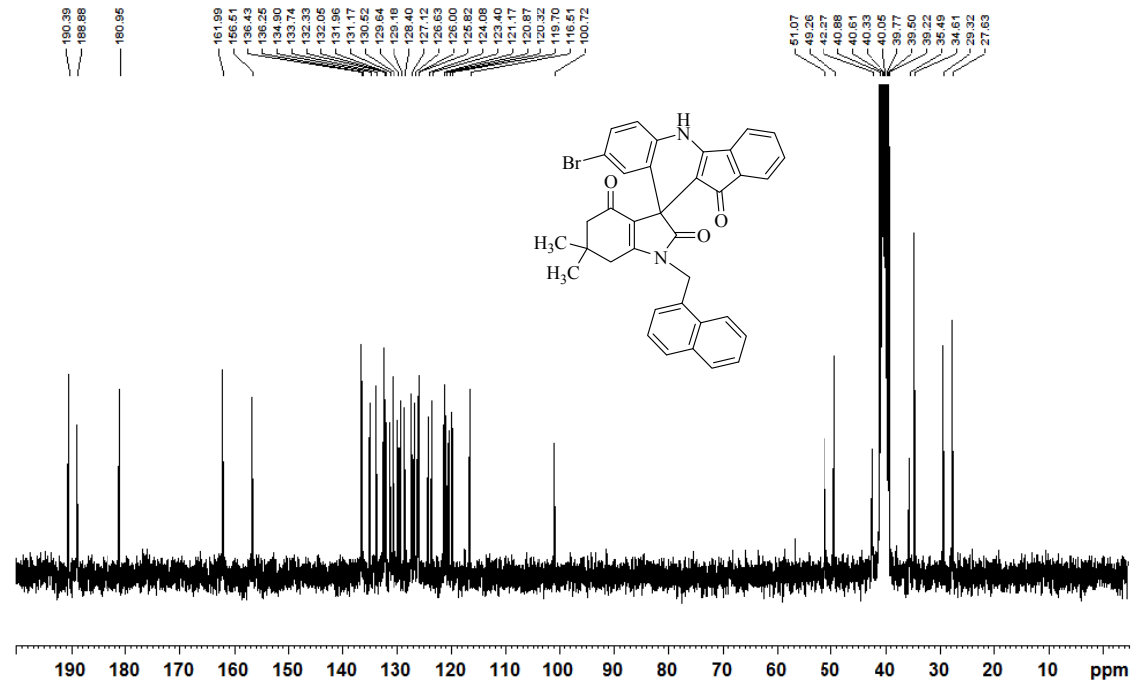
^{1}H NMR of compound 4ee



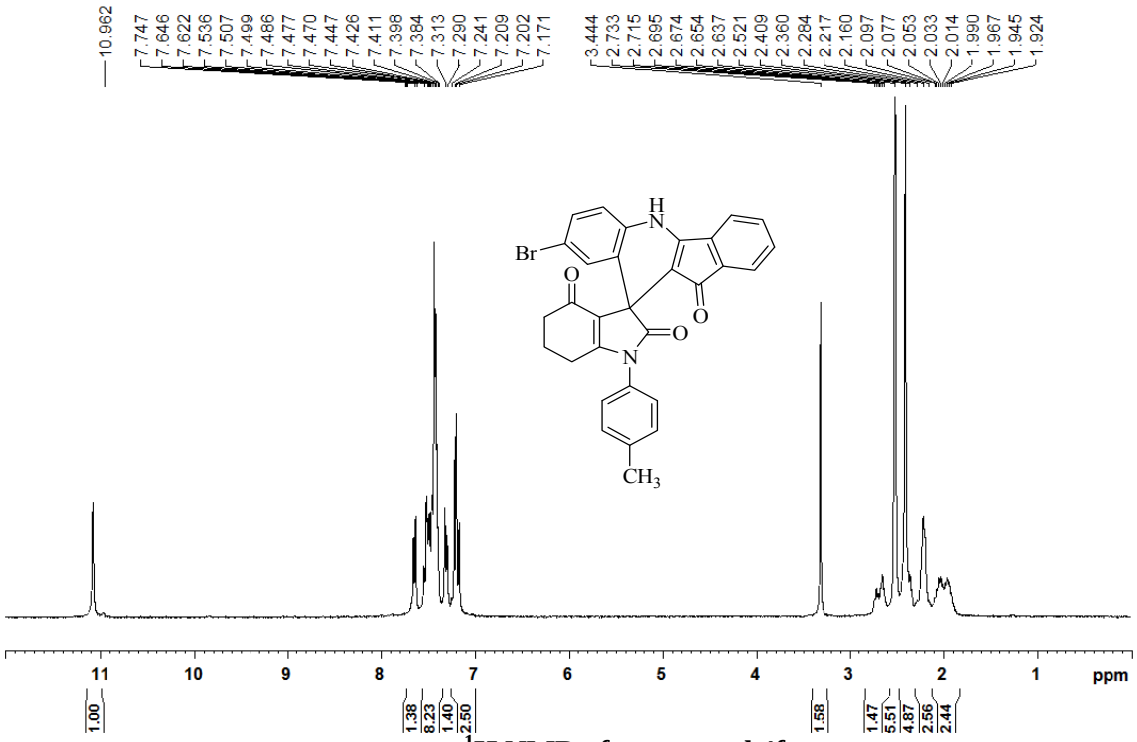
^{13}C NMR of compound 4ee



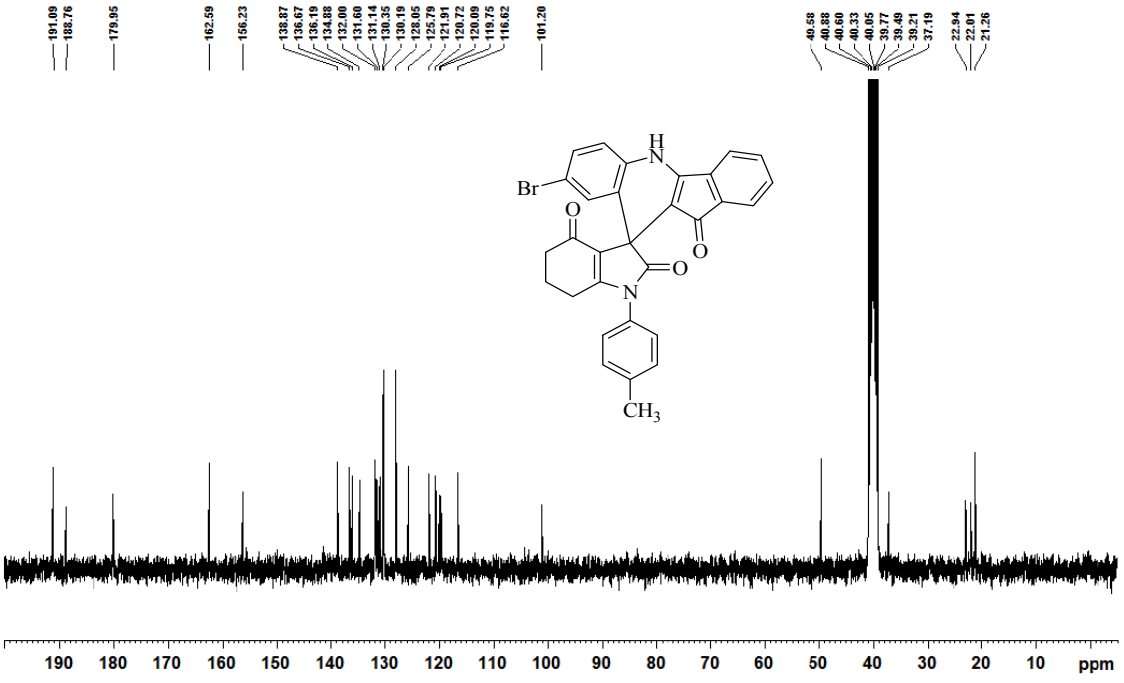
^{1}H NMR of compound 4ef



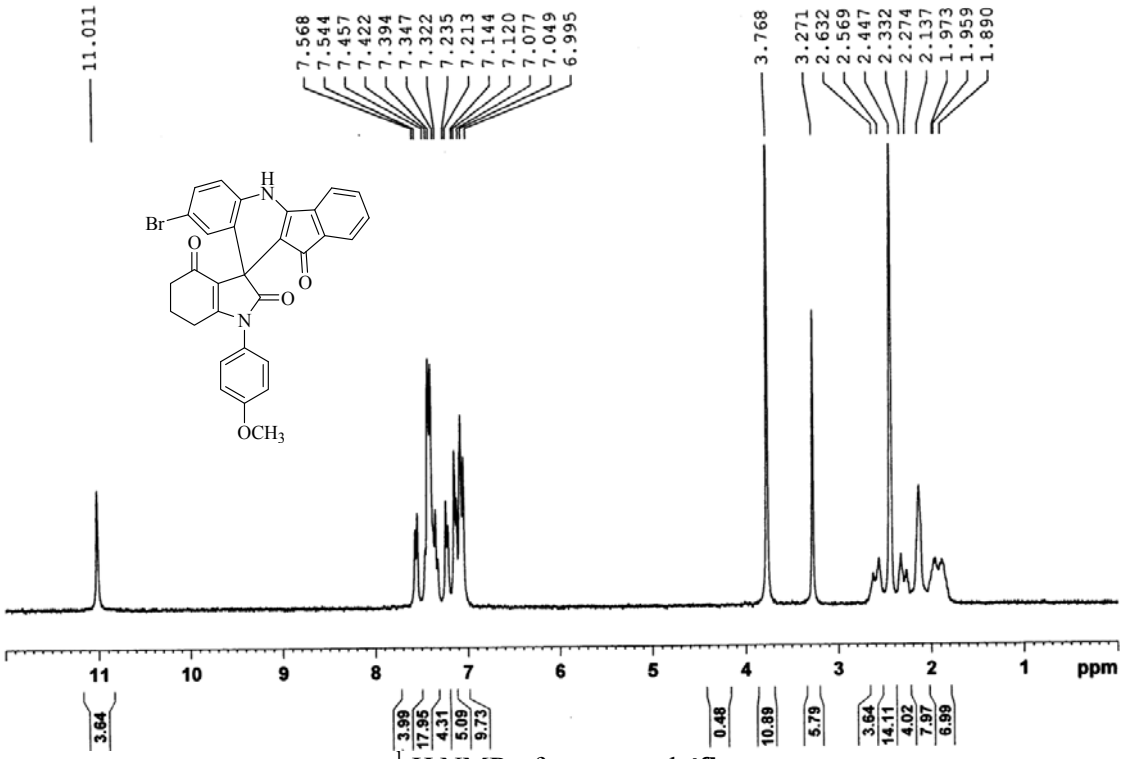
^{13}C NMR of compound 4ef



^{1}H NMR of compound 4fa



^{13}C NMR of compound 4fa



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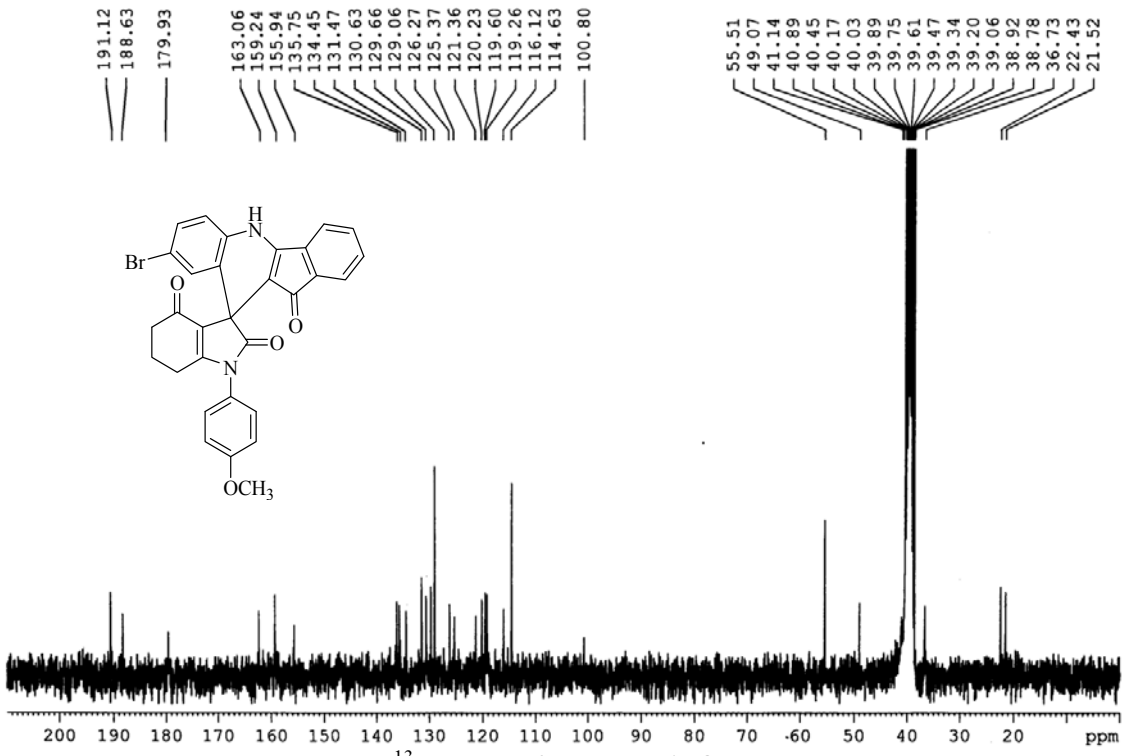

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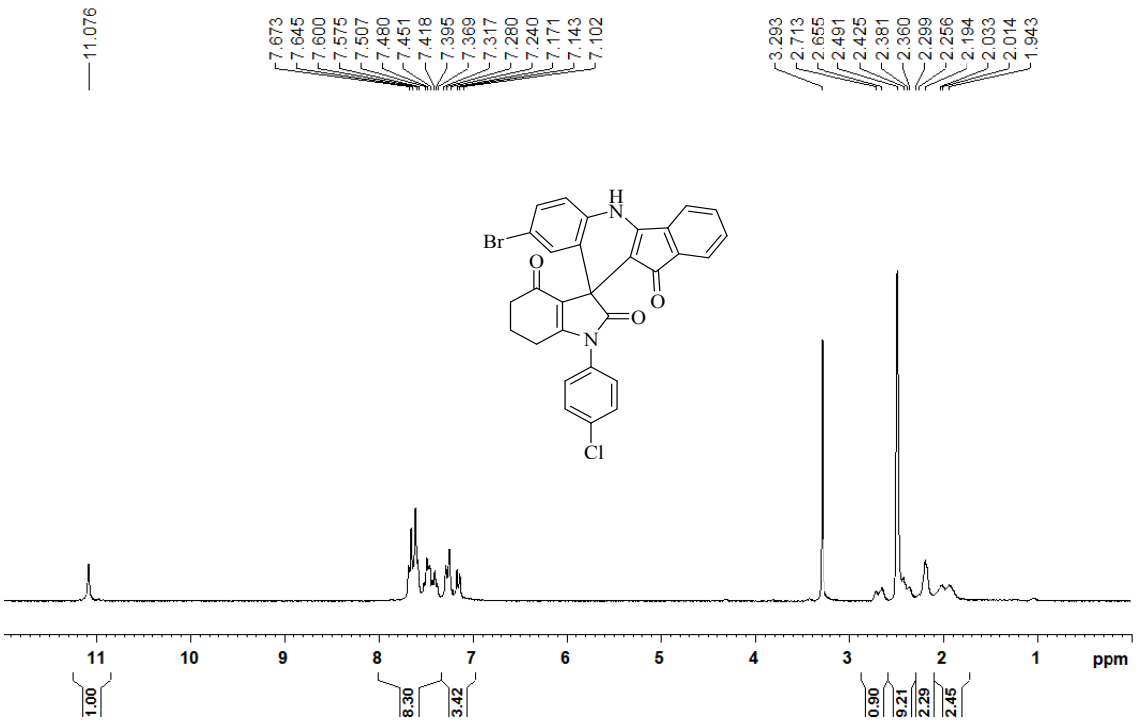

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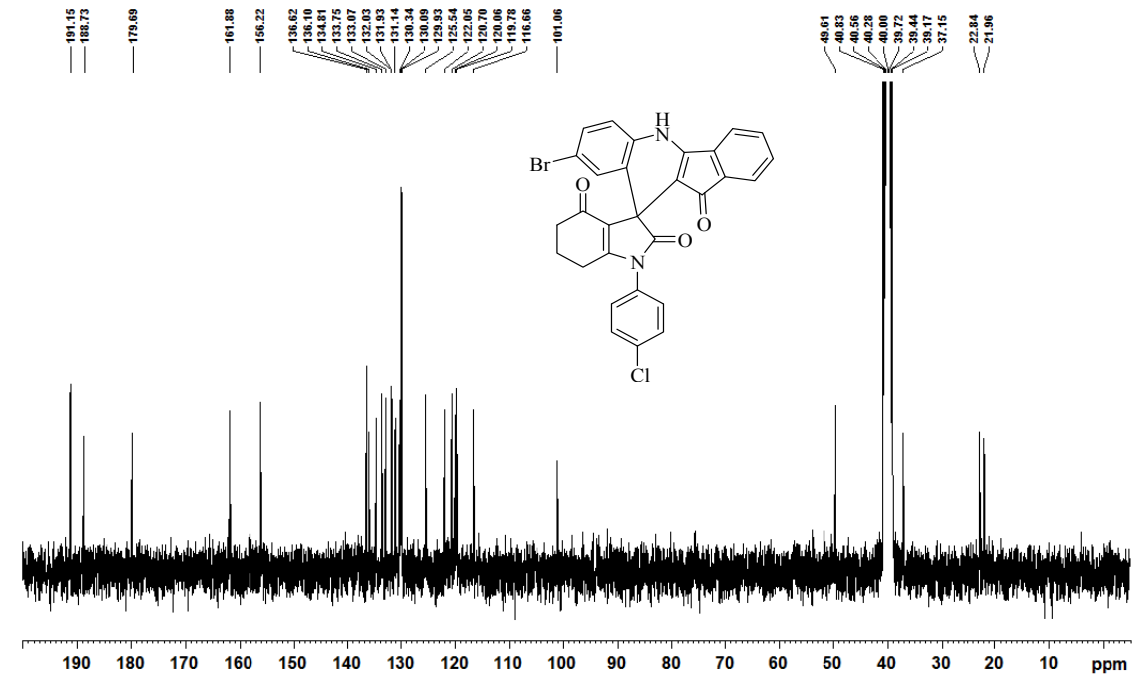

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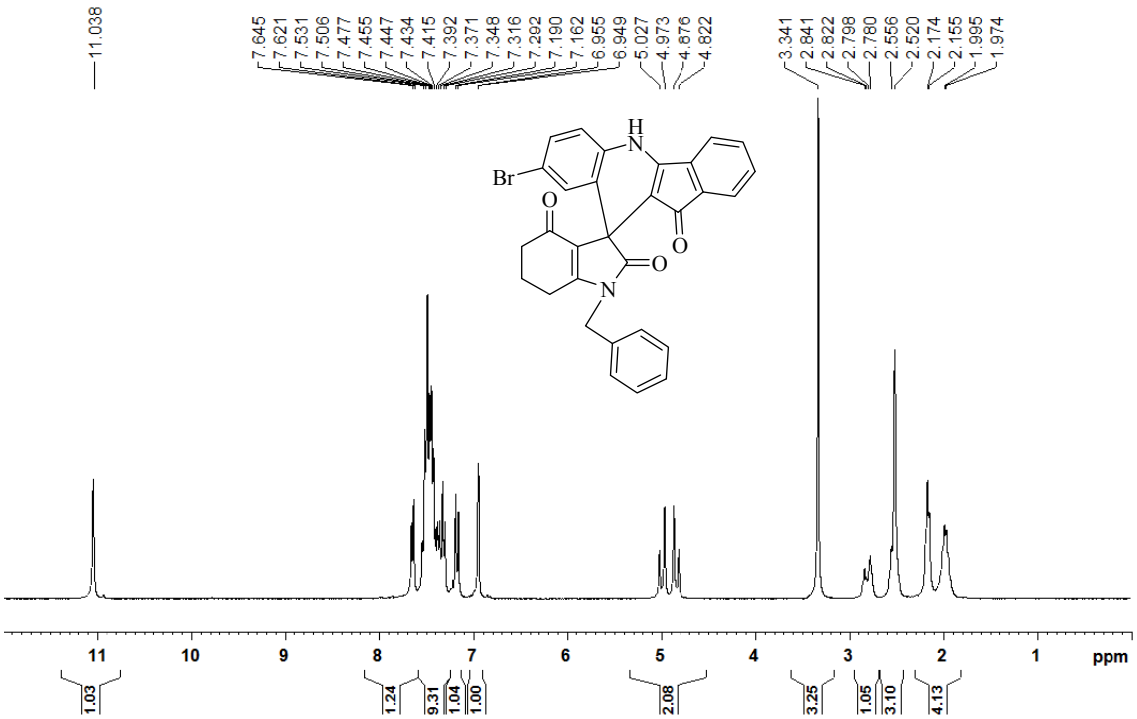
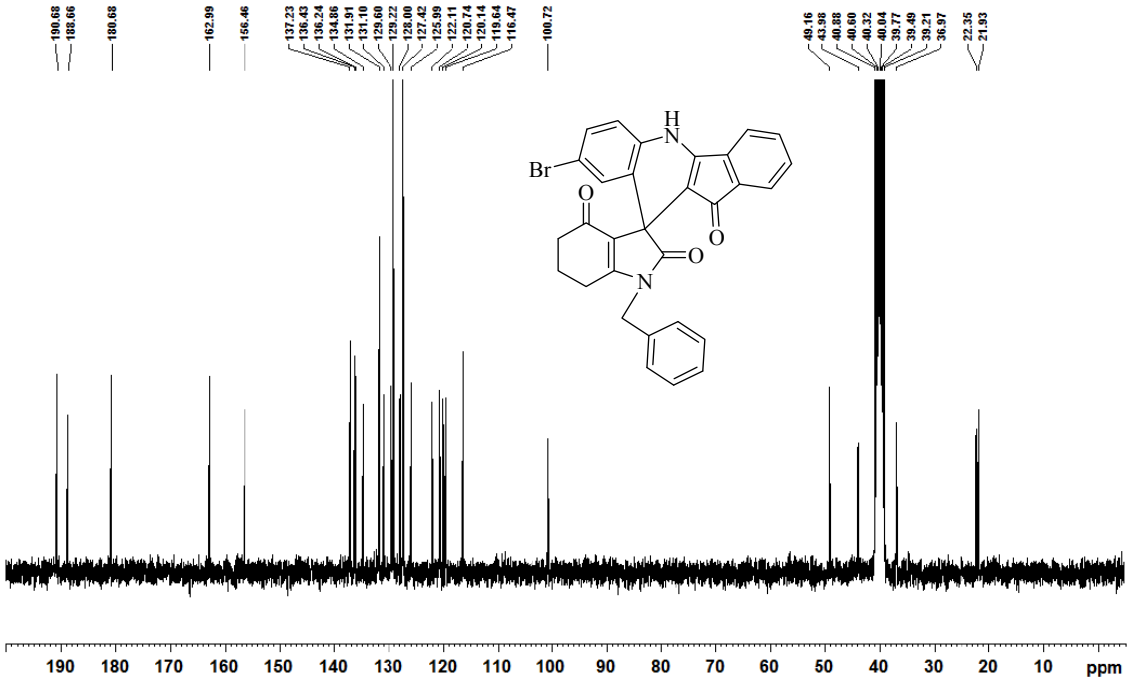


^{1}H NMR of compound **4fd**



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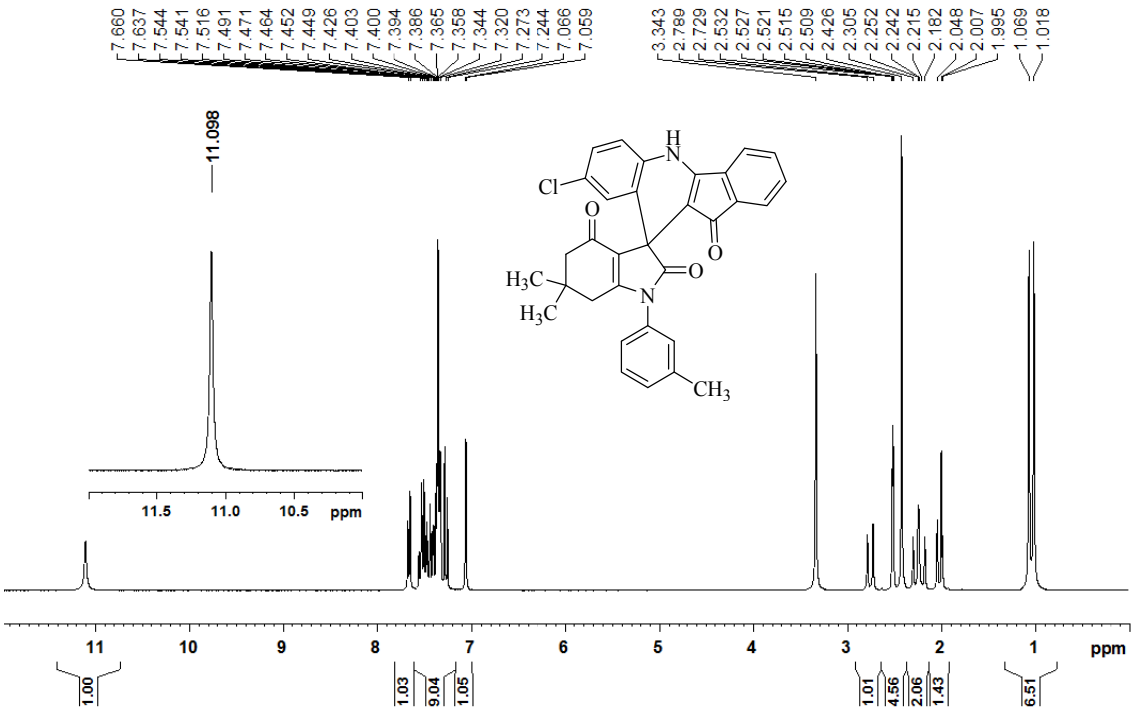
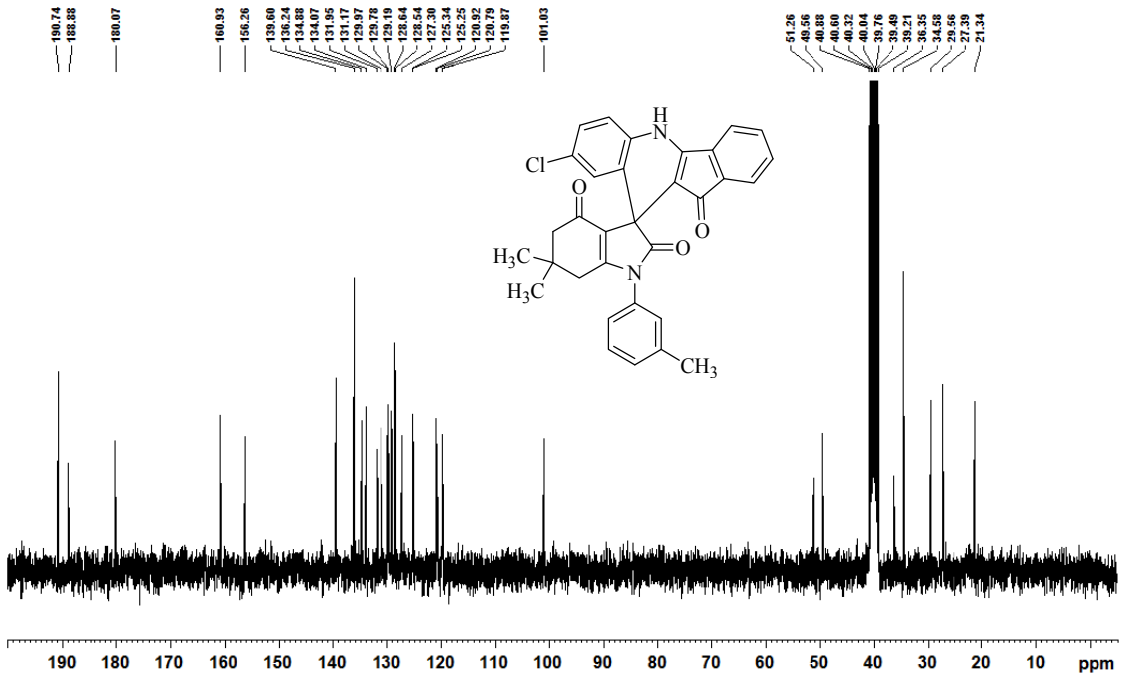
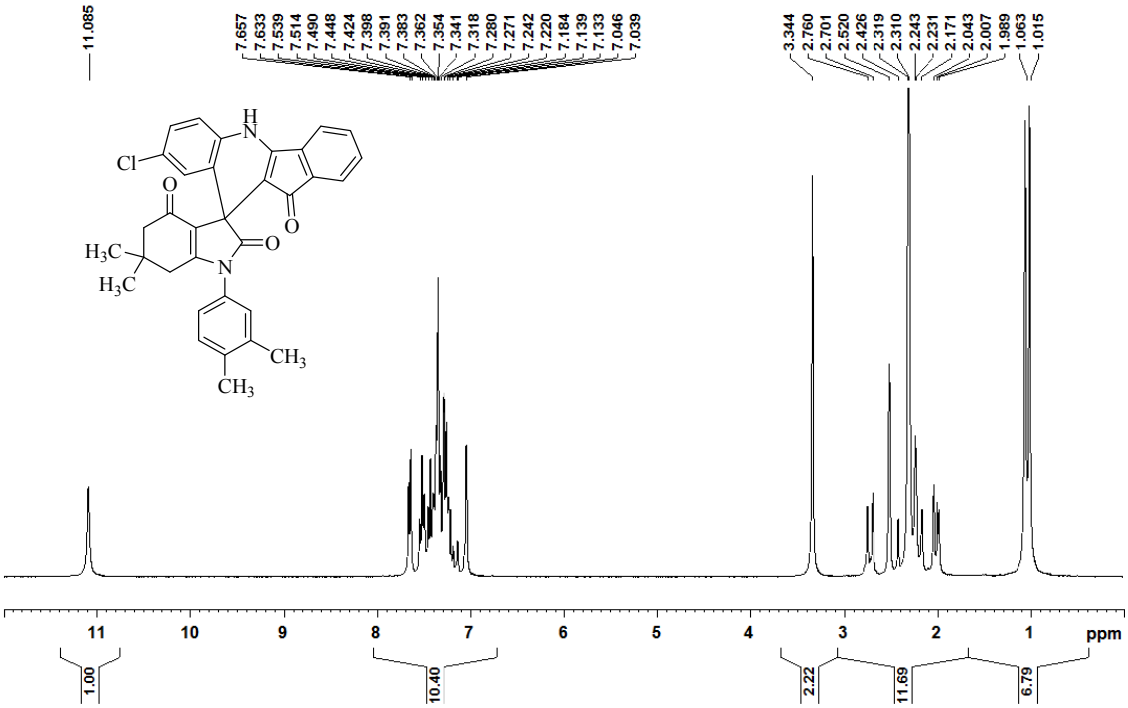


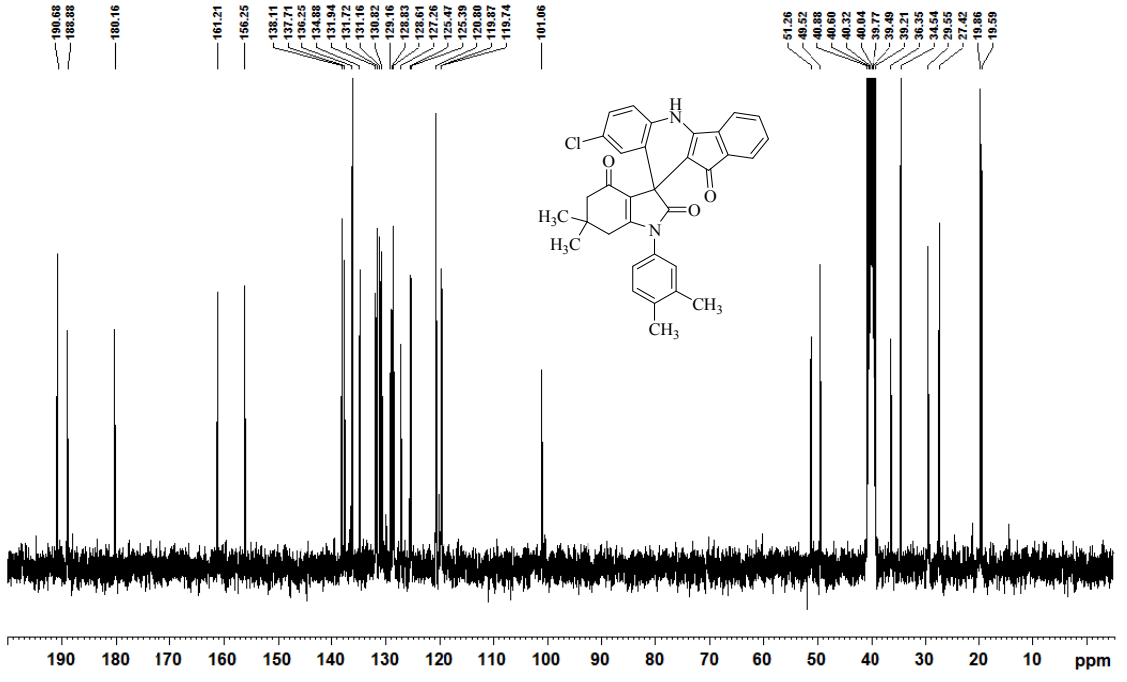
^{1}H NMR of compound **4ga**



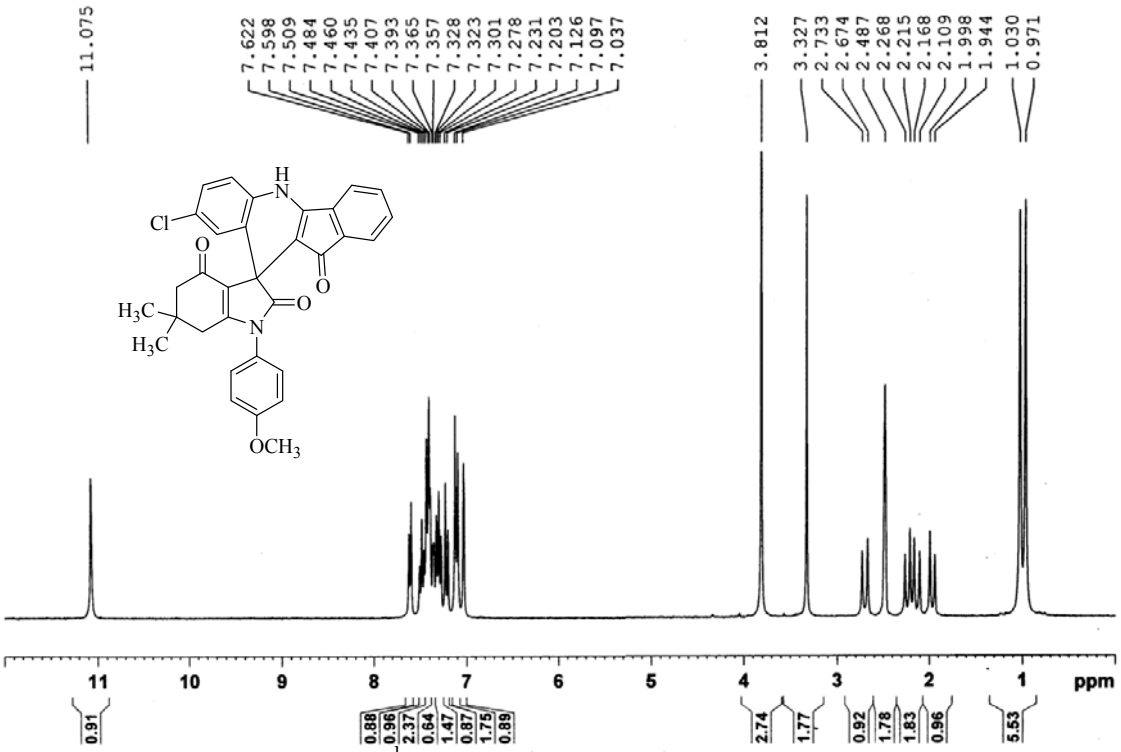
^{13}C NMR of compound **4ga**



^{1}H NMR of compound **4gb**



^{13}C NMR of compound **4gb**



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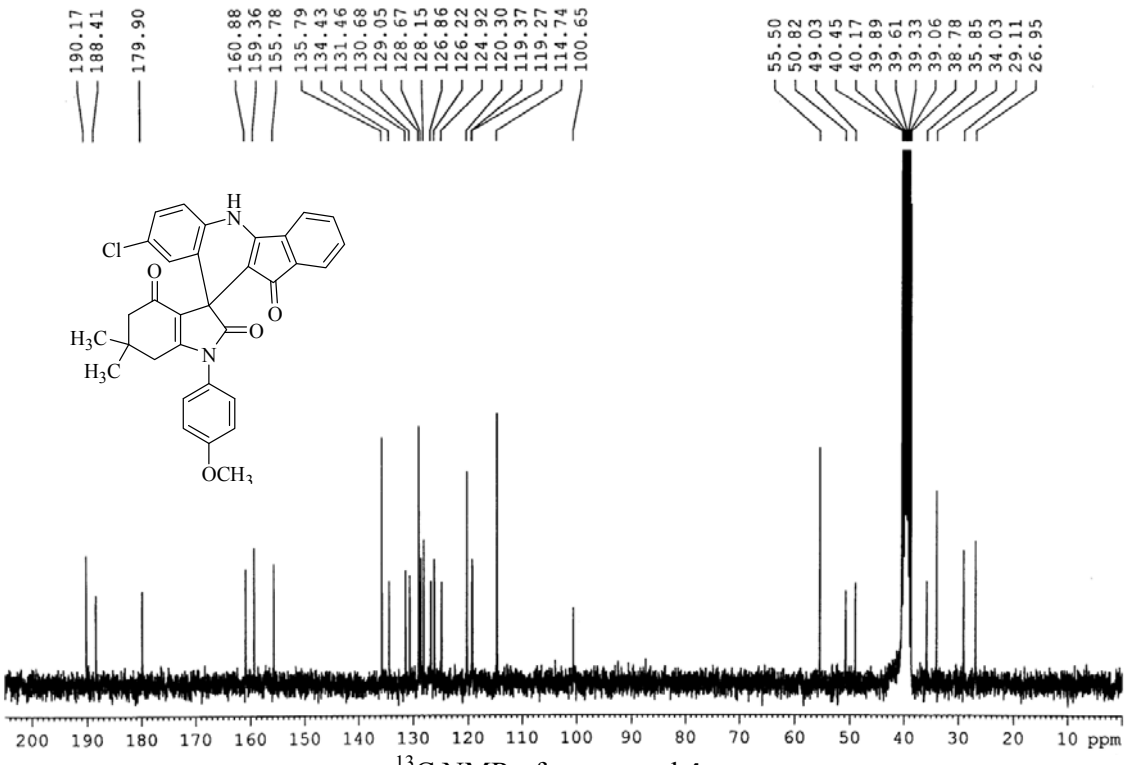
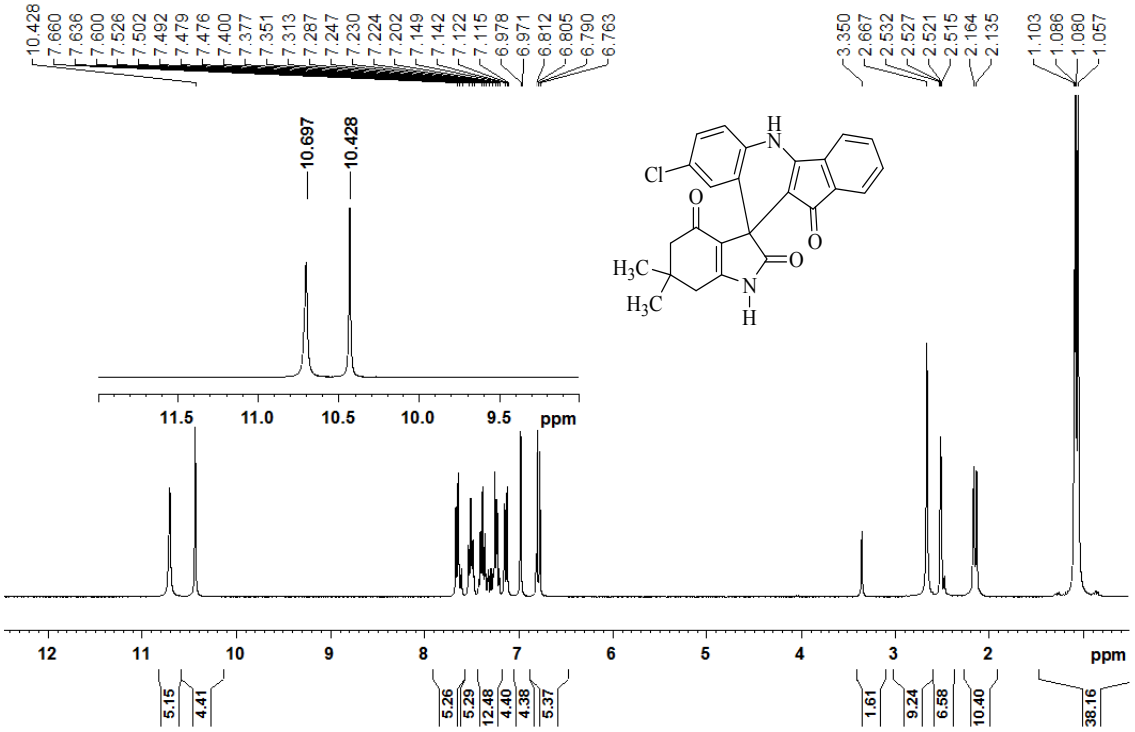
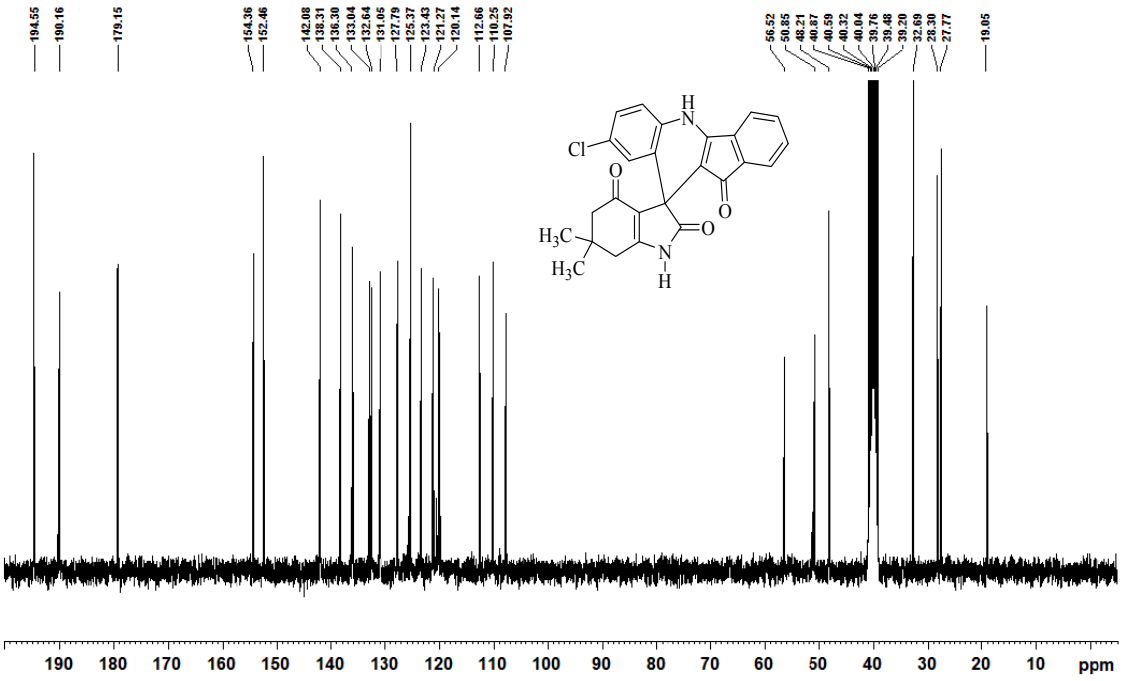


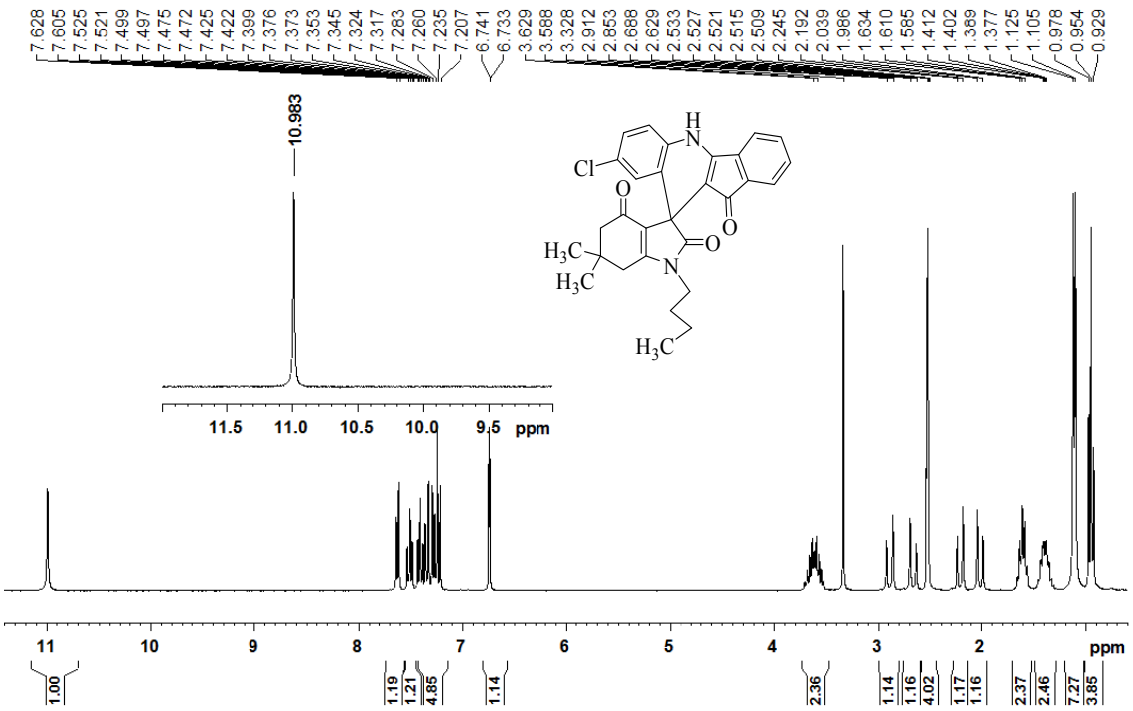
^{13}C NMR of compound **4gc**



^{1}H NMR of compound **4gd**



^{13}C NMR of compound **4gd**



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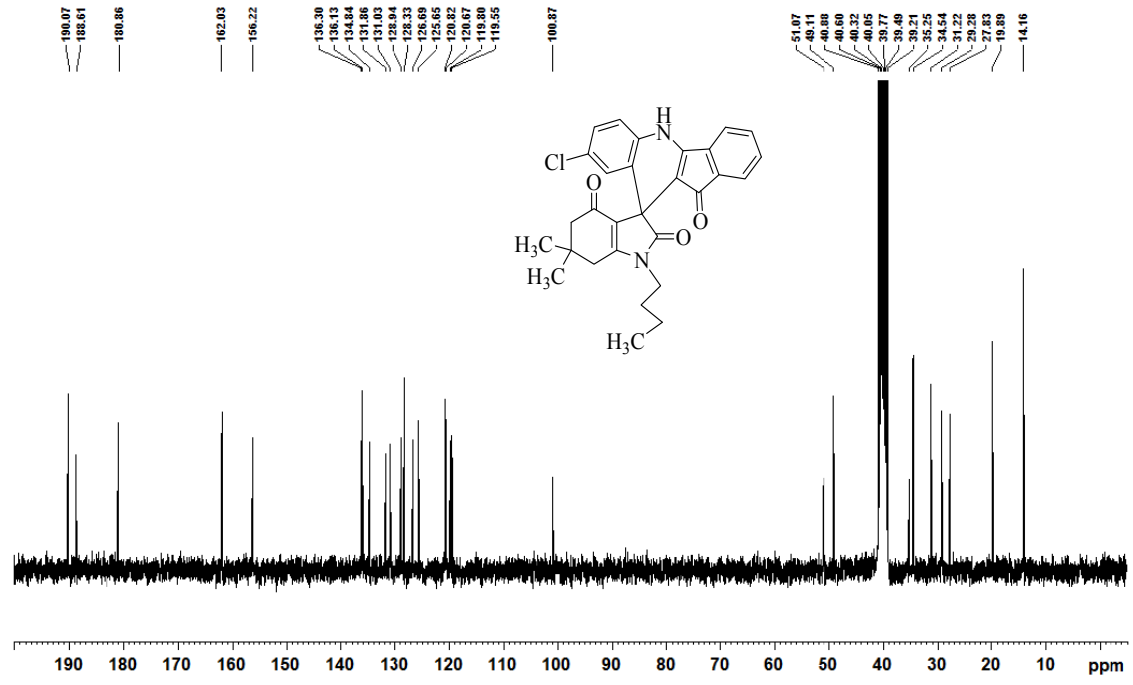
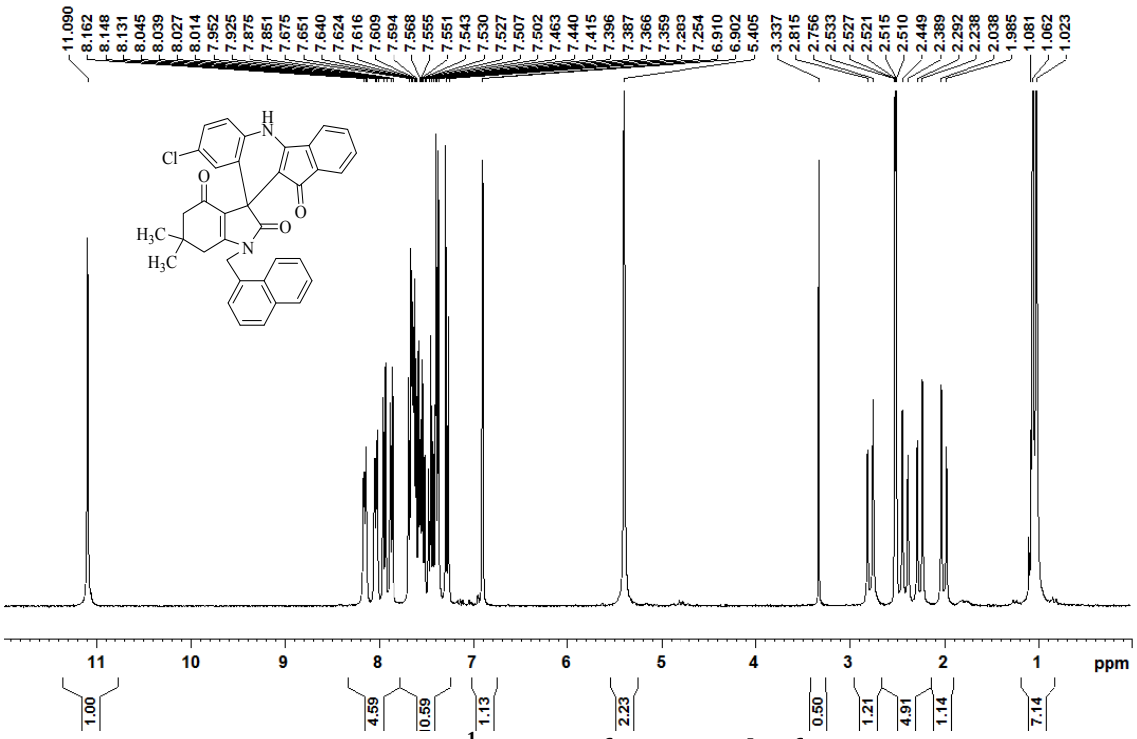
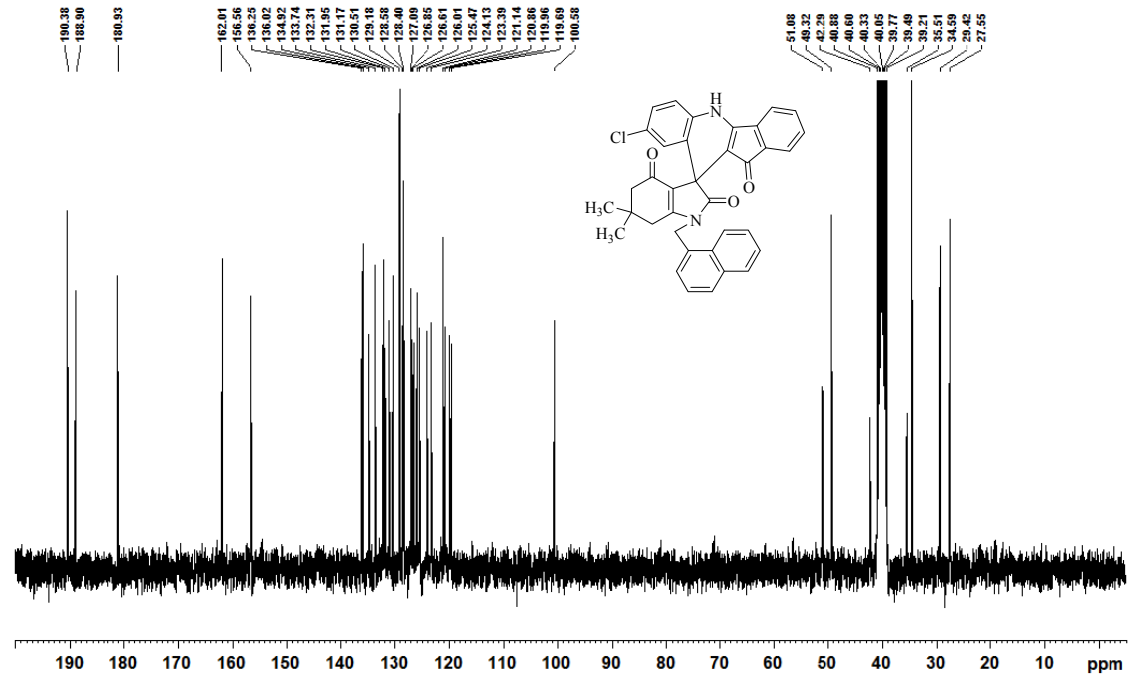


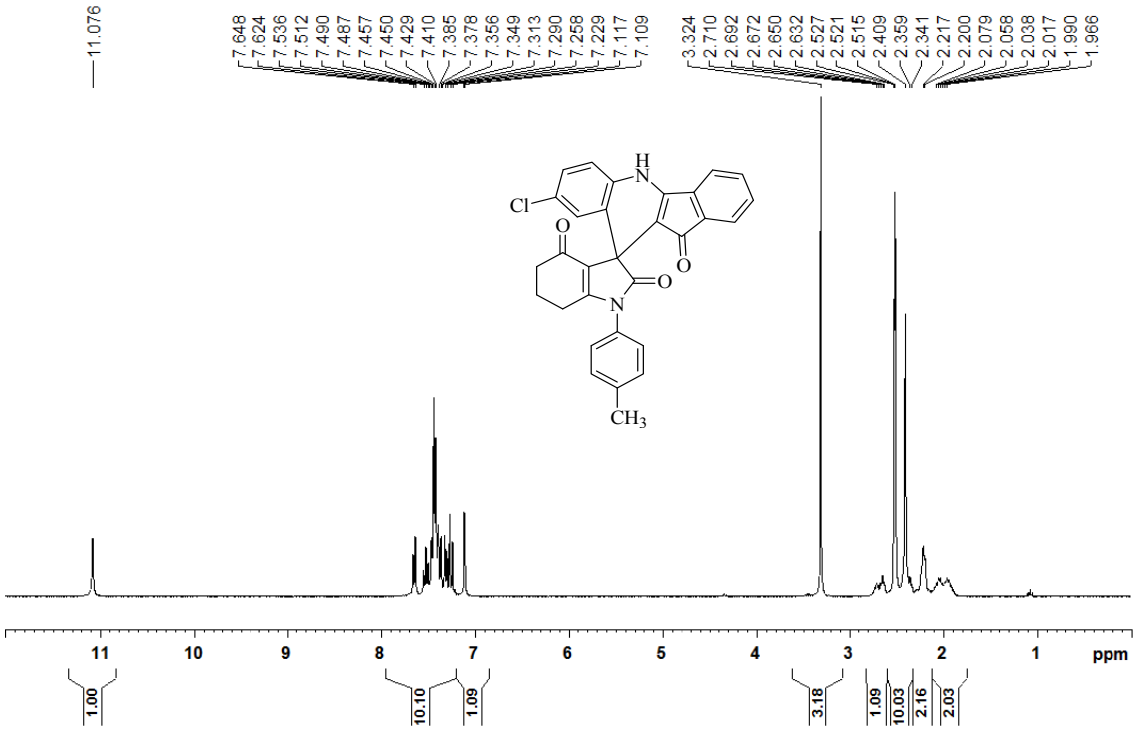
^{13}C NMR of compound **4ge**



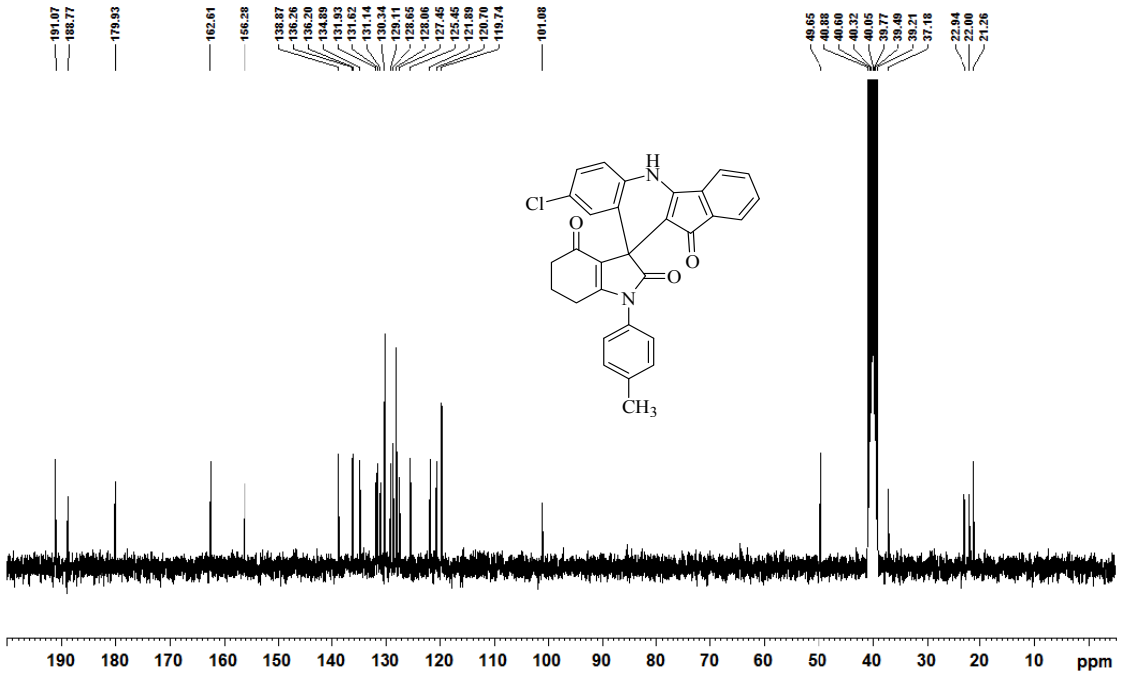
^{1}H NMR of compound 4gf



^{13}C NMR of compound 4gf



^{1}H NMR of compound **4ha**



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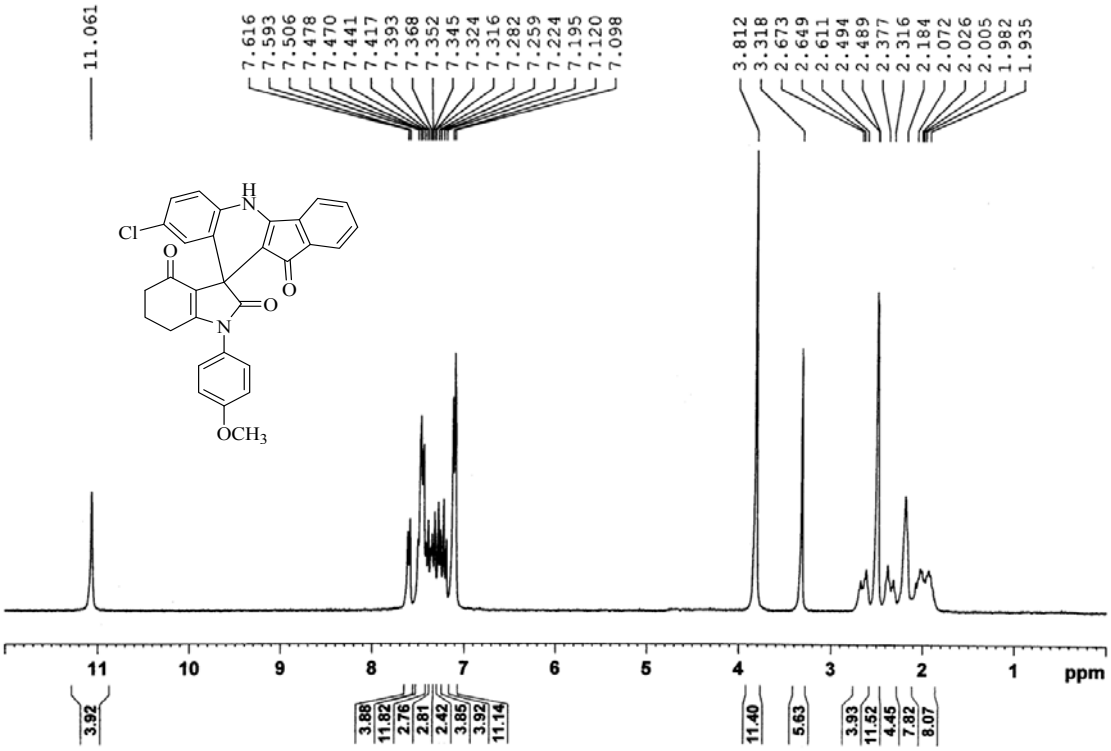

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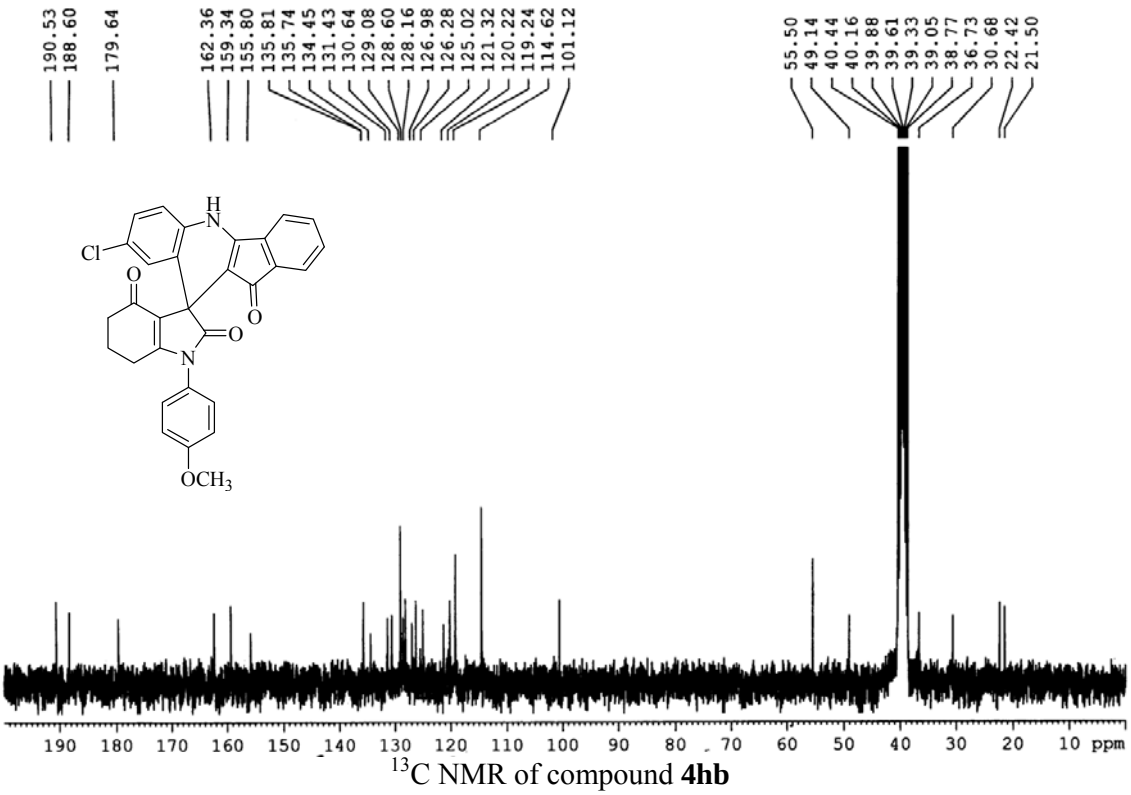

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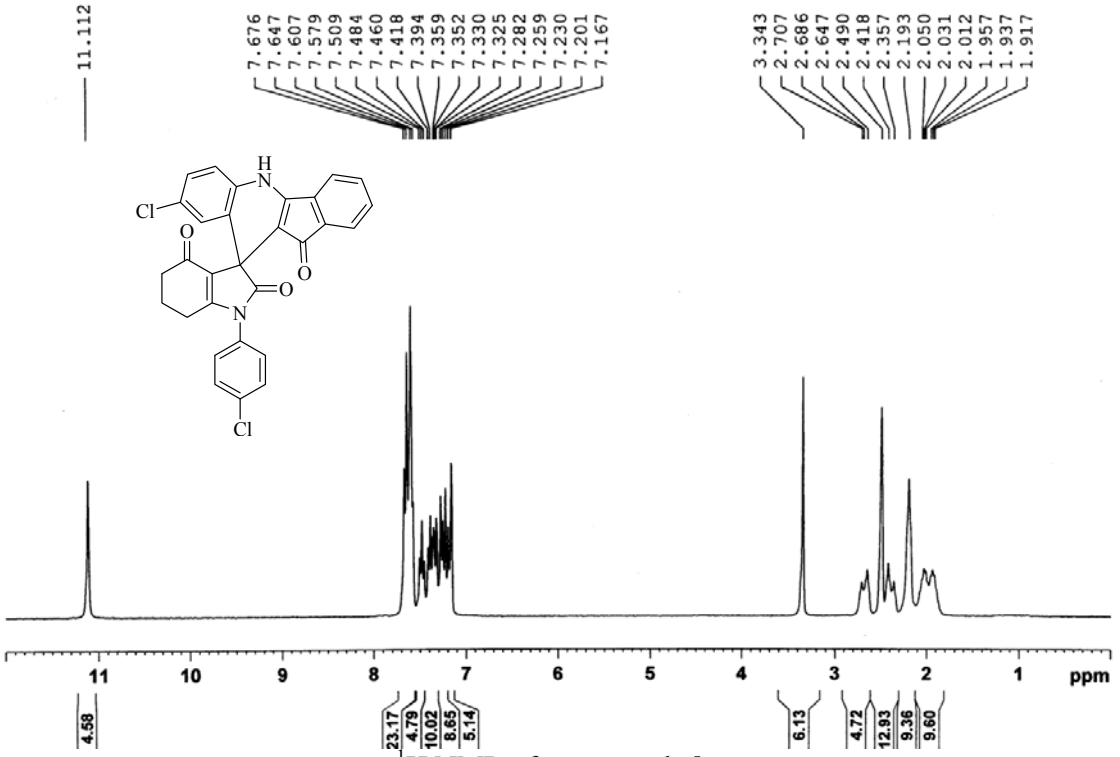
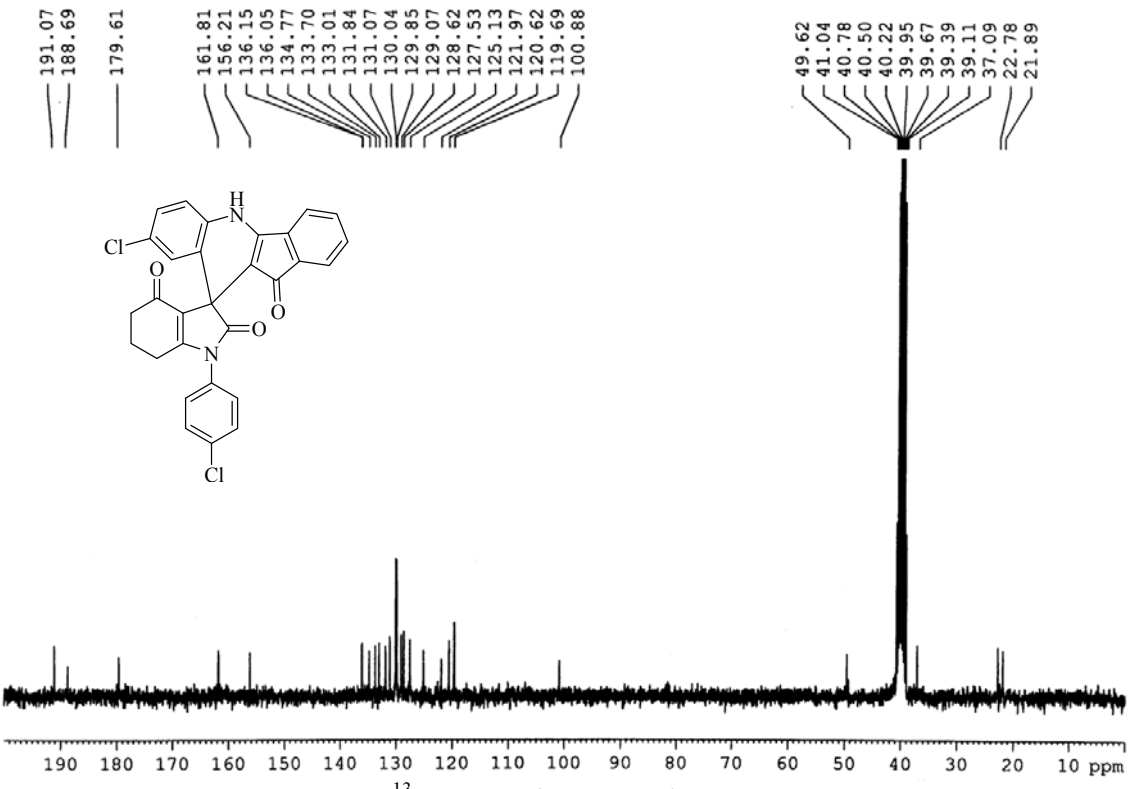
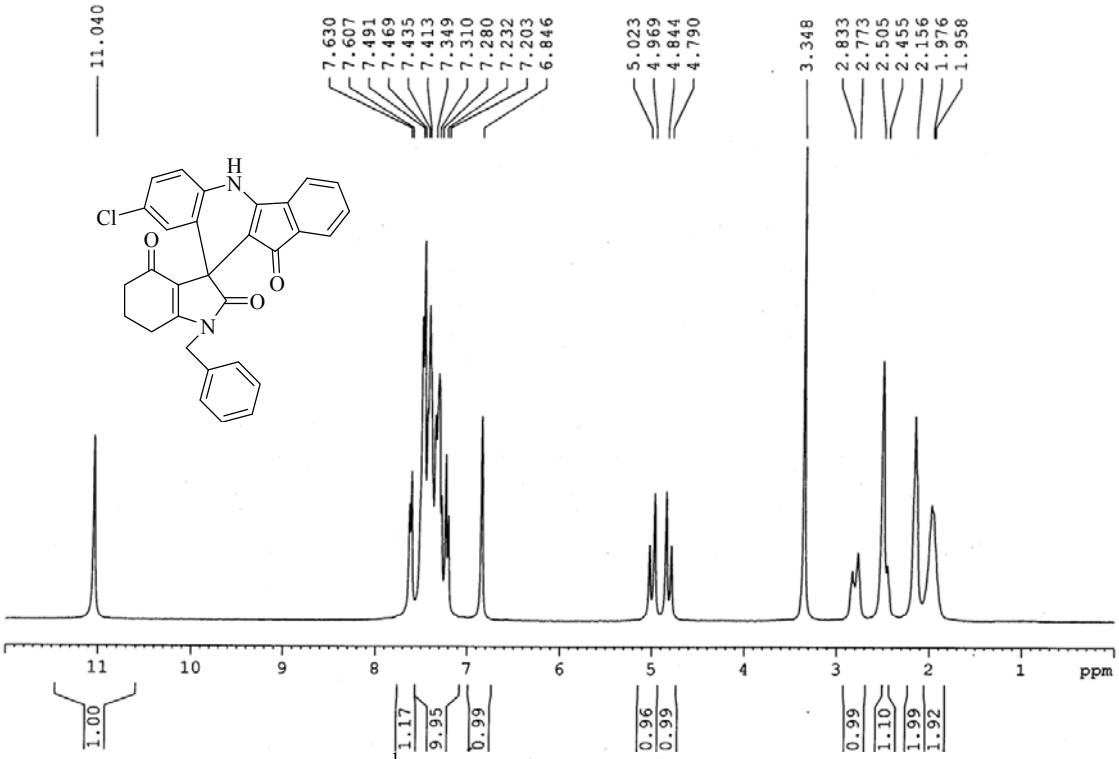


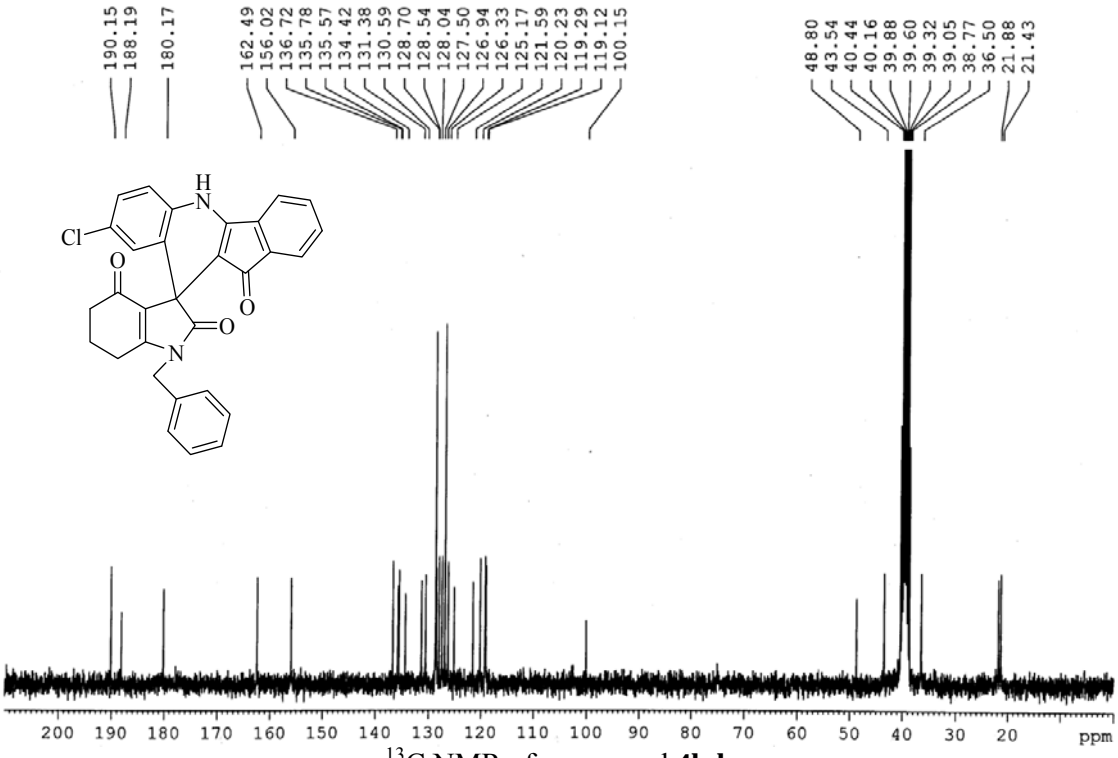
^{1}H NMR of compound **4hc**



^{13}C NMR of compound **4hc**



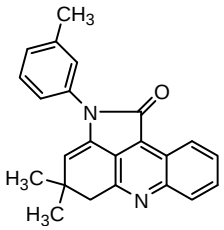
^{1}H NMR of compound **4hd**



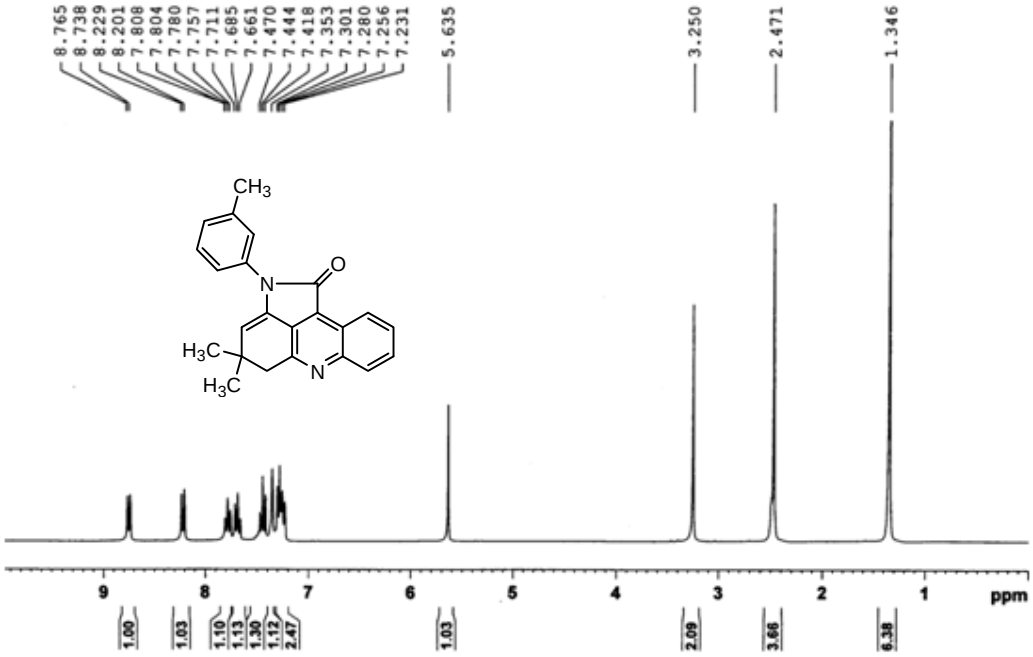
^{13}C NMR of compound **4hd**

The spectral and analytical data for the isolated product 4acSA and 4aiSA

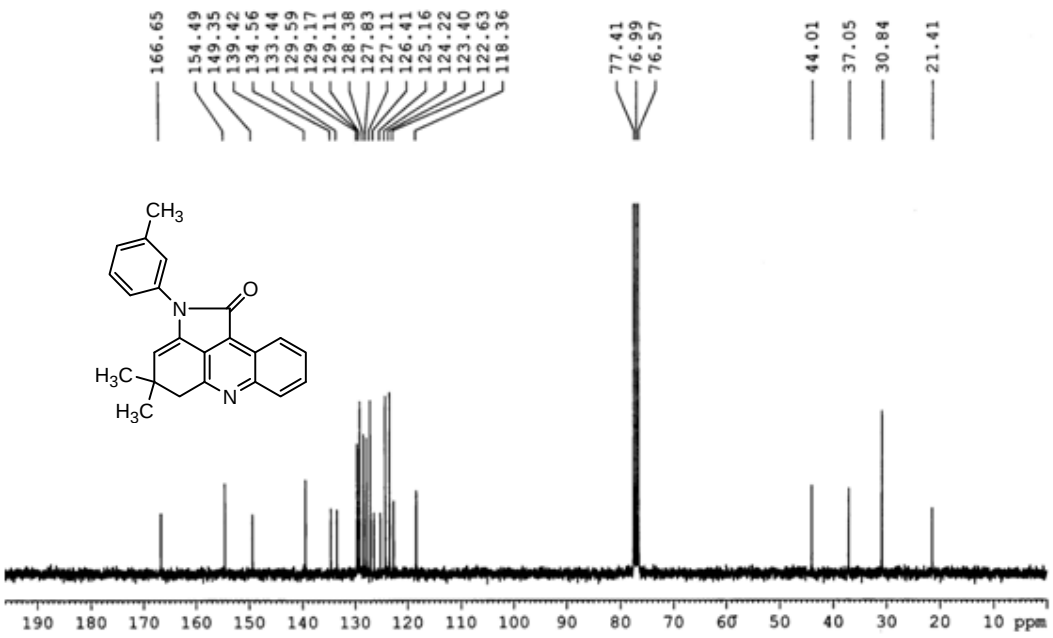
4,4-Dimethyl-2-m-tolyl-4,5-dihydro-2H-pyrrolo[2,3,4-kl]acridin-1-one:



Light yellow colored solid; Mp: 218-220 °C (EtOH); R_f [20 % EtOAc / petroleum ether (60-80°C)]: 0.65; IR (ν_{max}, KBr, cm^{-1}): 3077, 2961, 1717, 1479, 1345, 1158, 833, 742, 497; ^1H NMR (300 MHz, $CDCl_3$) δ_H: 8.75 (d, *J* = 8.1 Hz, 1H, ArH), 8.22 (d, *J* = 8.4 Hz, 1H, ArH), 7.78 (t, *J* = 7.8 Hz, 1H, ArH), 7.69 (t, *J* = 7.8 Hz, 1H, ArH), 7.44 (t, *J* = 7.8 Hz, 1H, ArH), 7.35 (s, 1H, ArH), 7.23-7.30 (m, 2H, ArH), 5.64 (s, 1H, CH), 3.25 (s, 2H, CH_2), 2.47 (s, 3H, CH_3), 1.35 (s, 6H, 2xCH_3); ^{13}C NMR (75 MHz, $CDCl_3$) δ_C: 166.7, 154.5, 149.4, 139.4, 134.6, 133.4, 129.6, 129.2, 129.1, 128.4, 127.8, 127.1, 126.4, 125.2, 124.2, 123.4, 122.6, 118.4, 44.0, 37.1, 30.8, 21.4; Anal. Calcd for $C_{23}H_{20}N_2O$: C, 81.15; H, 5.92; N, 8.23%. Found: C, 81.22; H, 5.94; N, 8.28%;

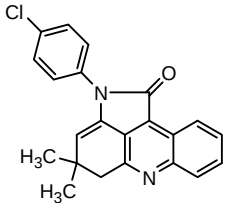


^1H NMR of compound **4acSA**

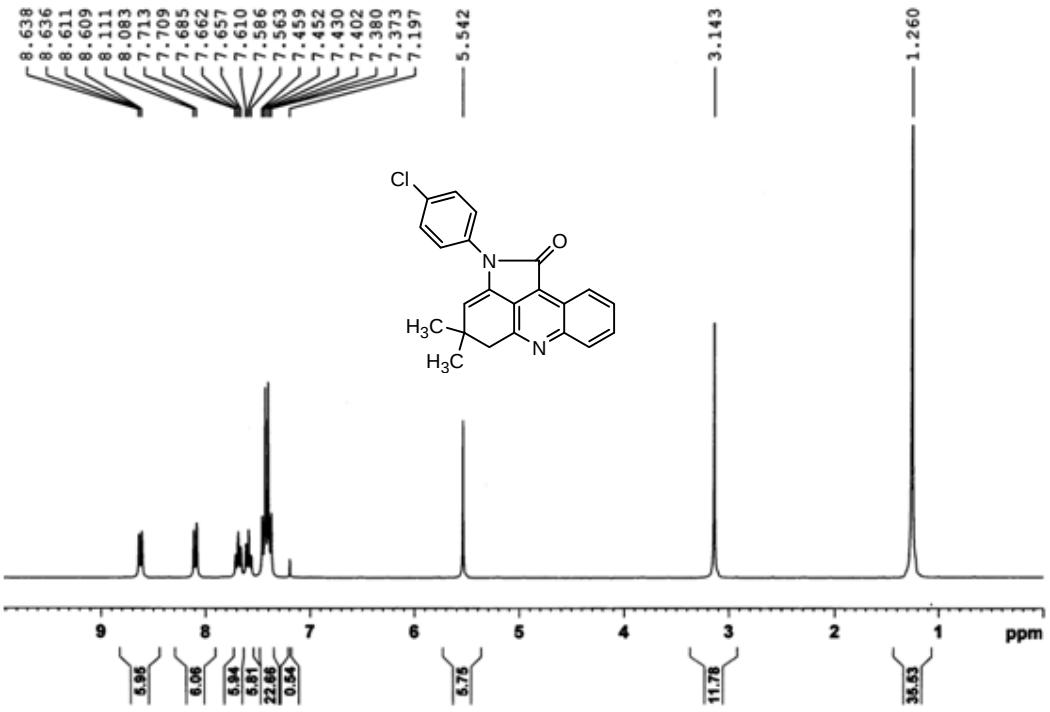


^{13}C NMR of compound **4acSA**

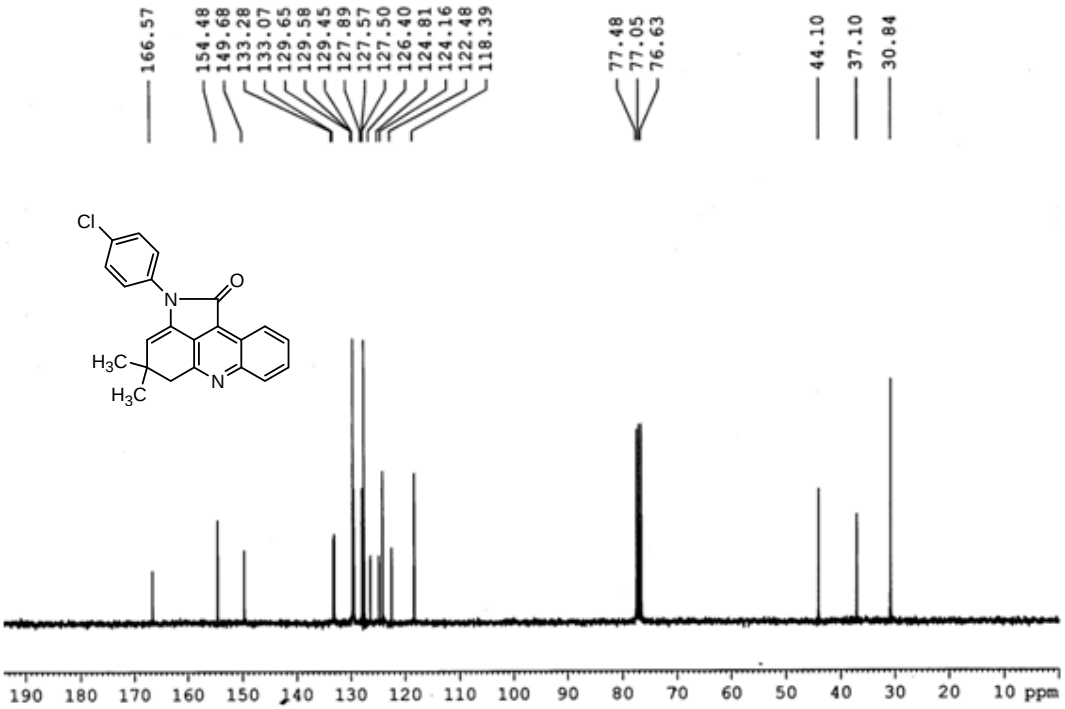
2-(4-Chloro-phenyl)-4,4-dimethyl-4,5-dihydro-2H-pyrrolo[2,3,4-kl]acridin-1-one:



Light yellow colored solid; Mp: 189-191 °C (EtOH); R_f [20 % EtOAc / petroleum ether (60-80°C)]: 0.60; IR (ν_{max}, KBr, cm^{-1}): 3087, 2971, 1724, 1481, 1365, 1160, 837, 745, 499; ^{1}H NMR (300 MHz, $CDCl_3$) δ_H: 8.62 (dd, *J* = 8.1 Hz, *J* = 0.6 Hz, 1H, ArH.), 8.10 (d, *J* = 8.4 Hz, 1H, ArH), 7.69 (dt, *J* = 7.8 Hz, *J* = 1.2 Hz, 1H, ArH), 7.59 (t, *J* = 7.2 Hz, 1H, ArH), 7.42 (q, *J* = 7.8 Hz, 4H, ArH), 5.54 (s, 1H, CH), 3.14 (s, 2H, CH_2), 1.26 (s, 6H, 2xCH_3); ^{13}C NMR (75 MHz, $CDCl_3$) δ_C: 166.6, 154.5, 149.7, 133.3, 133.1, 129.7, 129.6, 129.5, 127.9, 127.6, 127.5, 126.4, 124.8, 124.2, 122.5, 118.4, 44.1, 37.1, 30.8; Anal. Calcd for $C_{22}H_{17}ClN_2O$: C, 73.23; H, 4.75; N, 7.76%. Found: C, 73.29; H, 4.77; N, 7.72%;



^{1}H NMR of compound **4aiSA**



^{13}C NMR of compound **4aiSA**