

Supporting Information

Stereoselective Construction of Functionalized Tetra and Pentacyclic Hybrid Coumarinopyranpyrazole / Pyrimidinedione / Coumarin Scaffolds Using Solid State Melt Reaction

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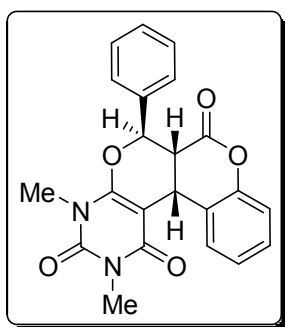
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Experimental Section

General Remarks: Melting points were recorded on a Superfit (India) capillary melting point apparatus and were uncorrected. IR spectra were recorded on a Bruker-FT-IR spectrometer using solid samples as KBr plates. For compounds ^1H NMR (300 MHz, CDCl_3) and ^{13}C NMR (75 MHz, 100 MHz, CDCl_3) spectra were recorded in deuteriochloroform (CDCl_3) on a Bruker 300 MHz spectrometer using tetramethylsilane (TMS, $\delta = 0$) as an internal standard at room temperature. Mass spectra were recorded on Electrospray Ionisation Method with Thermo Finnigan mass spectrometer. The X-ray diffraction measurements were carried on a Bruker AXS SMART APEX 2 diffractometer.

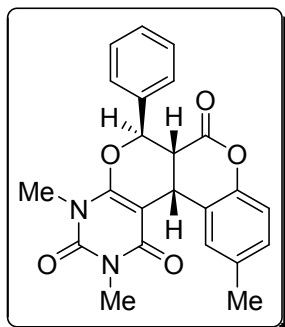
Representative procedure for the synthesis of tetracyclic coumarinopyranpyrimidinediones: A mixture of (*E*)-2-formylphenyl cinnamate (**2a**, 0.252g, 1mmol) and *N,N*-dimethylbarbituric acid (**3a**, 0.156g, 1mmol) was placed in a round bottom flask and melted at 180 °C for 1 h. After completion of the reaction as indicated by TLC, the crude product was washed with 5 mL of ethylacetate and hexane mixture (1:49 ratio) which successfully provided the pure product **5a** in 98% yield, as colorless solid.

4,6-dimethyl-9-phenyl-8,12-dioxo-4,6-diazatetracyclo[8.8.0.0^{2,7}.0^{13,18}]octadeca-2(7),13,15,17-tetraene-3,5,11-trione (5a**):**



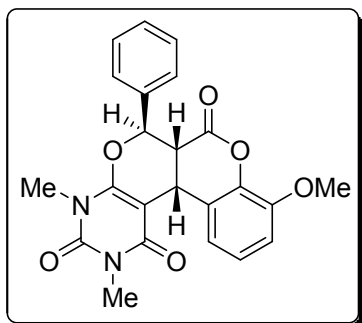
Yield: 98%; Colourless solid; mp:238-240 °C; ^1H NMR (300 MHz, CDCl_3): δ 3.32 - 3.33 (m, 1H), 3.37 (s, 3H), 3.44 (s, 3H), 4.60 (d, $J=4.8\text{Hz}$, 1H), 5.30 (d, $J=9.6\text{Hz}$, 1H), 7.07-7.46 (m, 9H); ^{13}C NMR (75 MHz): δ 28.3, 28.9, 30.5, 45.4, 77.8, 86.1, 116.9, 123.5, 125.4, 126.4, 128.0, 129.1, 129.3, 130.0, 134.4, 149.3, 150.7, 156.2, 162.8, 164.5; IR (KBr): 1725, 1703, 1642 cm^{-1} ; MS (m/z): 391 (M^++1); Elemental Analysis for $\text{C}_{22}\text{H}_{18}\text{N}_2\text{O}_5$: Calculated: C, 67.69; H, 4.65; N, 7.18; Found: 67.58; H, 4.56; N, 7.26.

4,6,16-trimethyl-9-phenyl-8,12-dioxo-4,6-diazatetracyclo[8.8.0.0^{2,7}.0^{13,18}]octadeca-2(7),13,15,17-tetraene-3,5,11-trione (5b):



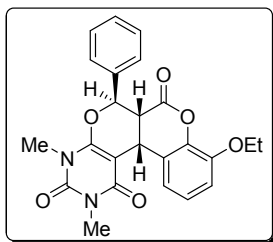
Yield: 96%; mp: 249-251°C; ¹H NMR (300 MHz, CDCl₃): δ 2.33 (s, 3H), 3.26 (dd, *J*=4.8, 9.9 Hz, 1H), 3.37 (s, 3H), 3.47 (s, 3H), 4.59 (d, *J*=4.2 Hz, 1H), 5.25 (d, *J*=9.9 Hz, 1H), 6.98-7.44 (m, 8H); ¹³C NMR (75 MHz): δ 21.0, 28.4, 28.9, 30.5, 45.6, 77.8, 86.1, 116.7, 123.4, 126.5, 129.1, 129.8, 129.9, 130.0, 134.4, 135.2, 147.2, 150.8, 156.2, 162.8, 164.7; IR (KBr): 1732, 1709, 1632 cm⁻¹; MS (*m/z*): 405 (*M*⁺+1); Elemental Analysis for C₂₃H₂₀N₂O₅: Calculated: C 68.31; H, 4.98; N, 6.93; Found: C 68.22; H, 4.86; N, 7.04.

14-methoxy-4,6-dimethyl-9-phenyl-8,12-dioxo-4,6-diazatetracyclo[8.8.0.0^{2,7}.0^{13,18}]octadeca-2(7),13,15,17-tetraene-3,5,11-trione (5c):



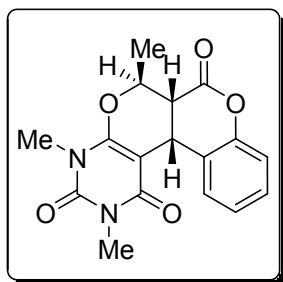
Yield: 93%; mp: 250-252°C; ¹H NMR (300 MHz, CDCl₃): δ 3.29-3.33 (m, 1H), 3.38 (s, 3H), 3.43 (s, 3H), 3.91 (s, 3H), 4.59 (d, *J*= 4.8 Hz, 1H), 5.35 (d, *J*=9.6 Hz, 1H), 6.85-7.45 (m, 8H); ¹³C NMR (75 MHz): δ 28.3, 28.9, 30.6, 45.1, 56.2, 77.7, 86.1, 111.9, 121.0, 124.6, 125.1, 126.4, 128.0, 128.6, 129.1, 129.9, 134.5, 138.6, 147.6, 150.7, 156.2, 162.7, 163.9; IR (KBr): 1748, 1710, 1644 cm⁻¹; MS (*m/z*): 421 (*M*⁺+1); Elemental Analysis for C₂₃H₂₀N₂O₆: Calculated: C 65.71; H, 4.79; N, 6.66; Found: C 65.71; H, 4.79; N, 6.66.

14-ethoxy-4,6-dimethyl-9-phenyl-8,12-dioxo-4,6-diazatetracyclo[8.8.0.0^{2,7}.0^{13,18}]octadeca-2(7),13,15,17-tetraene-3,5,11-trione (5d)



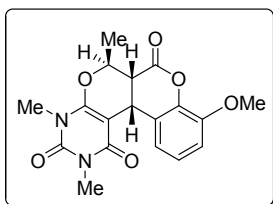
Yield: 91%; mp: 252-254 °C; ^1H NMR (300 MHz, CDCl_3): δ 1.46 (t, $J=6.9\text{Hz}$, 3H), 3.27-3.32 (m, 1H), 3.37 (s, 3H), 3.43 (s, 3H), 4.13 (q, $J=6.3\text{Hz}$, 2H), 4.57 (d, $J=4.5\text{Hz}$, 1H), 5.36 (d, $J=9.3\text{Hz}$, 1H); 6.82-7.44 (m, 8H); ^{13}C NMR (75 MHz): δ 14.7, 28.3, 28.9, 30.6, 45.1, 65.0, 77.7, 86.1, 113.4, 121.0, 124.7, 125.1, 126.4, 129.1, 129.9, 134.5, 139.0, 146.9, 150.8, 156.1, 162.7, 164.2; IR (KBr): 1726, 1709, 1637 cm^{-1} ; MS (m/z): 435 (M^++1); Elemental Analysis for $\text{C}_{24}\text{H}_{22}\text{N}_2\text{O}_6$: Calculated: C 66.35; H, 5.10; N, 6.45; Found: C 66.28; H, 5.02; N, 6.56.

4,6,9-trimethyl-8,12-dioxa-4,6-diazatetracyclo[8.8.0.0^{2,7}.0^{13,18}]octadeca-2(7),13,15,17-tetraene-3,5,11-trione (5e):



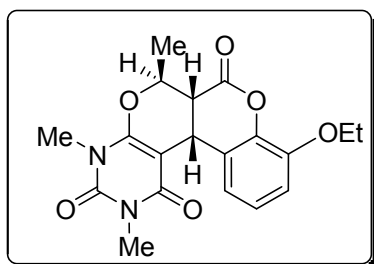
Yield: 92%; Colourless solid; mp: 244 – 246 °C; ^1H NMR (300 MHz, CDCl_3): δ 1.57 (d, $J=6.3\text{Hz}$, 3H), 2.96 (dd, $J=5.1, 9.9\text{Hz}$, 1H), 3.36 (s, 3H), 3.43 (s, 3H), 4.37-4.43 (m, 1H), 4.58 (d, $J=4.8\text{Hz}$, 1H), 7.03-7.31 (m, 4H); ^{13}C NMR (75 MHz): δ 18.8, 28.3, 28.7, 30.0, 44.7, 72.2, 85.7, 116.9, 123.7, 125.4, 129.0, 129.5, 149.1, 150.8, 156.0, 162.9, 165.6; IR (neat): ν 1785, 1576, 1530 cm^{-1} ; MS (m/z): 329 (M^++1); Elemental Analysis for $\text{C}_{17}\text{H}_{16}\text{N}_2\text{O}_5$: Calculated: C 62.19; H, 4.91; N, 8.53; Found: C 62.08; H, 4.82; N, 8.45.

14-methoxy-4,6,9-trimethyl-8,12-dioxa-4,6-diazatetracyclo[8.8.0.0^{2,7}.0^{13,18}]octadeca-2(7),13,15,17-tetraene-3,5,11-trione (5f):



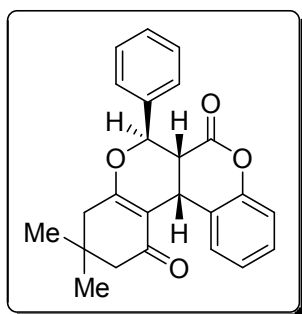
Yield: 90%; Colourless solid; mp: 228 – 230 °C; ^1H NMR (300 MHz, CDCl_3): δ 1.59 (d, $J=6.3\text{Hz}$, 3H), 2.97 (dd, $J=4.8, 10.2\text{Hz}$, 1H), 3.37 (s, 3H), 3.44 (s, 3H), 3.90 (s, 3H), 4.38-4.48 (m, 1H), 4.59 (d, $J=4.8\text{ Hz}$, 1H), 6.74-7.12 (m, 3H); ^{13}C NMR (75 MHz): δ 28.3, 28.7, 30.2, 44.5, 56.1, 72.2, 85.7, 111.6, 118.6, 120.4, 124.8, 125.2, 138.4, 147.4, 150.7, 156.0, 162.8, 165.0; IR (neat): ν 1729, 1578, 1546 cm^{-1} ; MS (m/z): 359 (M^++1); Elemental Analysis for $\text{C}_{18}\text{H}_{18}\text{N}_2\text{O}_6$: Calculated: C 60.33; H, 5.06; N, 7.82; Found: C 60.24; H, 4.96; N, 7.94.

14-ethoxy-4,6,9-trimethyl-8,12-dioxa-4,6-diazatetracyclo[8.8.0.0^{2,7}.0^{13,18}]octadeca-2(7),13,15,17-tetraene-3,5,11-trione (5g):



Yield: 91%; Colourless solid; mp: 231 – 233 °C; ^1H NMR (300 MHz, CDCl_3): δ 1.46 (t, $J = 6.9\text{Hz}$, 3H), 1.58 (d, $J = 6\text{ Hz}$, 3H), 2.94 (dd, $J = 4.8, 9.9\text{ Hz}$, 1H), 3.37 (s, 3H), 3.42 (s, 3H), 4.10 (q, $J=6.9\text{ Hz}$, 2H), 4.38-4.47 (m, 1H), 4.57 (d, $J=4.5\text{ Hz}$, 1H), 6.72 (d, $J=7.8\text{Hz}$, 1H), 6.87 (d, $J=8.4\text{Hz}$, 1H), 7.05 (t, $J=7.8\text{Hz}$, 1H); ^{13}C NMR (75 MHz): δ 14.7, 18.9, 28.3, 28.7, 30.2, 44.6, 64.9, 72.2, 85.7, 113.1, 120.4, 124.8, 125.2, 138.8, 146.8, 150.8, 156.0, 162.8, 165.2; IR (neat): ν 1719, 1583, 1549 cm^{-1} ; MS (m/z): 373 (M^++1); Elemental Analysis for $\text{C}_{19}\text{H}_{20}\text{N}_2\text{O}_6$: Calculated: C 61.28; H, 5.41; N, 7.52; Found: C 61.19; H, 5.30; N, 7.63.

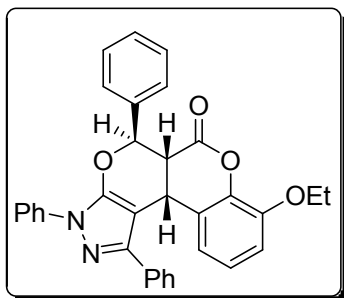
Methyl 4,6-dimethyl-12-[(4-methylbenzene)sulfonyl]-9-(3,4-dimethoxyphenyl)-3,5-dioxo-8-oxa-4,6,12-triazatetracyclo[8.8.0.0^{2,7}.0^{13,18}]octadeca-2(7),13,15,17-tetraene-10-carboxylate (5h):



Yield: 90%; Colourless solid; mp: 198 – 200 °C; ^1H NMR (300 MHz, CDCl_3): δ 1.16(s, 3H), 1.18 (s, 3H), 2.40 (d, $J = 15.6\text{ Hz}$, 2H), 2.50 (d, $J=16.8\text{Hz}$, 2H), 3.18(dd, $J=5.1, 9.6\text{ Hz}$, 1H),

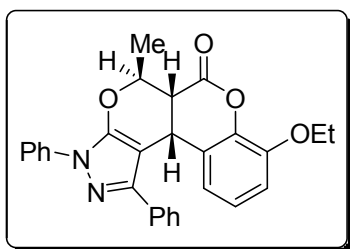
4.52 (d, $J=3.9\text{Hz}$, 1H), 5.04 (t, $J=9.9\text{ Hz}$, 1H); 6.97-7.41 (m, 9H); ^{13}C NMR (75 MHz): δ 28.4, 29.6, 32.3, 42.3, 45.5, 50.7, 75.5, 109.4, 116.9, 124.5, 125.2, 125.9, 126.6, 128.0, 128.5, 128.8, 129.5, 135.6, 149.5, 165.2, 170.5, 197.2; IR (neat): ν 1743, 1598, 1529 cm^{-1} ; MS (m/z): 375 (M^++1).

11,14,16-triphenyl-8,12-dioxa-14,15-diazatetracyclo[8.7.0.0^{2,7}.0^{13,17}]heptadeca-2,4,6,13(17),15-pentaen-9-one (8a):



Yield: 97%; Colourless solid; mp: 228 – 230 °C; ^1H NMR (300 MHz, CDCl_3): δ 1.47 (t, $J=6.9\text{ Hz}$, 3H), 3.49 (dd, $J=4.5, 5.4\text{ Hz}$, 1H), 4.13 (q, $J=6.9\text{ Hz}$, 1H), 4.78 (s, 1H), 5.39 (d, $J=5.7\text{ Hz}$, 1H), 6.70-7.88 (m, 18H); ^{13}C NMR (CDCl_3 , 75 MHz): δ 14.8, 29.6, 32.2, 46.6, 65.0, 94.0, 113.6, 120.6, 121.4, 124.9, 125.2, 126.2, 126.6, 126.7, 128.3, 128.6, 128.9, 129.0, 129.5, 133.1, 135.8, 138.3, 139.3, 147.1, 148.1, 149.7, 165.1; IR (neat): ν 1734, 1583, 1537 cm^{-1} ; MS (m/z): 516 (M^++1); Elemental Analysis for $\text{C}_{33}\text{H}_{26}\text{N}_2\text{O}_4$: Calculated: C 77.03; H, 5.09; N, 5.44; Found: C 76.98; H, 5.00; N, 5.35.

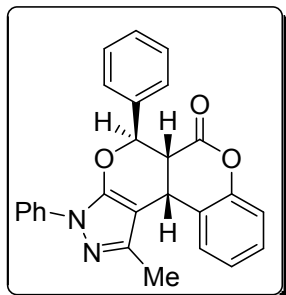
6-ethoxy-11-methyl-14,16-diphenyl-8,12-dioxa-14,15-diazatetracyclo[8.7.0.0^{2,7}.0^{13,17}]heptadeca-2,4,6,13(17),15-pentaen-9-one (8b):



Yield: 90%; Colourless solid; mp: 226 – 228 °C; ^1H NMR (300 MHz, CDCl_3): δ 1.47 (t, $J=6.0\text{ Hz}$, 1H), 1.59 (t, $J=6.0\text{ Hz}$, 3H), 3.19-3.22 (m, 1H), 4.11 (q, $J=6.3\text{ Hz}$, 1H), 4.44 (d, $J=9.6\text{ Hz}$, 1H), 4.82 (d, $J=4.2\text{ Hz}$, 1H), 6.68-7.87 (m, 13H); ^{13}C NMR (CDCl_3 , 75 MHz): δ 14.7, 19.1, 32.0, 45.9, 64.9, 71.4, 93.5, 113.2, 120.7, 121.1, 125.0, 125.4, 126.2, 126.3, 128.2, 128.7, 129.0, 133.2, 138.4, 139.0, 147.0, 147.8, 149.8, 166.3; IR (neat): ν 1720, 1569,

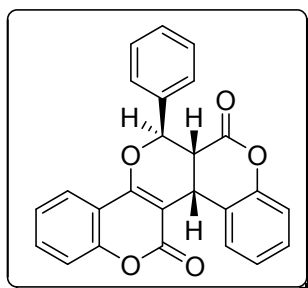
1544cm⁻¹; MS (m/z): 454 (M⁺+1); Elemental Analysis for C₂₈H₂₄N₂O₄: Calculated: C 74.32; H, 5.35; N, 6.19; Found: C 74.24; H, 5.26; N, 6.28.

16-methyl-11,14-diphenyl-8,12-dioxa-14,15-diazatetracyclo[8.7.0.0^{2,7}.0^{13,17}]heptadeca-2,4,6,13(17),15-pentaen-9-one(8c):



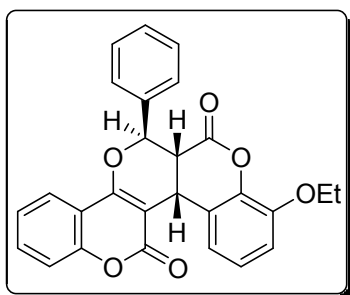
Yield: 92%; Colourless solid; mp: 233 – 235 °C; ¹H NMR (300 MHz, CDCl₃): δ 1.64 (s, 1H), 1.98 (bs, 3H), 3.37 (s, 1H), 4.03 (bs, 1H), 7.10-7.80 (m, 14H); ¹³CNMR (CDCl₃, 75 MHz): δ 13.8, 29.5, 44.7, 77.7, 94.3, 117.2, 120.5, 122.9, 124.6, 125.2, 125.8, 128.8, 129.0, 129.4, 129.8, 137.2, 138.2, 146.3, 148.8, 150.2, 166.3; IR (neat): ν 1733, 1567, 1539 cm⁻¹; MS (m/z): 409 (M⁺+1); Elemental Analysis for C₂₆H₂₀N₂O₃: Calculated: C 76.45; H, 4.94; N, 6.86; Found: C 76.55; H, 4.99; N, 6.98.

12-phenyl-9,13,21-trioxapentacyclo[12.8.0.0^{2,11}.0^{3,8}.0^{15,20}]docosa-1(14),3,5,7,15(20),16,18-heptaene-10,22-dione (10a):



Yield: 96%; Colourless solid; mp: 219 – 221 °C; ¹H NMR (300 MHz, CDCl₃): δ 3.33 (t, *J* = 11.1Hz, 1H), 4.50 (d, *J*=13.2Hz, 1H), 5.35 (d, *J*=10.2Hz, 1H), 7.09-7.83 (m, 13H); ¹³C NMR (75 MHz): δ 33.1, 46.7, 78.9, 99.6, 116.7, 117.0, 123.2, 124.2, 124.7, 125.5, 128.2, 128.6, 129.0, 129.5, 132.7, 132.8, 136.5, 151.3, 152.9, 161.7, 163.0, 166.3; IR (neat): ν 1735, 1572, 1540 cm⁻¹; MS (m/z): 397 (M⁺+1).

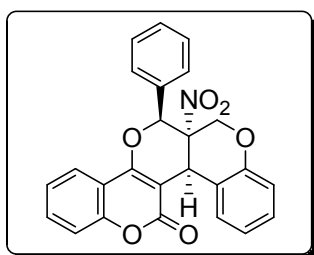
7-ethoxy-12-phenyl-9,13,21-trioxapentacyclo[12.8.0.0^{2,11}.0^{3,8}.0^{15,20}]docosa-1(14),3,5,7,15(20),16,18-heptaene-10,22-dione (10b):



Yield: 92%; Colourless solid; mp: 222 – 224 °C; ^1H NMR (300 MHz, CDCl_3): δ 1.46 (t, $J=6.9\text{Hz}$, 3H), 3.40 (dd, $J = 4.2, 8.7\text{Hz}$, 1H), 4.14 (q, $J=6.6\text{Hz}$, 2H), 4.66 (d, $J=6.0\text{Hz}$, 1H), 5.38 (d, $J=12.3\text{Hz}$, 1H), 6.86-7.82(m, 12H); ^{13}C NMR (75 MHz): δ 14.7, 31.4, 45.0, 65.0, 75.9, 99.6, 113.2, 113.6, 114.7, 116.8, 120.8, 123.0, 124.1, 124.3, 125.2, 126.6, 128.2, 128.5, 129.0, 129.7, 132.7, 135.2, 139.2, 147.1, 153.0, 160.5; IR (neat): ν 1699, 1589, 1523 cm^{-1} ; MS (m/z): 441 (M^++1).

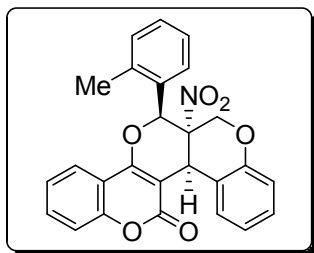
Representative procedure for synthesis of pentacyclic coumarinopyrancoumarins: A mixture of *O*-alkylated product (**11a**, 0.36g, 0.841 mmol) and 4-hydroxy-2*H*-chromen-2-one (**6b**, 0.12g, 0.841mmol) was placed in a round bottom flask and melted at 180 °C for 1 h. After completion of the reaction as indicated by TLC, the crude product was washed with 5 mL of ethylacetate and hexane mixture (1:49 ratio) which successfully provided the pure product **13a** as colorless solid.

12-phenyl-11-nitro-9,13,21-trioxapentacyclo[12.8.0.0^{2,11}.0^{3,8}.0^{15,20}]docosa-1(14),3,5,7,15(20),16,18-heptaen-22-one (13a)



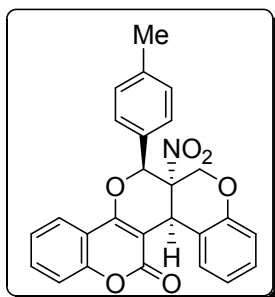
Yield: 90%; Colourless solid; mp: 228-230°C; ^1H NMR (300 MHz, CDCl_3): δ 4.54 (d, $J = 12.6\text{Hz}$, 1H), 4.77 (d, $J = 12.6\text{Hz}$, 1H), 5.24 (s, 1H), 5.83 (s, 1H), 6.63-7.83 (m, 13H); ^{13}C NMR (75 MHz): δ 38.1, 60.8, 79.9, 99.7, 116.7, 117.0, 123.3, 124.3, 124.7, 125.5, 128.2, 128.6, 129.0, 132.7, 132.8, 136.5, 156.3, 158.8, 161.7, 162.0, 164.3; IR (neat): ν 1692, 1580, 1538 cm^{-1} ; MS (m/z): 442 (M^++1); Elemental Analysis for $\text{C}_{26}\text{H}_{19}\text{NO}_6$: Calculated: C 70.74; H, 4.34; N, 3.17; Found: C 70.62; H, 4.24; N, 3.28.

12-(2-methylphenyl)-11-nitro-9,13,21-trioxapentacyclo[12.8.0.0^{2,11}.0^{3,8}.0^{15,20}]docosa-1(14),3,5,7,15(20),16,18-heptaen-22-one (13a)



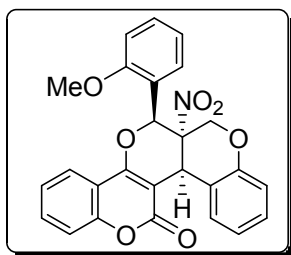
Yield: 92%; Colourless solid; mp: 239-241 °C; ¹H NMR (300 MHz, CDCl₃): δ 2.42 (s, 3H), 4.70 (d, *J* = 12.3 Hz, 1H), 4.87 (d, *J* = 12.3 Hz, 1H), 5.39 (s, 1H), 6.33 (s, 1H), 6.49-7.77 (m, 12H); ¹³C NMR (75 MHz): δ 19.5, 37.1, 63.7, 77.7, 86.0, 102.6, 114.3, 116.0, 116.6, 116.9, 121.3, 123.1, 124.2, 125.7, 127.0, 129.2, 129.6, 130.7, 131.0, 132.3, 132.8, 136.6, 151.9, 152.5, 158.7, 161.2; IR (neat): ν 1687, 1582, 1535cm⁻¹; MS (m/z): 442 (M⁺+1); Elemental Analysis for C₂₆H₁₉NO₆: Calculated: C 70.74; H, 4.34; N, 3.17; Found: C 70.62; H, 4.24; N, 3.28.

12-(4-methylphenyl)-11-nitro-9,13,21-trioxapentacyclo[12.8.0.0^{2,11}.0^{3,8}.0^{15,20}]docosa-1(14),3,5,7,15(20),16,18-heptaen-22-one (13b):



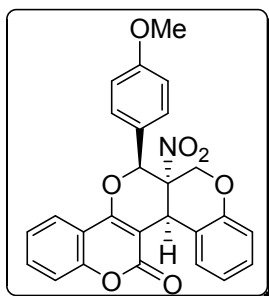
Yield: 90%; Colourless solid; mp: 241 -243 °C; ¹H NMR (300 MHz, CDCl₃): δ 2.37 (s, 3H), 4.54 (d, *J* = 12.9 Hz, 1H), 4.78 (d, *J* = 12.9 Hz, 1H), 5.24 (s, 1H), 5.82(s, 1H), 6.62-7.83 (m, 12H); ¹³C NMR (75 MHz): δ 21.2, 30.9, 38.3, 62.1, 81.2, 86.6, 103.2, 114.3, 116.0, 116.2, 116.6, 121.0, 122.9, 124.2, 126.6, 128.4, 129.4, 129.5, 132.8, 133.6, 140.2, 152.2, 152.5, 158.2, 160.5; IR (neat): ν 1684, 1569, 1598cm⁻¹; MS (m/z): 442 (M⁺+1); Elemental Analysis for C₂₆H₁₉NO₆: Calculated: C 70.74; H, 4.34; N, 3.17; Found: C 70.64; H, 4.26; N, 3.28.

12-(2-methoxyphenyl)-11-nitro-9,13,21-trioxapentacyclo[12.8.0.0^{2,11}.0^{3,8}.0^{15,20}]docosa-1(14),3,5,7,15(20),16,18-heptaen-22-one (13c):



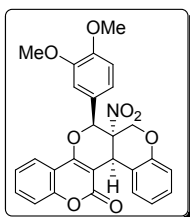
Yield: 89%; Colourless solid; mp: 236-238 °C; ^1H NMR (300 MHz, CDCl_3): δ 3.90 (s, 3H), 4.54 (d, $J = 11.7$ Hz, 1H), 4.86 (d, $J = 11.7$ Hz, 1H), 5.38 (s, 1H), 6.29-7.80 (m, 12H); ^{13}C NMR (75 MHz): δ 34.7, 55.5, 65.4, 74.8, 85.8, 101.5, 110.0, 114.4, 115.7, 116.7, 118.3, 119.7, 121.4, 121.7, 123.2, 124.2, 127.1, 128.6, 130.1, 130.4, 132.7, 151.6, 152.7, 157.0, 158.9, 162.2; IR (neat): ν 1679, 1593, 1529 cm^{-1} ; MS (m/z): 458 ($\text{M}^+ + 1$); Elemental Analysis for $\text{C}_{26}\text{H}_{19}\text{NO}_7$: Calculated: C 68.27; H, 4.19; N, 3.06; Found: C 68.38; H, 4.28; N, 3.14.

12-(4-dimethoxyphenyl)-11-nitro-9,13,21-trioxapentacyclo[12.8.0.0^{2,11}.0^{3,8}.0^{15,20}]docosa-1(14),3,5,7,15(20),16,18-heptaen-22-one (13d)



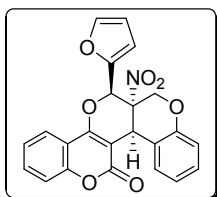
Yield: 90%; Colourless solid; mp: 245 -247°C; ^1H NMR (300 MHz, CDCl_3): δ 3.81 (s, 3H), 4.54 (d, $J = 12.9$ Hz, 1H), 4.77 (d, $J = 12.6$ Hz, 1H), 5.23 (s, 1H), 5.82 (s, 1H), 6.62-7.83 (m, 12H); ^{13}C NMR (75 MHz): δ 38.2, 55.3, 62.2, 81.1, 86.6, 103.1, 114.1, 114.3, 116.1, 116.2, 116.6, 121.0, 122.9, 123.3, 124.2, 128.1, 129.5, 132.8, 133.4, 152.1, 152.5, 158.3, 160.8; IR (neat): ν 1687, 1583, 1522 cm^{-1} ; MS (m/z): 459 ($\text{M}^+ + 1$); Elemental Analysis for $\text{C}_{26}\text{H}_{19}\text{NO}_7$: Calculated: C 68.27; H, 4.19; N, 3.06; Found: C 68.15; H, 4.08; N, 3.14.

12-(3,4-dimethoxyphenyl)-11-nitro-9,13,21-trioxapentacyclo[12.8.0.0^{2,11}.0^{3,8}.0^{15,20}]docosa-1(14),3,5,7,15(20),16,18-heptaen-22-one (13e)



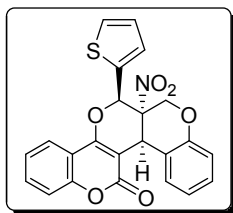
Yield: 92%; Colourless solid; mp: 189-191 °C; ^1H NMR (300 MHz, CDCl_3): δ 3.80 (s, 3H), 3.90 (s, 3H), 4.56 (d, $J = 12.6\text{ Hz}$, 1H), 4.78 (d, $J = 15\text{ Hz}$, 1H), 5.24 (s, 1H), 5.83 (s, 1H), 6.64 – 7.83 (m, 11H); ^{13}C NMR (75 MHz): δ 38.1, 55.9, 56.0, 62.4, 81.3, 86.6, 109.6, 111.0, 114.2, 116.2, 116.3, 116.6, 119.8, 121.1, 122.9, 123.7, 124.2, 129.6, 132.8, 133.2, 149.1, 150.4, 152.2, 152.5, 160.6; IR (neat): ν 1691, 1574, 1526 cm^{-1} ; MS (m/z): 488 ($\text{M}^+ + 1$); Elemental Analysis for $\text{C}_{27}\text{H}_{21}\text{NO}_8$: Calculated: C 66.53; H, 4.34; N, 2.87; Found: C 66.42; H, 4.23; N, 2.98.

12-(furan-2-yl)-11-nitro-9,13,21-trioxapentacyclo[12.8.0.0^{2,11}.0^{3,8}.0^{15,20}]docosa-1(14),3,5,7,15(20),16,18-heptaen-22-one (16a)



Yield: 88%; Colourless solid; mp: 159-161 °C; ^1H NMR (300 MHz, CDCl_3): δ 4.72 (d, $J = 12.9\text{ Hz}$, 1H), 4.97 (d, $J = 12.9\text{ Hz}$, 1H), 5.19 (s, 1H), 6.05 (s, 1H), 6.29 – 7.80 (m, 11H); ^{13}C NMR (75 MHz): δ 37.1, 64.6, 74.8, 86.5, 102.1, 110.7, 112.4, 114.2, 116.3, 116.6, 117.6, 121.5, 123.0, 124.2, 129.2, 131.9, 132.8, 144.2, 144.7, 152.1, 152.5, 158.2, 160.9; IR (neat): ν 1689, 1584, 1537 cm^{-1} ; MS (m/z): 418 ($\text{M}^+ + 1$); Elemental Analysis for $\text{C}_{23}\text{H}_{15}\text{NO}_7$: Calculated: C 66.19; H, 3.62; N, 3.36; Found: C 66.08; H, 3.50; N, 3.44.

11-nitro-12-(thiophen-2-yl)-9,13,21-trioxapentacyclo[12.8.0.0^{2,11}.0^{3,8}.0^{15,20}]docosa-1(14),3,5,7,15(20),16,18-heptaen-22-one (16b)



Yield: 86%; Colourless solid; mp: 145-147 °C; ^1H NMR (300 MHz, CDCl_3): δ 4.56 (d, $J = 13.2\text{ Hz}$, 1H), 4.94 (d, $J = 12.9\text{ Hz}$, 1H), 5.16 (s, 1H), 6.15 (s, 1H), 6.74 – 7.84 (m, 11H); ^{13}C

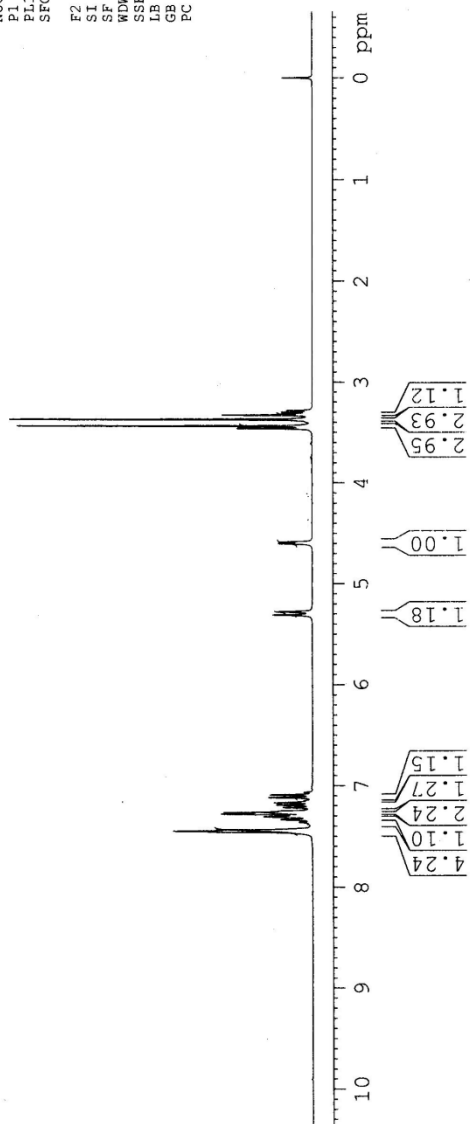
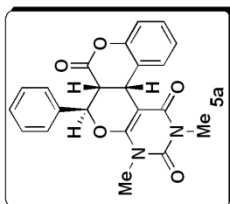
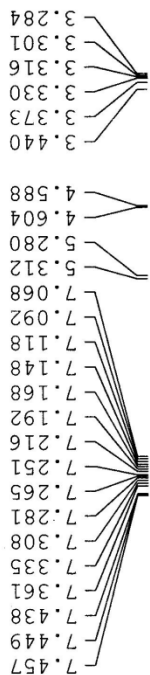
NMR (75 MHz): δ 39.3, 62.5, 78.4, 87.3, 103.4, 114.0, 116.0, 116.5, 116.6, 121.1, 122.9, 124.3, 127.4, 127.6, 128.1, 129.9, 132.6, 132.9, 133.9, 152.5, 152.5, 157.9, 160.0; IR (neat): ν 1678, 1589, 1517 cm^{-1} ; MS (m/z): 434 ($M^{+}+1$); Elemental Analysis for $\text{C}_{23}\text{H}_{15}\text{NO}_6\text{S}$: Calculated: C 63.73; H, 3.49; N, 3.23; Found: C 63.61; H, 3.38; N, 3.34.



Current Data Parameters
 NAME VN-I-94
 EXPNO 7
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20110711
 Time 17.46
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 13
 DS 2
 SWH 6172.839 Hz
 FIDRES 0.094190 Hz
 AQ 5.3084660 sec
 RG 203.2
 DW 81.000 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.00000000 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 13.15 usec
 PL1 0.00 dB
 SFO1 300.1318534 MHz
 F2 - Processing parameters
 SI 32768
 SF 300.1300049 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00





Current Data Parameters
 NAME VM-I-94
 EXPNO 8
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20100111
 Time_ 17:55
 INSTRUM spect
 PROBD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 241
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.8219508 sec
 RG 512
 RW 27.800 usec
 DR 300.0 usec
 TE 300.2 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.30 usec
 PL1 0.00 dB
 SFO1 75.4752953 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.68 dB
 PL13 16.00 dB
 SFO2 300.1312005 MHz

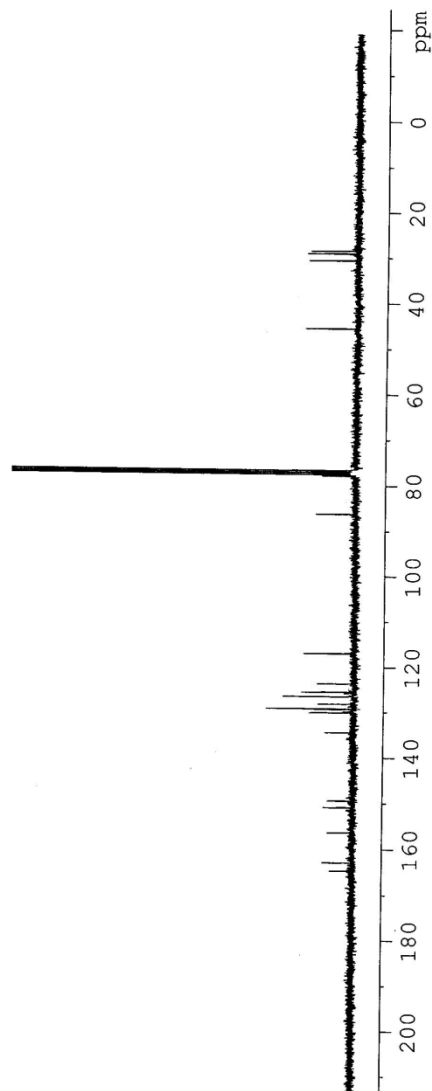
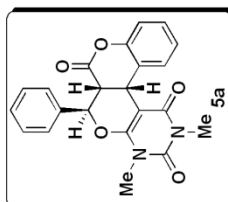
F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 WDW EM
 SSB 0
 GB 1.00 Hz
 PC 1.40

164.59
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 150.78
 149.31
 134.45
 130.07
 129.31
 129.15
 128.01
 126.46
 125.44
 123.59
 116.96

86.17
 77.80
 77.46
 77.03
 76.61

45.46

30.53
 28.97
 28.39



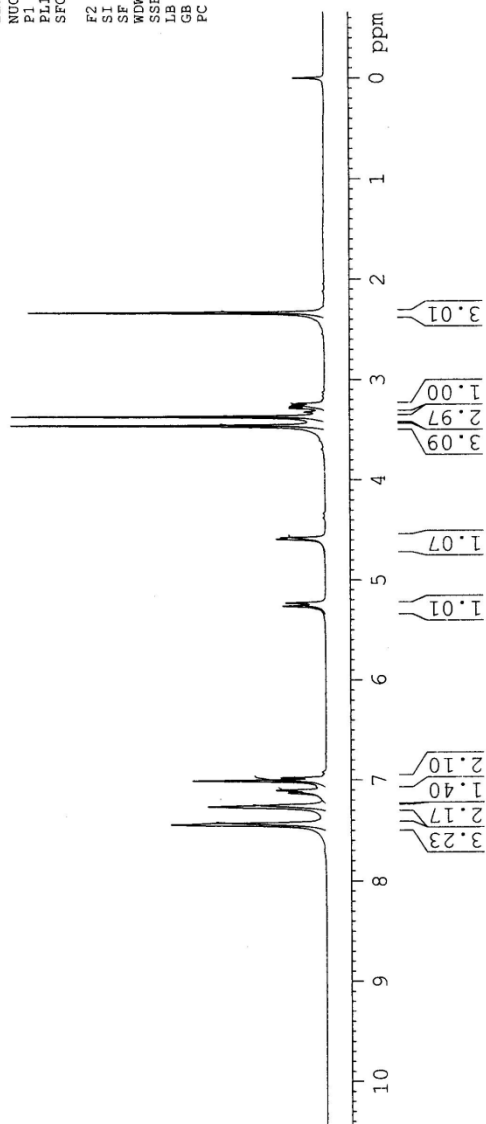
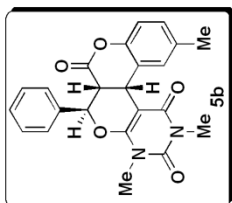


Current Data Parameters
 NAME VM-I-124
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20110711
 Time_ 18.14
 INSTRUM Spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 6172.835 Hz
 FIDRES 0.064190 Hz
 AQ 5.308460 sec
 RG 2280
 SFO1 300.1300052 MHz
 DWT 81600 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 13.15 usec
 PL1 0.00 dB
 SFO1 300.1318534 MHz
 F2 - Processing parameters
 SI 32768
 SF 300.1300052 MHz
 EM 0
 WDW 0
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

7.443
7.265
7.131
7.104
7.008
6.980
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4.593
4.579
3.461
3.371
3.289
3.273
3.256
3.240
2.336





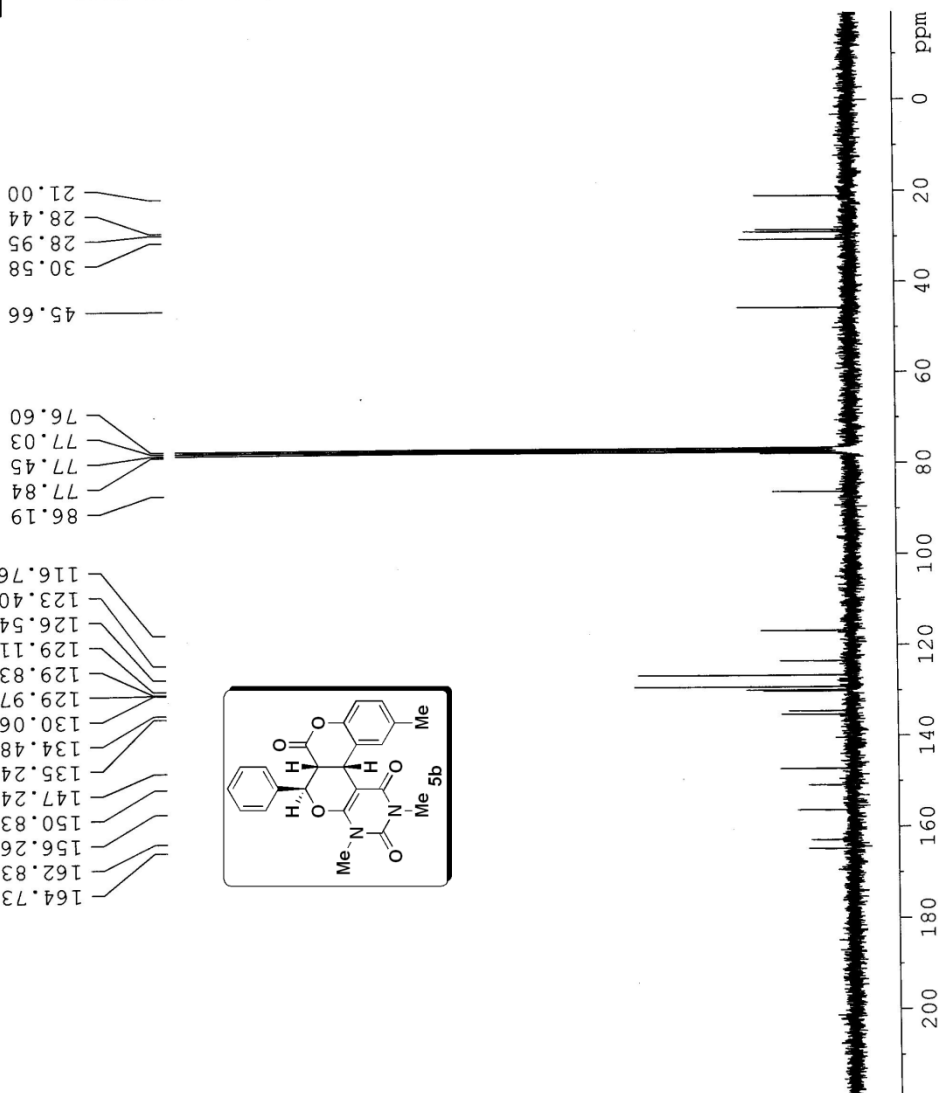
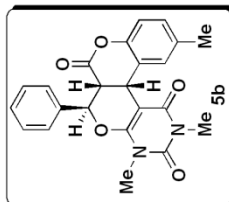
Current Data Parameters
 NAME VN-I-124
 EXPNO 4
 PROCNO 1

F2 - Acquisition Parameters
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 Time_ 16.39
 INSTRUM Spect
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 PULPROG zgpg30
 TOCPRG 200306
 SOLVENT CDCl3
 NS 306
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.8219508 sec
 RG 574.7
 DW 27.800 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.0000000 sec
 d11 0.0300000 sec
 DELTA 1.8999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.30 usec
 PL1 0.00 dB
 SF01 75.4752953 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.68 dB
 PL13 16.00 dB
 SF02 300.1312005 MHz

F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40





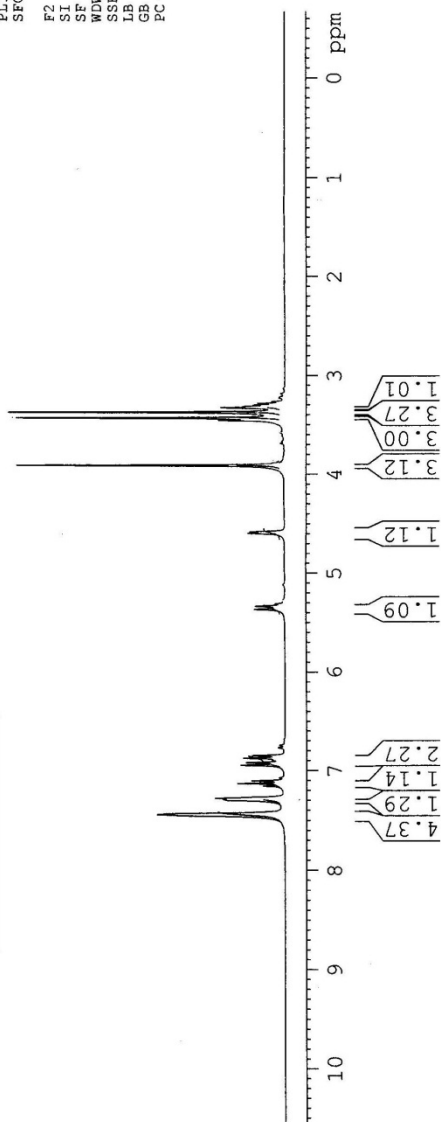
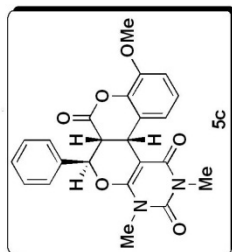
Current Data Parameters
 NAME VM-136
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20110721
 Time_ 14.25
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 15
 DS 2
 SWH 6172.839 Hz
 FIDRES 0.094190 Hz
 AQ 5.3084660 sec
 RG 101.6
 DW 81.000 usec
 DE 6.000 usec
 TE 300.0 K
 D1 1.00000000 sec
 D11 1
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 13.15 usec
 PL1 0.00 dB
 SF01 300.1318534 MHz

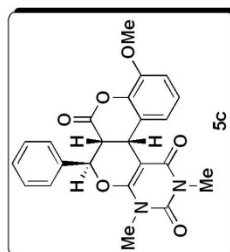
F2 - Processing parameters
 SI 32768
 SF 300.1300000 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

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7.301
7.295
7.282
7.160
7.133
7.107
6.950
6.923
6.898
6.877
6.851
5.369
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4.598
4.582
3.914
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3.378
3.331
3.320
3.305
3.288

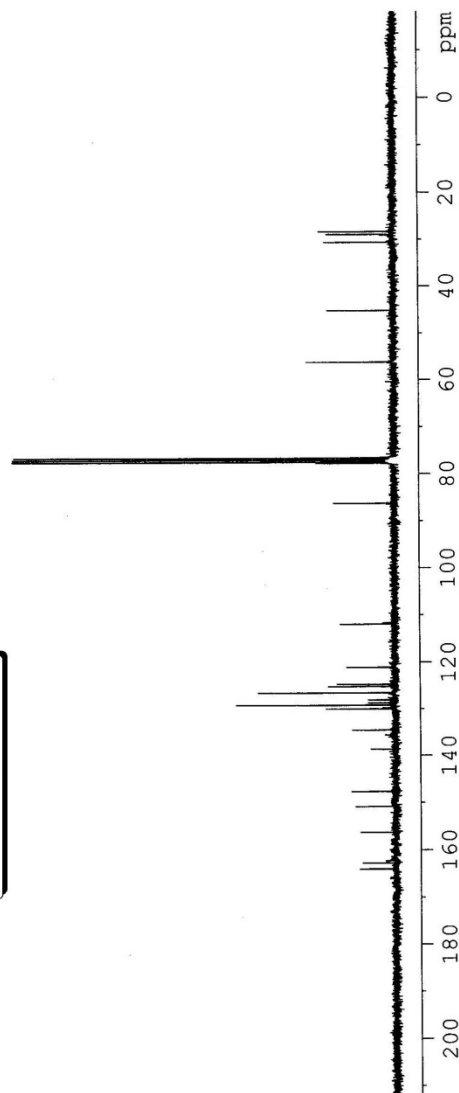




163.99
 162.72
 156.22
 150.78
 147.61
 138.68
 134.51
 129.98
 129.13
 128.65
 128.04
 126.49
 125.15
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 77.49
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 28.36

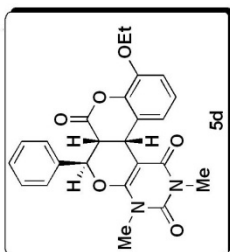


Current Data Parameters
 NAME VN-136
 EXPNO 2
 PROCNO 1
 F2 - Acquisition Parameters
 Date_ 20110721
 Time_ 14.41
 INSTRUM spect
 PROHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 232
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.821308 sec
 RG 1459.00
 DW 27.800 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1
 ===== CHANNEL f1 =====
 NUC1 13C
 P1 9.30 usec
 PL1 0.00 dB
 SF01 75.4752953 MHz
 ===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.68 dB
 PL13 16.00 dB
 SF02 300.1312005 MHz
 F2 - Processing parameters
 SI 32768
 SE 75.4677450 MHz
 WDW EM
 SS 0
 LB 1.00 Hz
 GB 0
 PC 1.40

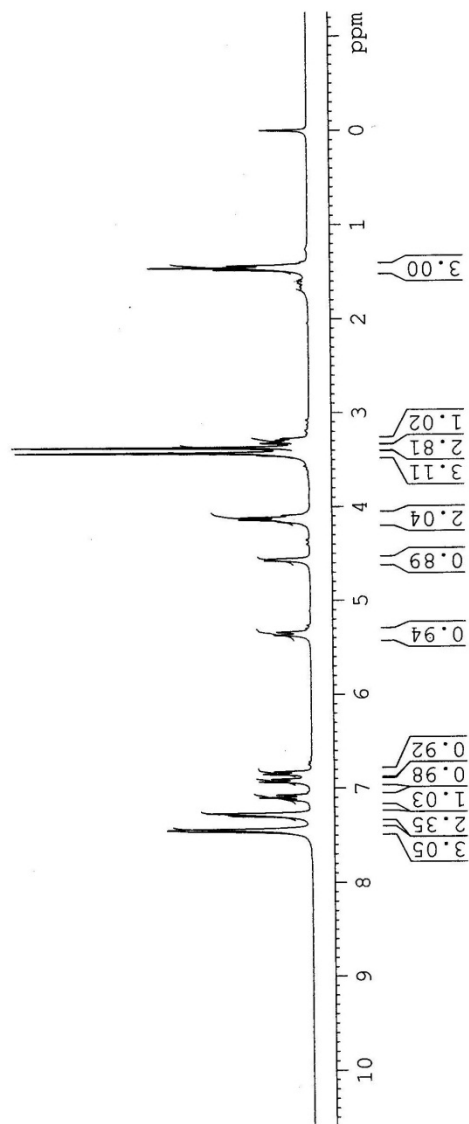




1.481
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 4.162
 4.559
 4.574
 5.341
 5.372
 6.824
 6.850
 6.905
 6.931
 7.072
 7.098
 7.125
 7.266
 7.284
 7.444



Current Data Parameters
 NAME VM-i-105
 EXPNO 1
 PROCNO 1
 F2 - Acquisition Parameters
 Date 20110610
 Time 20.11
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 SOLVENT CDCl3
 NS 12
 DS 2
 SWH 6172.839 Hz
 FIDRES 0.04185 Hz
 AQ 5.308460 sec
 RG 228.1
 DW 81.000 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.00000000 sec
 TD0 1
 CHANNEL f1
 NUC1 1H
 P1 13.15 usec
 PL1 0.00 dB
 SFO1 300.1318534 MHz
 F2 - Processing parameters
 SI 32768
 SF 300.1300048 MHz
 WDW EM
 SSB 0
 GB 0.30 Hz
 PC 1.00





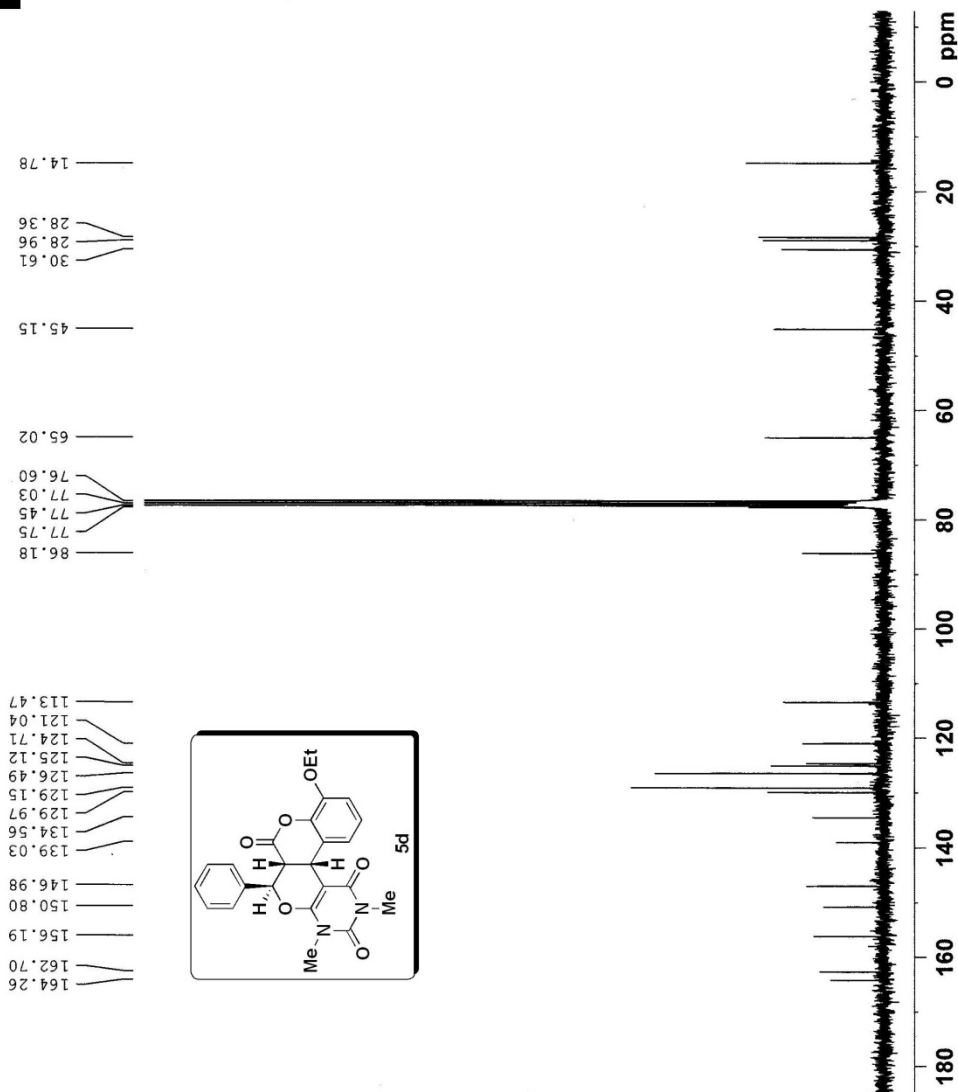
Current Data Parameters
 NAME VM-I-105
 EXNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20110610
 Time_ 20.21
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 1000
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.8219508 sec
 RG 645.1
 DW 27.800 usec
 DE 6.00 usec
 TE 300.0 K
 P1 2.0000000 sec
 d11 0.0300000 sec
 DELTA 1.8999999 sec
 ID0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.30 usec
 PL1 0.00 dB
 SFO1 75.4752953 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.68 dB
 PL13 16.00 dB
 SFO2 300.1312005 MHz

F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40





Current Data Parameters
 NAME VM-I-Me- mha
 EXPNO 1
 PROCNO 1

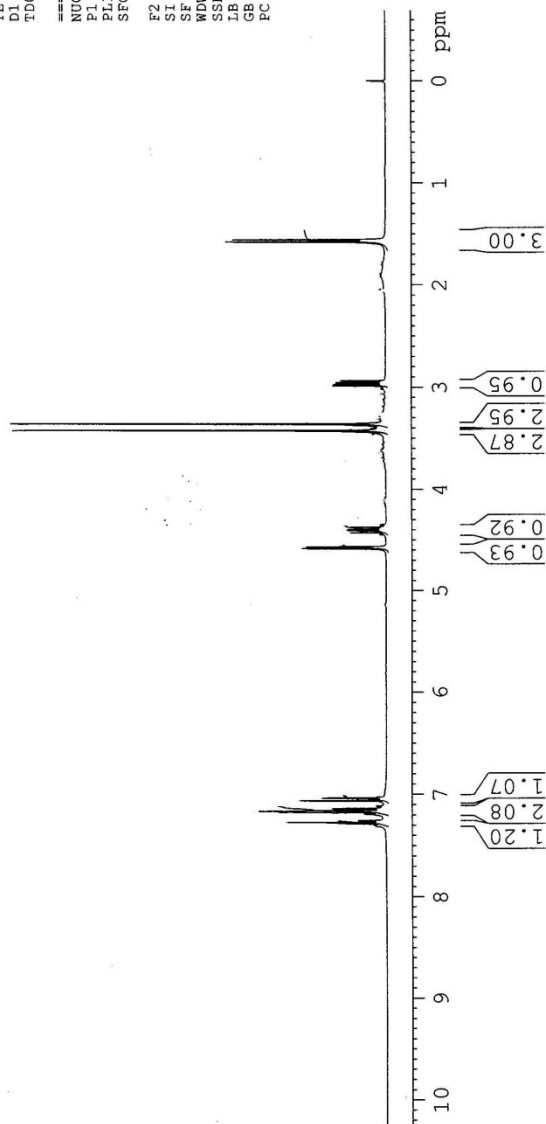
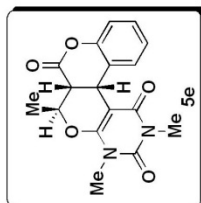
F2 - Acquisition Parameters
 Date_ 20110716
 Time_ 15.31

INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 6172.839 Hz
 FIDRES 0.094190 Hz
 AQ 5.3084660 sec
 RG 161.3
 DW 81.000 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 13.15 usec
 PL1 0.00 dB
 SF01 300.1318534 MHz

F2 - Processing parameters
 SI 32768
 SF 300.1300022 MHz
 EM
 WDW 0
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

7.311
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 7.279
 7.274
 7.262
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 7.193
 7.174
 7.165
 7.141
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 4.405
 4.392
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 4.371
 3.428
 3.362
 2.990
 2.973
 2.957
 2.940
 1.581
 1.560





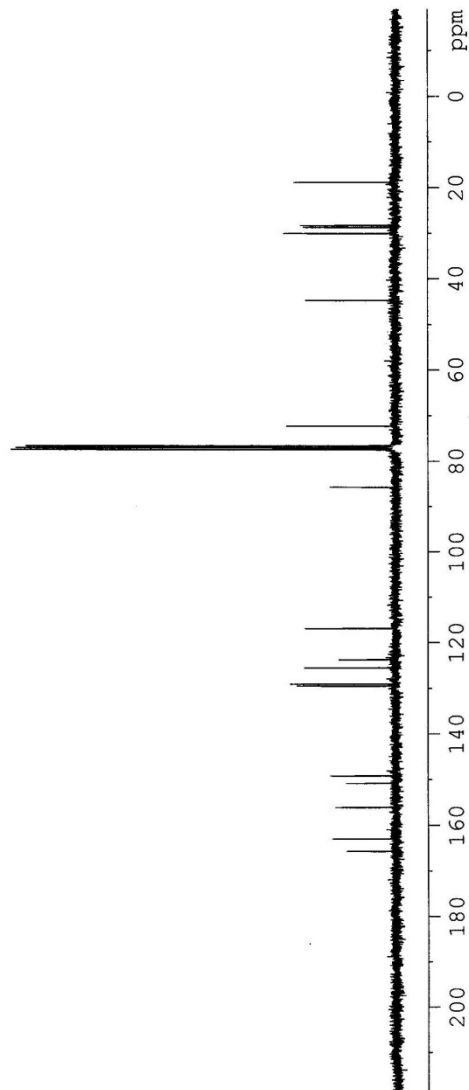
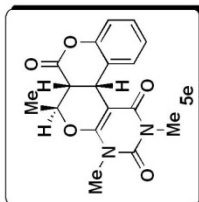
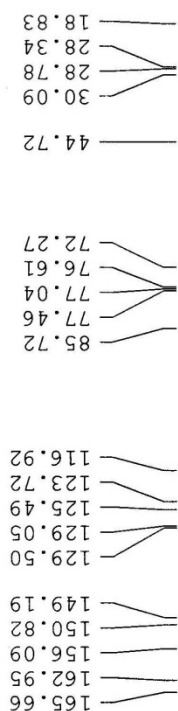
Current Data Parameters
 NAME VM-1-Me- nmba
 EXPNO 2
 PROCNO 1

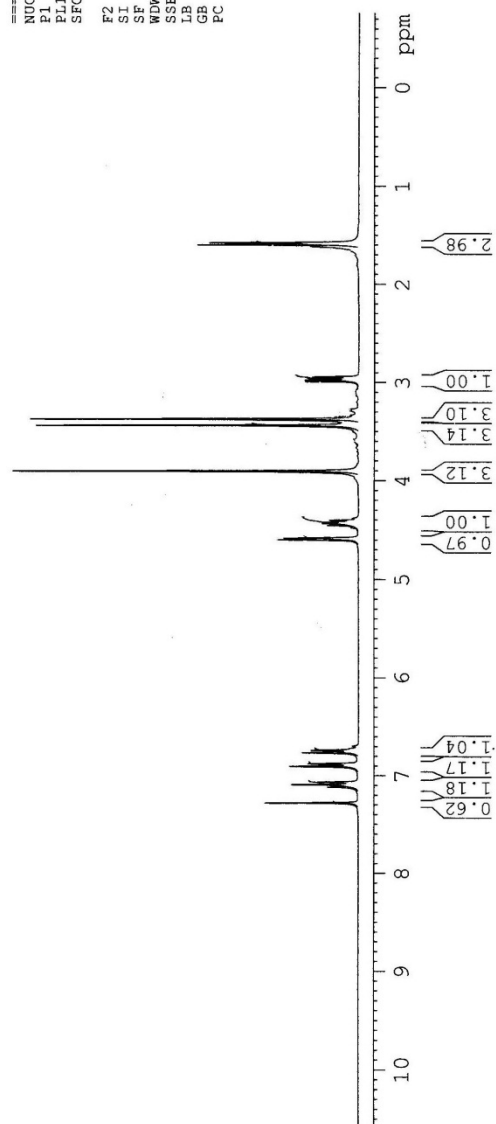
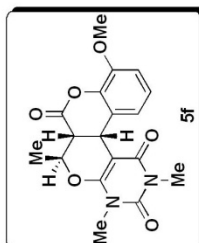
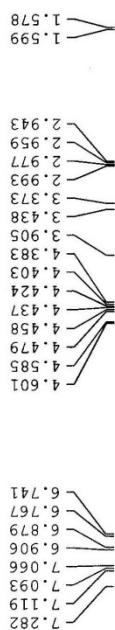
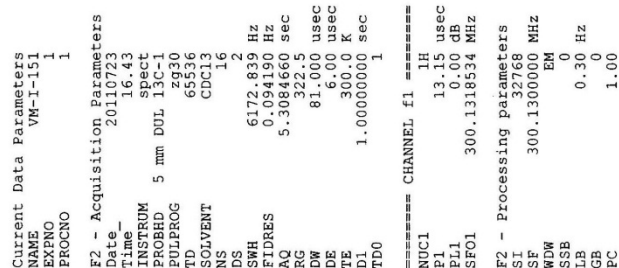
F2 - Acquisition Parameters
 Date_ 20110716
 Time_ 15.45
 INSTRUM spect
 PROHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 194
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.8219509 sec
 RG 327.500 usec
 DE 27.800 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

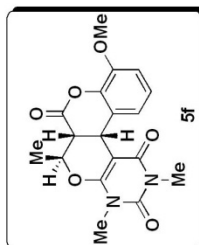
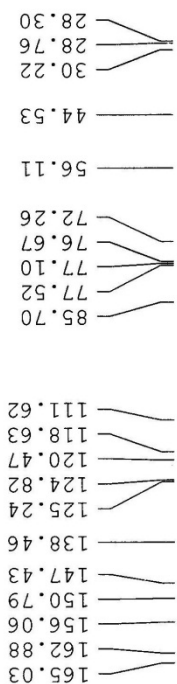
===== CHANNEL f1 =====
 NUC1 13C
 P1 9.30 usec
 PL1 0.00 dB
 SFO1 75.4752953 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.68 dB
 PL13 16.00 dB
 SFO2 300.1312005 MHz

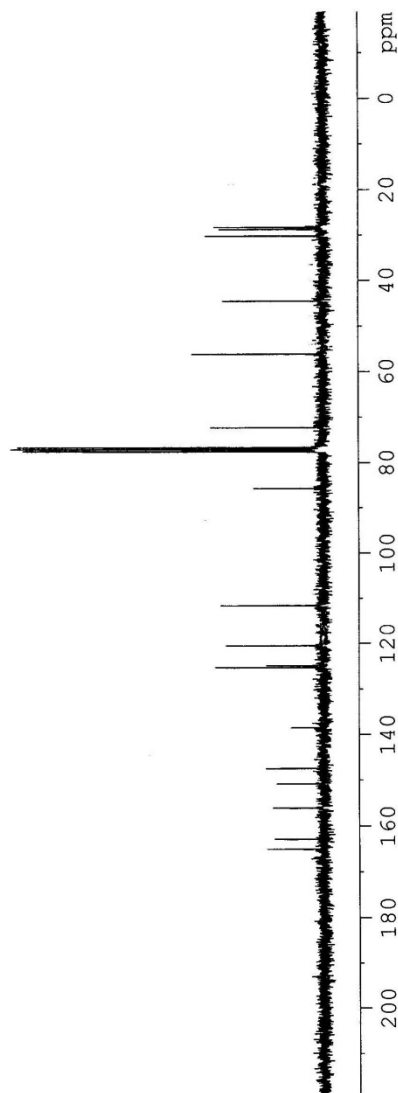
F2 - Processing Parameters
 SI 32768
 SF 75.4677450 MHz
 PCPM 8000
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40





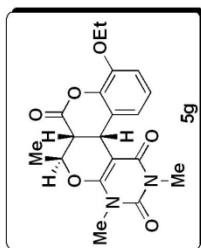


Current Data Parameters
 NAME VM-I-151
 EXPNO 3
 PROCNO 1
 F2 - Acquisition Parameters
 Date_ 20110723
 Time_ 17.09
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 113
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.8219508 sec
 RG 20642.5
 DW 27.800 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999999 sec
 TDO 1
 ===== CHANNEL f1 =====
 NUC1 13C
 P1 9.30 usec
 PL1 0.00 dB
 SFO1 75.4752953 MHz
 ===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

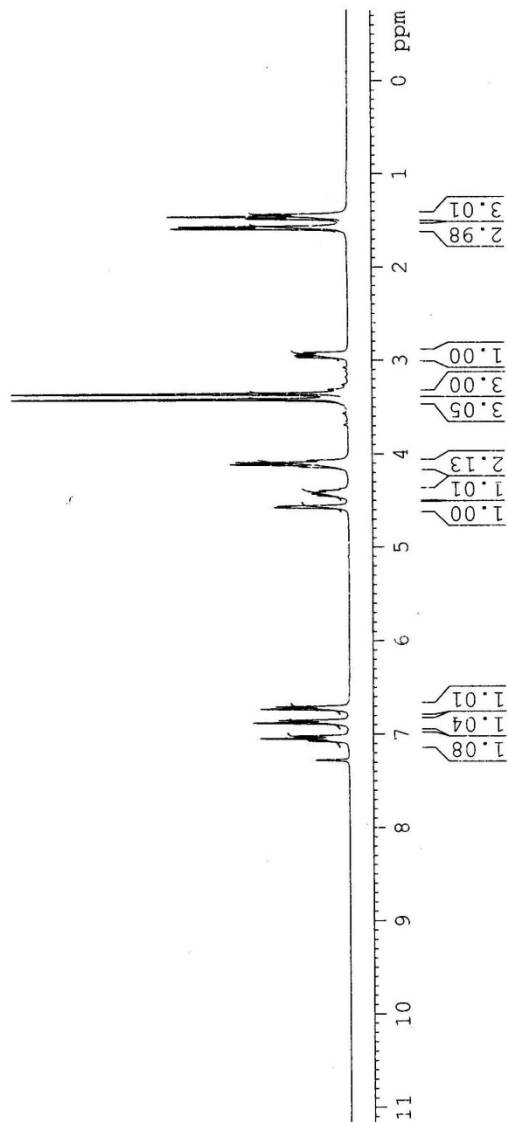




1.436
1.458
1.481
1.567
1.587
2.920
2.936
2.953
2.969
3.358
3.418
4.070
4.093
4.115
4.138
4.376
4.395
4.415
4.428
4.448
4.469
4.560
4.575
6.707
6.733
6.854
6.882
7.021
7.048
7.074
7.277



Current Data Parameters
NAME VM-I-111-A
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20110623
Time 15.34
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 6172.839 Hz
FIDRES 0.094190 Hz
AQ 5.3084660 sec
RG 327.67
DE 81.000 usec
TE 6.00 usec
TD0 300.0 K
D1 1.00000000 sec
D1 1
===== CHANNEL f1 =====
NUC1 1H
P1 13.15 usec
PL1 0.00 dB
SFO1 300.1318534 MHz
F2 - Processing parameters
SI 32768
SF 300.1300013 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00





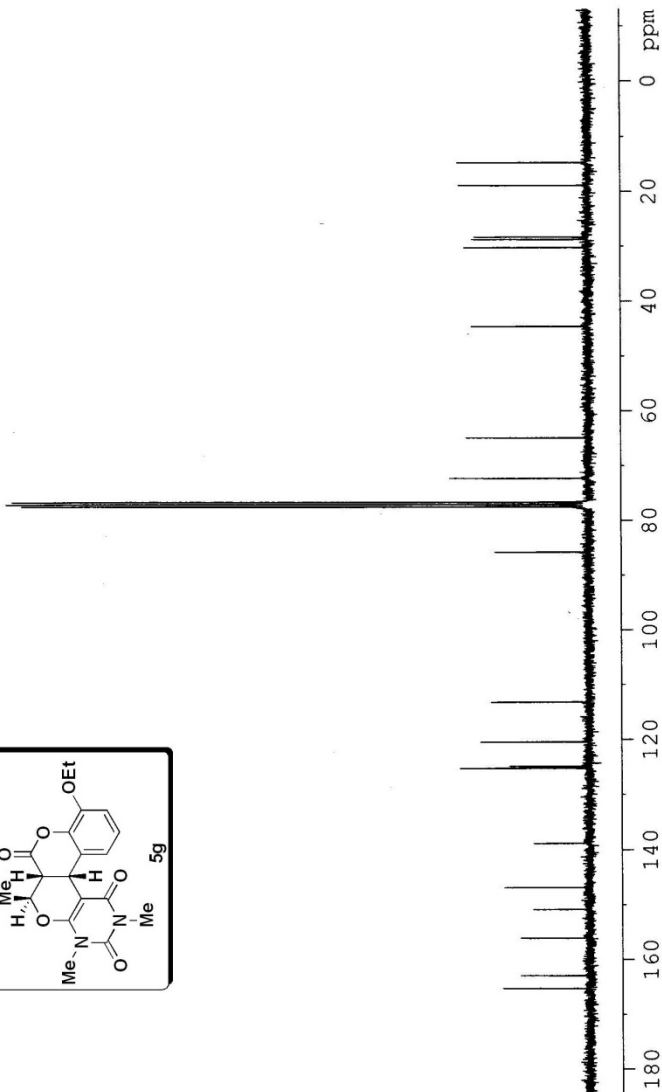
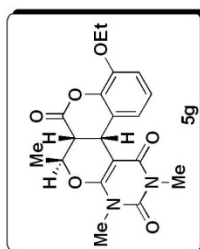
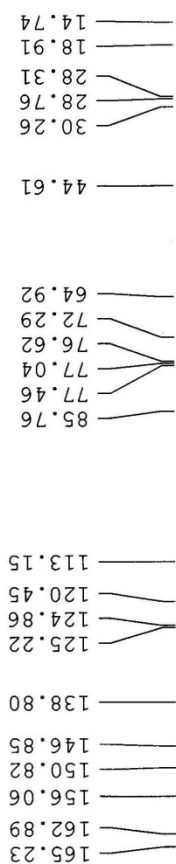
Current Data Parameters
 NAME VM-I-III-A
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20110623
 Time 15.46
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 243
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.8213306 sec
 RG 578.4
 DW 27.800 usec
 DE 30.00 usec
 TE 300.0 K
 IL 2.0000000 sec
 d11 0.0300000 sec
 DELTA 1.8999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 PL1 9.30 usec
 PL1 0.00 dB
 SFO1 75.4752953 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL2 15.68 dB
 PL13 16.00 dB
 SFO2 300.1312005 MHz

F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40





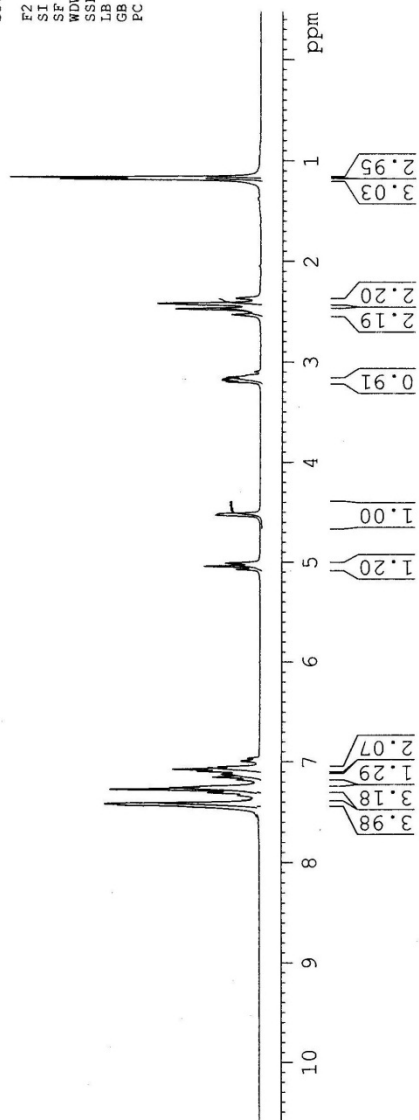
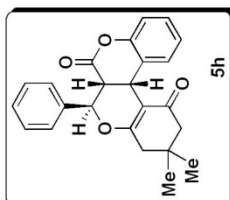
Current Data Parameters
 NAME VM-I-100
 EXNO 5
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20110711
 Time_ 17:07
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 13
 DS 2
 SWH 6172.839 Hz
 FIDRES 0.094190 Hz
 AQ 5.3084660 sec
 RG 287.4
 DW 81.000 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.00000000 sec
 D0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 13.15 usec
 PL1 0.00 dB
 SFO1 300.1318534 MHz

F2 - Processing parameters
 SI 32768
 SF 300.1300058 MHz
 EM 0
 WDW 0
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

7.414
7.401
7.323
7.298
7.263
7.174
7.149
7.122
7.095
7.074
7.051
6.994
6.970
5.075
5.042
5.011
4.529
4.516
3.202
3.185
3.170
3.153
2.532
2.476
2.423
2.371
1.183
1.164





Current Data Parameters
 NAME VN-I-100
 EXPNO 8
 PROCNO 1

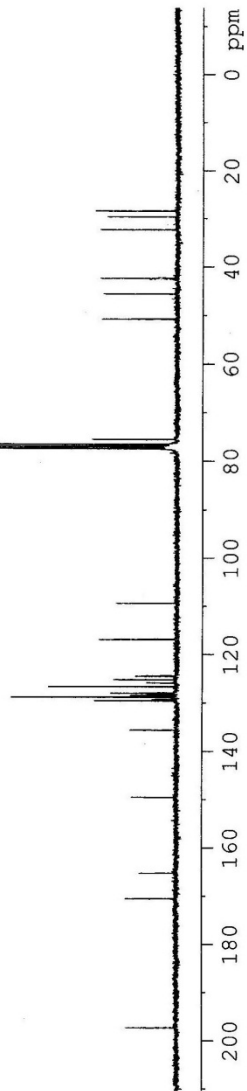
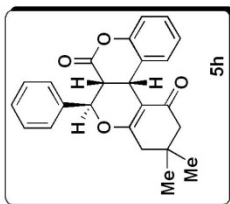
F2 - Acquisition Parameters
 Date_ 20110716
 Time 21.43
 INSTRUM spect
 PROSD 5 mm DUL 500-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 1648
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.8219508 sec
 RG 645.1
 DW 27.800 usec
 DE 3.000 usec
 TE 300.2 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

CHANNEL f1
 NUC1 13C
 P1 9.30 usec
 PL1 0.00 dB
 SF01 75.4752953 MHz

CHANNEL f2
 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.68 dB
 PL13 16.00 dB
 SF02 300.1312005 MHz

F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

197.29
 170.55
 165.28
 149.57
 135.65
 129.58
 128.87
 128.53
 128.05
 126.68
 125.92
 125.25
 124.52
 116.95
 109.44
 77.45
 77.03
 76.60
 75.56
 50.78
 45.59
 42.39
 32.34
 29.64
 28.43





Current Data Parameters
 Name: VM-I-III
 EXPNO: 4
 PROCNO: 1

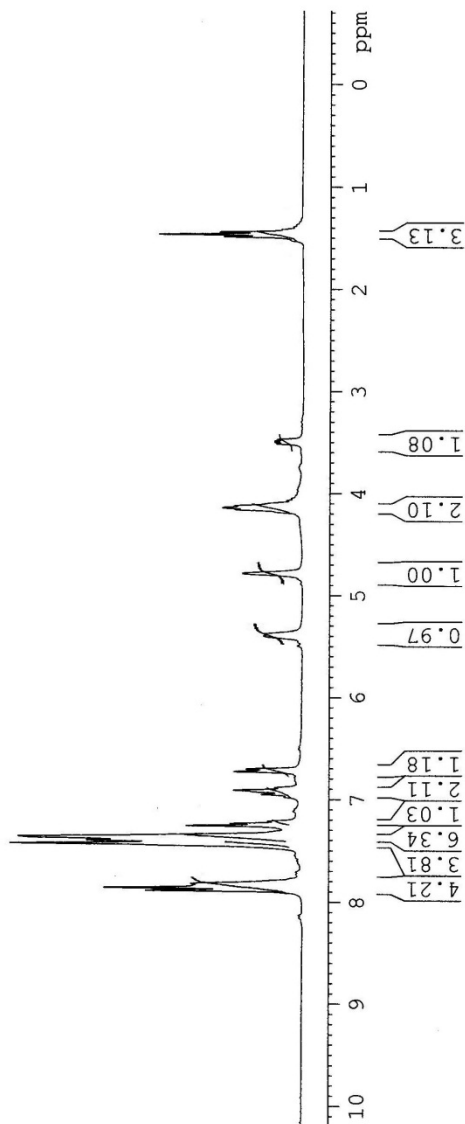
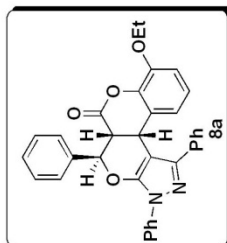
F2 - Acquisition Parameters
 Date_: 20110623
 Time: 14.49
 INSTRUM: spect
 PROBHD: 5 mm DUL 5pc1
 PULPROG: zg30
 TD: 65536
 SOLVENT: CDCl3
 NS: 16
 DS: 4
 SWH: 6172.826 Hz
 FIDRES: 0.094130 Hz
 AQ: 5.3084660 sec
 RG: 181
 DW: 81.000 usec
 DE: 6.00 usec
 TE: 300.2 K
 D1: 1.00000000 sec
 TDO: 1

CHANNEL f1
 NUC1: 1H
 P1: 13.00 usec
 PL1: 0.00 dB
 SFO1: 300.1318534 MHz

F2 - Processing parameters
 SI: 32768
 SF: 300.1300078 MHz
 WDW: EM
 SSB: 0
 LB: 0.30 Hz
 GB: 0
 PC: 1.00

1.488
1.466
1.443

3.473
3.488
3.502
3.516
4.101
4.124
4.141
4.160
4.783
5.381
5.400
6.705
6.728
6.728
6.886
6.911
6.952
6.977
7.212
7.236
7.257
7.362
7.399
7.430
7.819
7.859
7.886





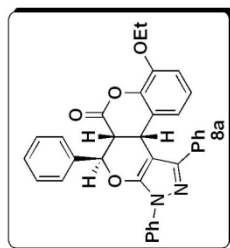
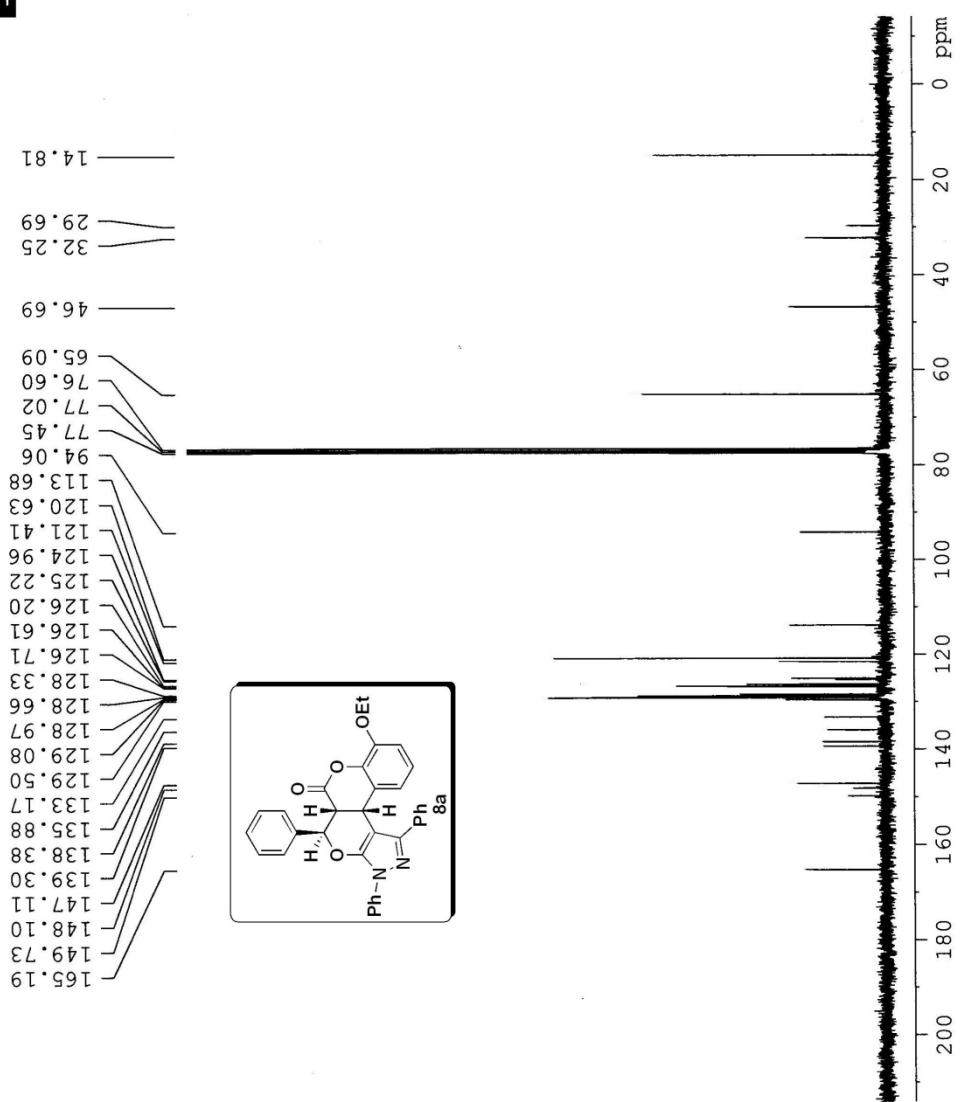
Current Data Parameters
 NAME VN-I-111
 EXPNO 5
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20110623
 Time_ 14.54
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 527
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.8219508 sec
 RG 512
 DW 27.800 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.0000000 sec
 d11 0.0500000 sec
 DELTA 1.8999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.30 usec
 PL1 0.00 dB
 SFO1 75.4752953 MHz

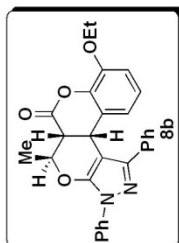
===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.68 dB
 PL13 16.00 dB
 SFO2 300.1312005 MHz

F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 MDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

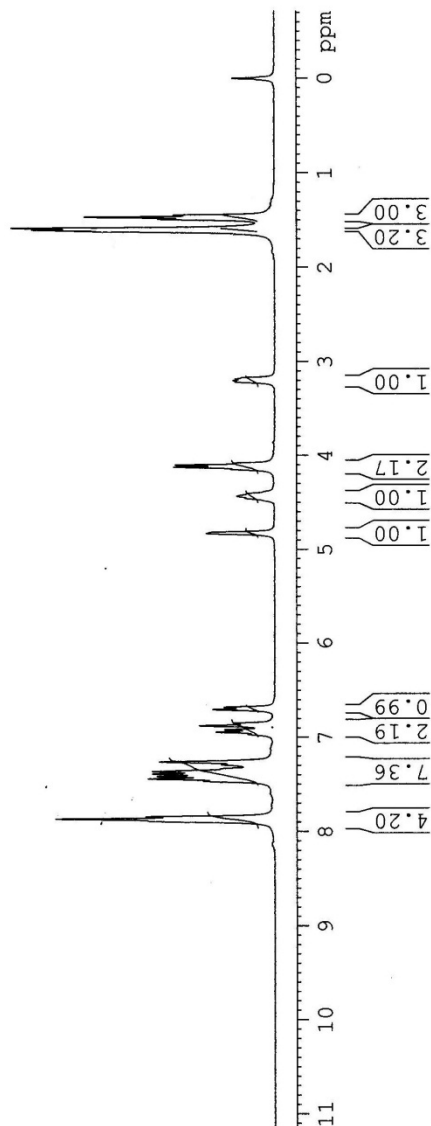




1.452
1.472
1.494
1.593
1.614
3.190
3.207
3.222
4.087
4.108
4.131
4.151
4.438
4.460
4.460
4.819
4.833
6.681
6.704
6.852
6.878
6.920
6.946
6.971
7.265
7.265
7.293
7.367
7.393
7.419
7.446
7.469
7.847
7.872



Current Data Parameters
NAME VM-1-115
EXPNO 3
PROCNO 1
F2 - Acquisition Parameters
Date_ 20110623
Time_ 13.04
INSTRUM spect
PROBHD 5 mm DUL 130-1
PULPROG zgpg30
PCPDPRG2 zgpg30
SOLVENT CDCl3
NS 16
DS 2
SWH 6172.839 Hz
FIDRES 0.094190 Hz
AQ 5.308466 sec
RG 320.0
FW 81.000 usec
DE 6.00 usec
TE 300.0 K
D1 1.0000000 sec
TD0 1
===== CHANNEL f1 =====
NUC1 1H
P1 13.15 usec
PL1 0.00 dB
SFO1 300.1318534 MHz
F2 - Processing parameters
SI 32768
SF 300.1300066 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

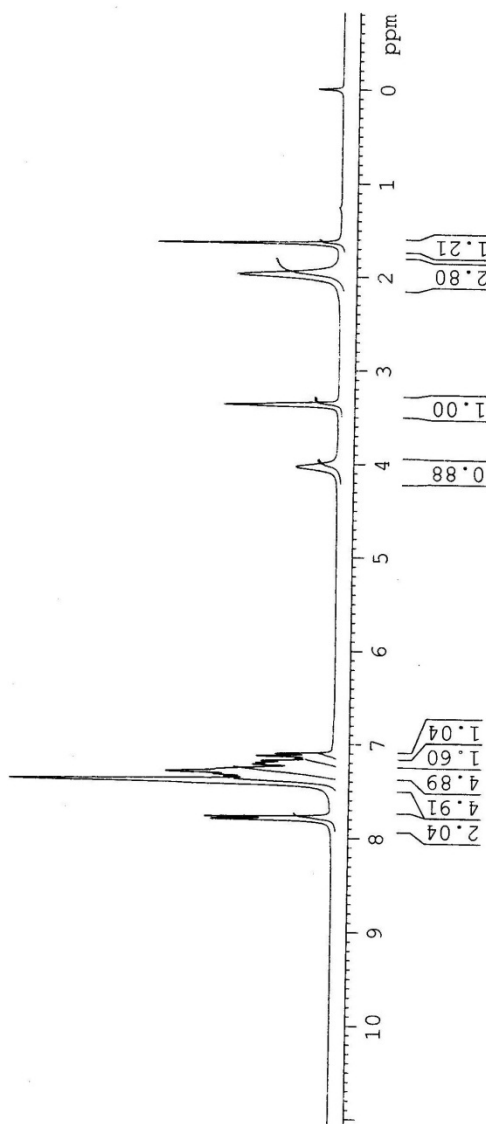
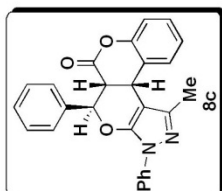




Current Data Parameters
 NAME: 20110624
 EXPNO: 1
 PROCNO: 1
 F2 - Acquisition Parameters
 Date_: 20110624
 Time: 13:27
 INSTRUM: spect
 PROBHD: 5 mm DUL
 PULPROG: zgpg30
 TD: 65536
 SOLVENT: CDC13
 NS: 16
 DS: 2
 SWH: 6172.839 Hz
 FIDRES: 0.094199 Hz
 AQ: 5.3084660 sec
 RG: 203.2
 DW: 81.000 usec
 DE: 6.00 usec
 TE: 300.0 K
 D1: 1.0000000 sec
 TUG: 1
 CHANNEL: f1
 NUC1: 1H
 P1: 13.15 usec
 PL1: 0.00 dB
 SFO1: 300.1318534 MHz
 F2 - Processing parameters
 SI: 32768
 SF: 300.1300068 MHz
 SWH: 0 Hz
 SSB: 0
 LB: 0.30 Hz
 GB: 0
 PC: 1.60

1.640
 1.979
 3.368
 4.031

7.804
 7.778
 7.394
 7.352
 7.328
 7.300
 7.265
 7.220
 7.203
 7.181
 7.155
 7.130
 7.103





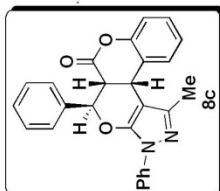
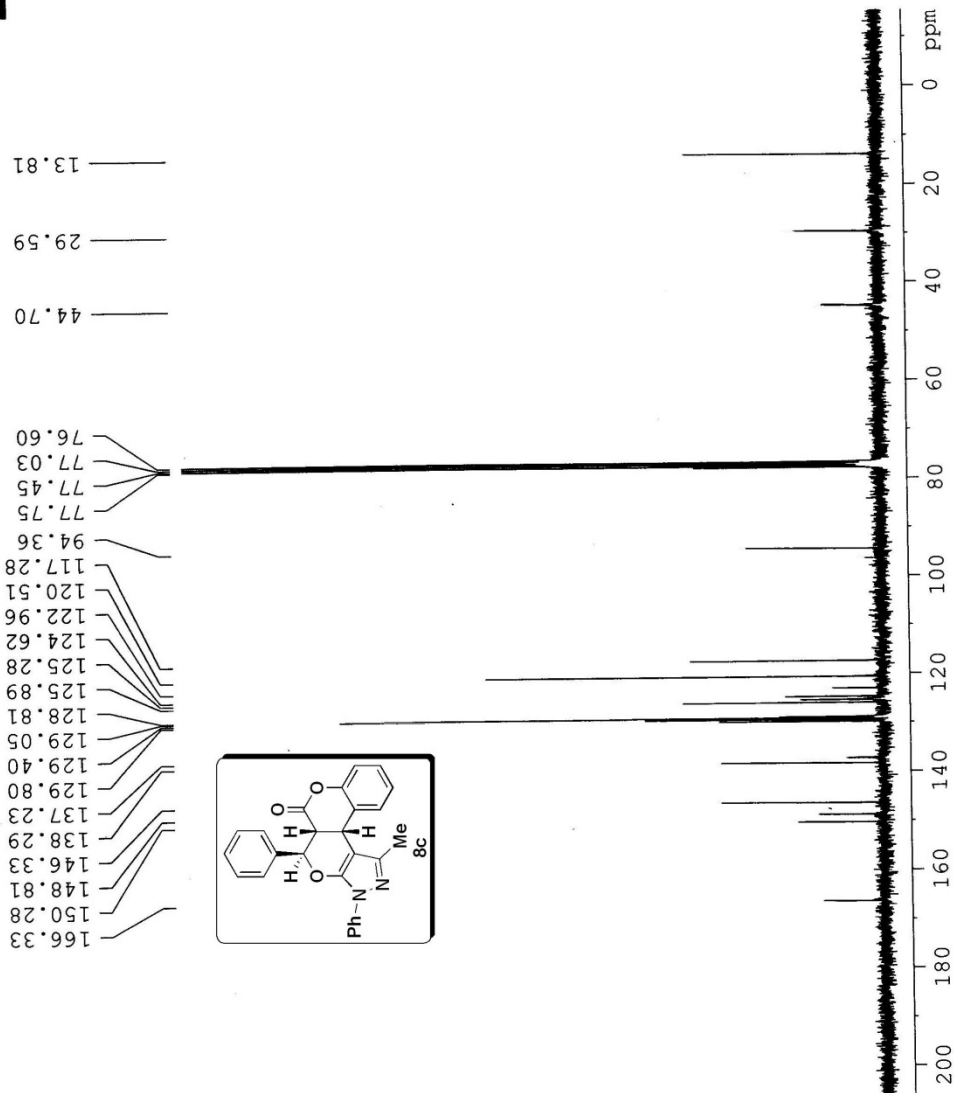
Current Data Parameters
NAME DK-UK
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20110624
Time_ 13.34
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 1000
DS 4
SWH 17985.611 Hz
FIDRES 0.274439 Hz
AQ 1.8219508 sec
RG 362
DW 27.800 usec
DE 6.00 usec
TE 300.0 K
D1 2.0000000 sec
d11 0.0300000 sec
DELTA 1.8999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.30 usec
PL1 0.00 dB
SFO1 75.4752953 MHz

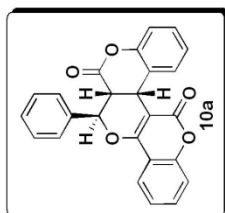
===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.68 dB
PL13 16.00 dB
SFO2 300.1312005 MHz

F2 - Processing parameters
SI 32768
SF 75.4677490 MHz
WDW EM
SSB 0
CB 1.00 Hz
PC 1.40

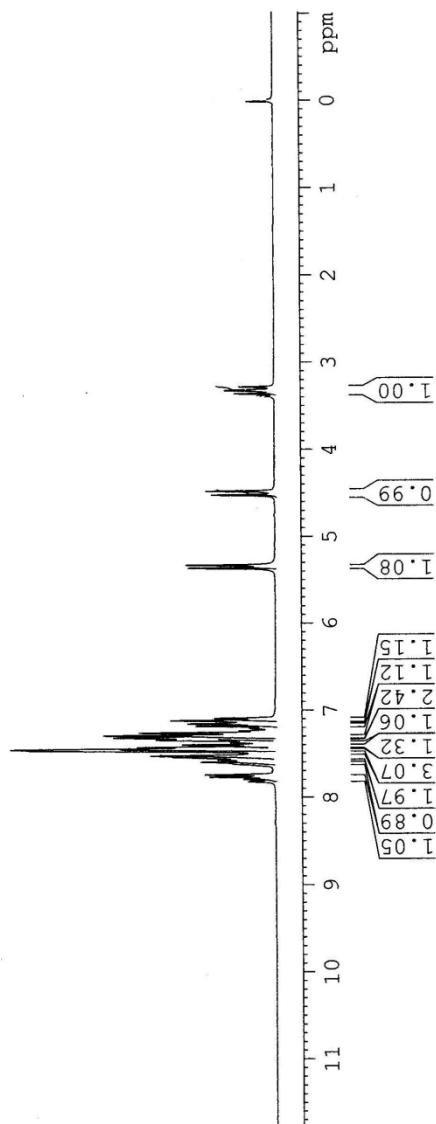




7.827
7.800
7.773
7.747
7.601
7.575
7.544
7.531
7.457
7.430
7.401
7.375
7.348
7.320
7.294
7.264
7.241
7.213
7.186
7.160
7.121
7.094
5.367
5.333
4.526
4.482
3.365
3.328
3.285



Current Data Parameters
NAME VM-I-98
EXPNO 4
PROCNO 1
F2 - Acquisition Parameters
Date_ 20110624
Time_ 18.20
INSTRUM spect
PROBHD 5 mm DUL
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 10
DS 2
SWH 6179.930 Hz
FIDRES 0.004490 Hz
AQ 5.3084660 sec
RG 228.1
DW 81.000 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec
D10 1
===== CHANNEL f1 =====
NUC1 1H
P1 13.15 usec
PL1 0.00 dB
SFO1 300.1318534 MHz
F2 - Processing parameters
SI 32768
SF 300.1300061 MHz
WDW EM
SSB 0
GB 0
PC 1.00





Current Data Parameters
 NAME VN-I-98
 EXPNO 1
 PROCNO 1

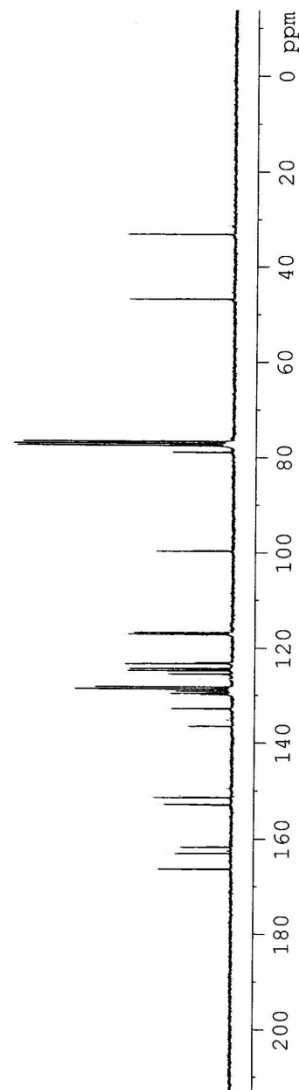
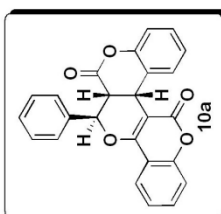
F2 - Acquisition Parameters
 Date_ 20110630
 Time 16.00
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 1000
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQC 1.8219508 sec
 RG 512
 DW 27.800 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.30 usec
 PL1 0.00 dB
 SFO1 75.4752953 MHz

===== CHANNEL f2 =====
 CPDPRG2 waitz16
 NUC2 1H
 P2 80.00 usec
 PL2 0.00 dB
 PL12 0.00 dB
 PL13 16.00 dB
 SFO2 300.1312005 MHz

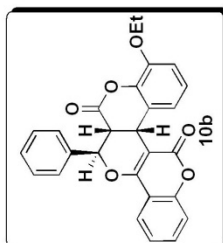
F2 - Processing Parameters
 SI 32768
 SF 75.4677490 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

166.32
 163.02
 161.70
 152.85
 151.38
 136.50
 132.84
 132.79
 129.57
 129.08
 128.65
 128.22
 125.50
 124.73
 124.29
 123.27
 117.06
 116.70
 99.65
 78.93
 77.50
 77.08
 76.65
 46.76
 33.14

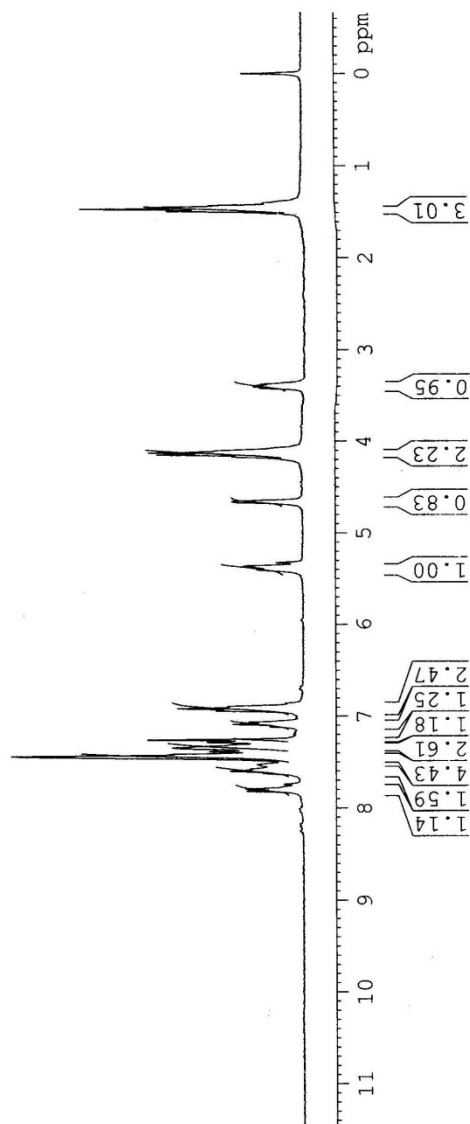




1.443
1.465
1.488
3.379
3.396
3.411
3.425
4.104
4.130
4.152
4.174
4.650
4.670
5.363
5.404
5.862
6.893
6.917
6.942
7.066
7.092
7.118
7.261
7.288
7.350
7.389
7.419
7.444
7.529
7.580
7.603
7.746
7.795
7.820



Current Data Parameters
NAME VM-OEt-COM
EXPNO 3
PROCNO 1
F2 - Acquisition Parameters
Date_ 20110627
Time 17.56
INSTRUM spect
PROBHD 5 mm DUL 1230
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 5
DS 5
SWH 6172.832 Hz
FIDRES 0.1094130 Hz
AQ 5.3084660 sec
RG 322.5
DW 81.000 usec
DE 6.00 usec
TE 300.2 K
TD0 1.0000000 sec
CHANNEL f1
NUC1 1H
P1 13.10 usec
PL1 0.00 dB
SFO1 300.1318534 MHz
F2 - Processing parameters
SI 32768
SF 300.1300067 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00





Current Data Parameters
 NAME VM-06t-COUM
 EXPNO 2
 PROCNO 1

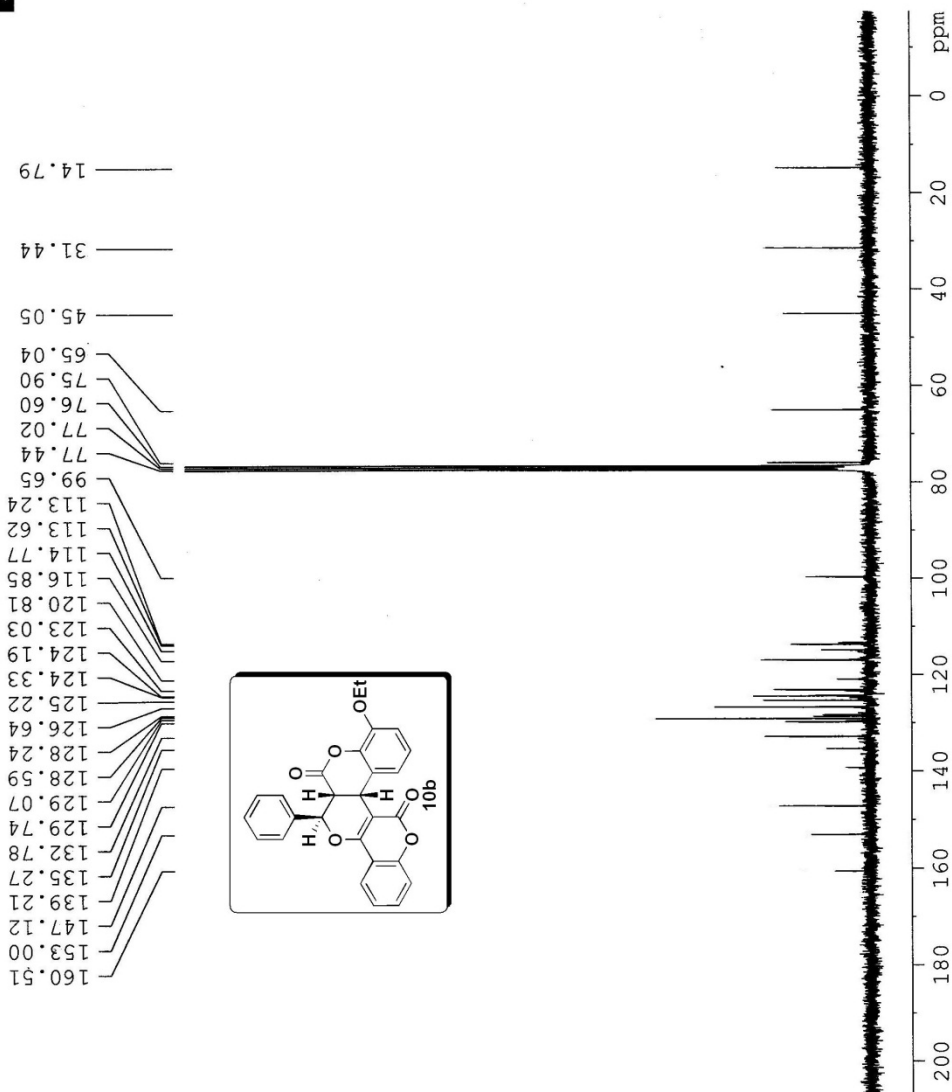
F2 - Acquisition Parameters
 Date_ 20110627
 Time_ 16.38

INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 1000
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.8219508 sec
 RG 574.7
 DW 27.800 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.0000000 sec
 d11 0.0300000 sec
 DELTA 1.8999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.30 usec
 PL1 0.00 dB
 SFO1 75.4752953 MHz

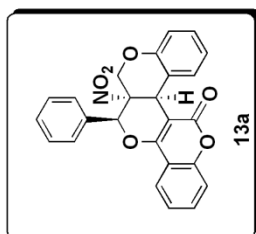
===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 FCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.68 dB
 PL13 16.00 dB
 SFO2 300.1312005 MHz

F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40





7.831
7.798
7.769
7.604
7.582
7.556
7.346
7.320
7.297
7.266
7.231
7.206
7.133
7.109
7.083
6.956
6.931
6.890
6.865
6.652
6.626
5.829
5.236
4.798
4.755
4.569
4.527

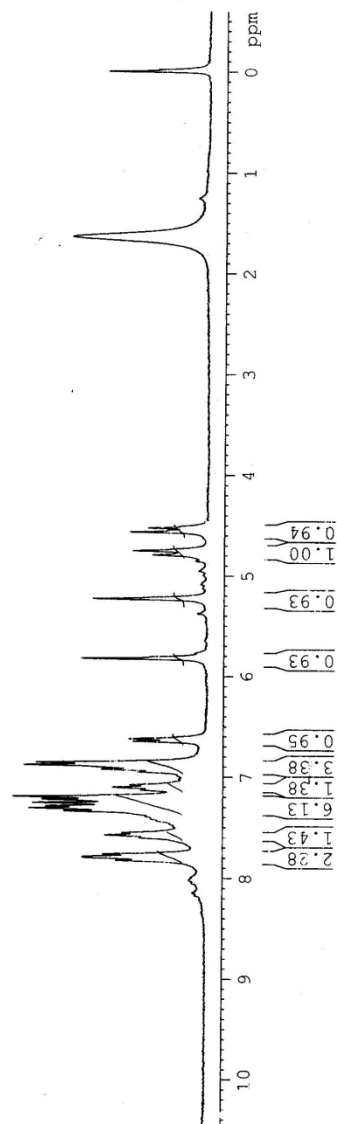


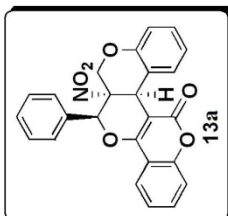
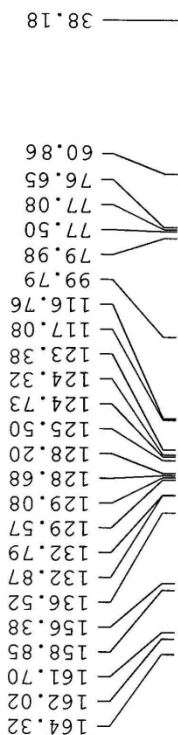
Current Data Parameters
NAME MS-148
EXPNO 3
PROCNO 1

F2 - Acquisition Parameters
Date_ 20100811
Time_ 10:37
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 6172.839 Hz
FIDRES 0.094190 Hz
AQ 5.3084660 sec
RG 322.5
RW 81.000 usec
TE 300.2 K
DE 600.135 sec
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13
P1 13.15 usec
PL1 0.00 dB
SF01 300.1318534 MHz

F2 - Processing Parameters
SI 32768
SF 300.130058 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00





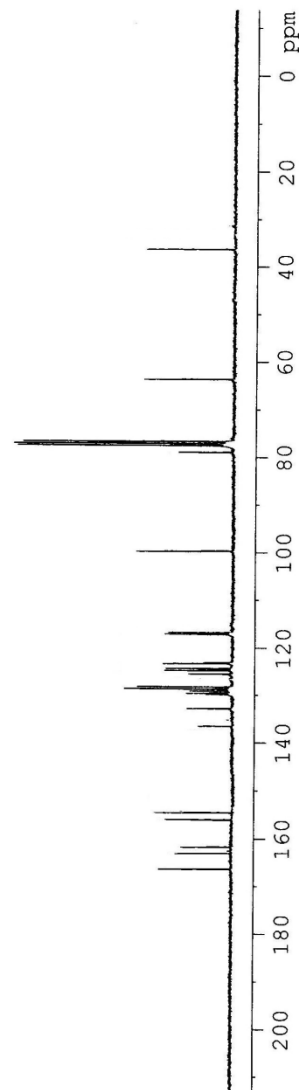
Current Data Parameters
NAME MGS-118
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20100817
Time 16.00
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 1000
DS 4
SWH 17985.611 Hz
FIDRES 0.274439 Hz
AQ 1.8219508 sec
RG 512
DW 27.800 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.30 usec
PL1 0.00 dB
SFO1 75.4752953 MHz

===== CHANNEL f2 =====
CPDPRG2 waitz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 16.00 dB
PL13 16.00 dB
SFO2 300.1312005 MHz

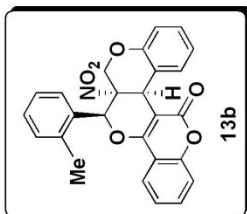
F2 - Processing parameters
SI 32768
SF 75.4677490 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



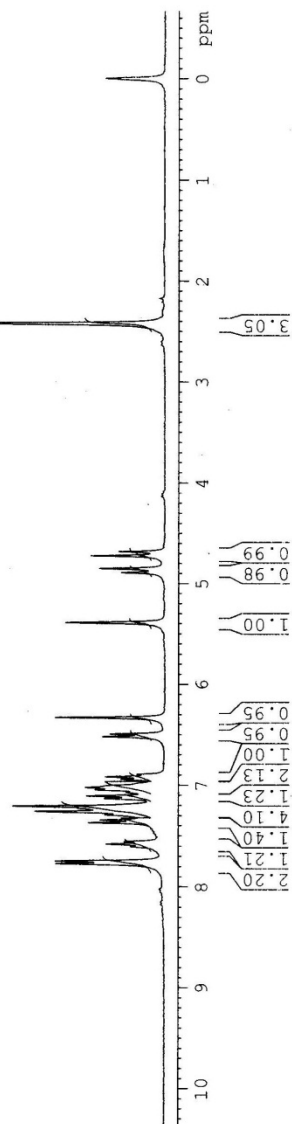


2.424

7.775
7.749
7.606
7.581
7.556
7.371
7.344
7.262
7.210
7.133
7.107
7.072
7.048
7.025
6.943
6.920
6.894
6.523
6.496
6.333
6.392
5.392
4.894
4.853
4.726
4.685



Current Data Parameters
NAME PM-11-72
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100824
Time_ 11.22
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TOTALS 16
SOLVENT CDCl3
NS 16
DS 2
SWH 6172.839 Hz
FIDRES 0.094190 Hz
AQ 5.3084660 sec
RG 655.200
DM 81.000 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec
TD0 1
===== CHANNEL f1 =====
NUC1 1H
P1 13.15 usec
PL1 0.00 dB
SFO1 300.1318534 MHz
F2 - Processing parameters
SI 32768
SF 300.1300062 MHz
WDW EM
SSB 0
LB 0.3 Hz
GB 0
PC 1.00





Current Data Parameters
NAME PW-II-76
EXFNO 1
PROCNO 1

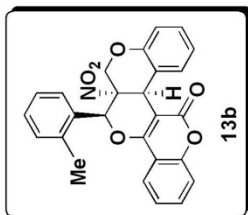
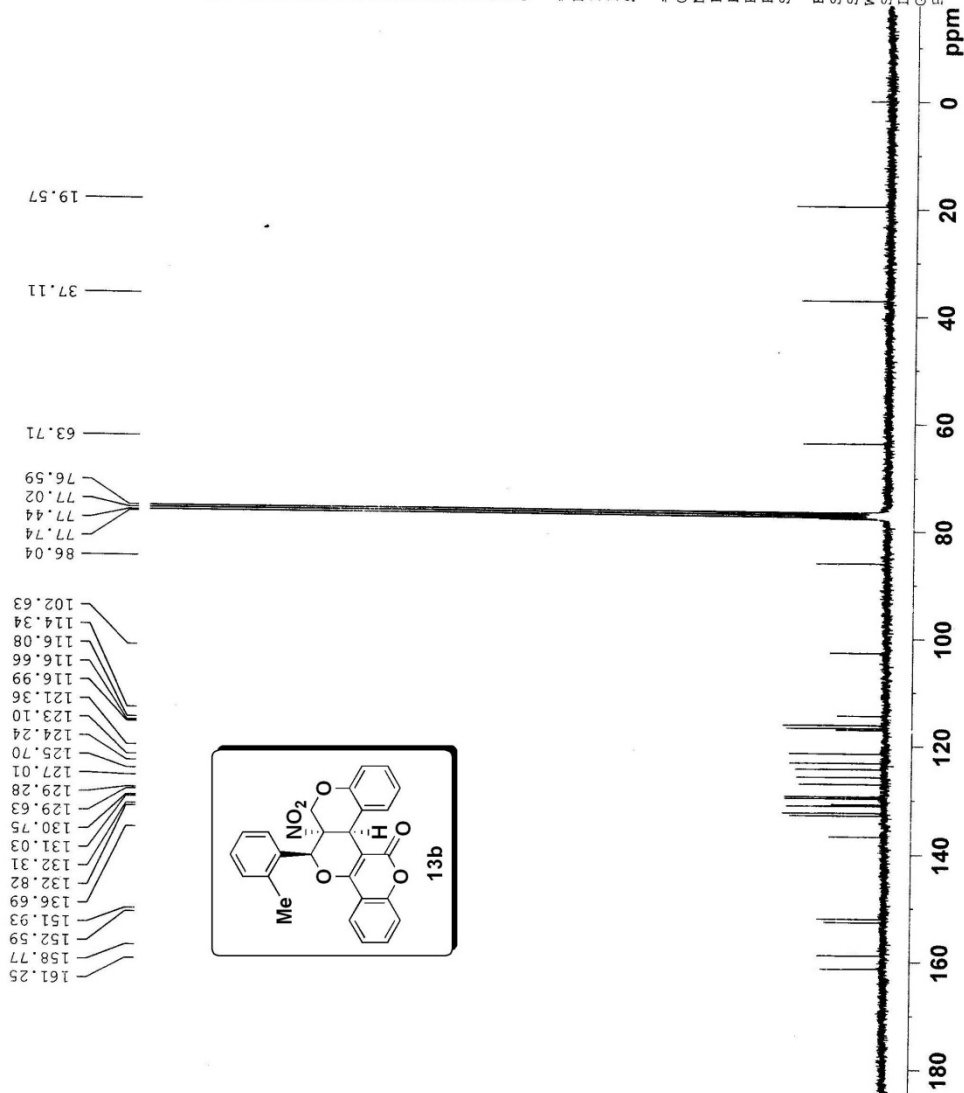
F2 - Acquisition Parameters

Date_ 20100825
Time_ 1.33
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
ID 65536
SOLVENT CDCl3
NS 1876
DS 4
SWH 17985.611 Hz
FIDRES 0.274439 Hz
AQ 1.8219508 sec
RG 724.1
DW 27.800 usec
DE 6.00 usec
TE 300.0 K
D1 2.0000000 sec
d11 0.0300000 sec
DELTA 1.8999998 sec
TDO 1

===== CHANNEL f1 =====
NUC1 13C
P1 7.40 usec
PL1 -2.00 dB
SFO1 75.4752953 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.68 dB
PL13 16.00 dB
SFO2 300.1312005 MHz

F2 - Processing parameters
SI 32768
SF 75.4677490 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40





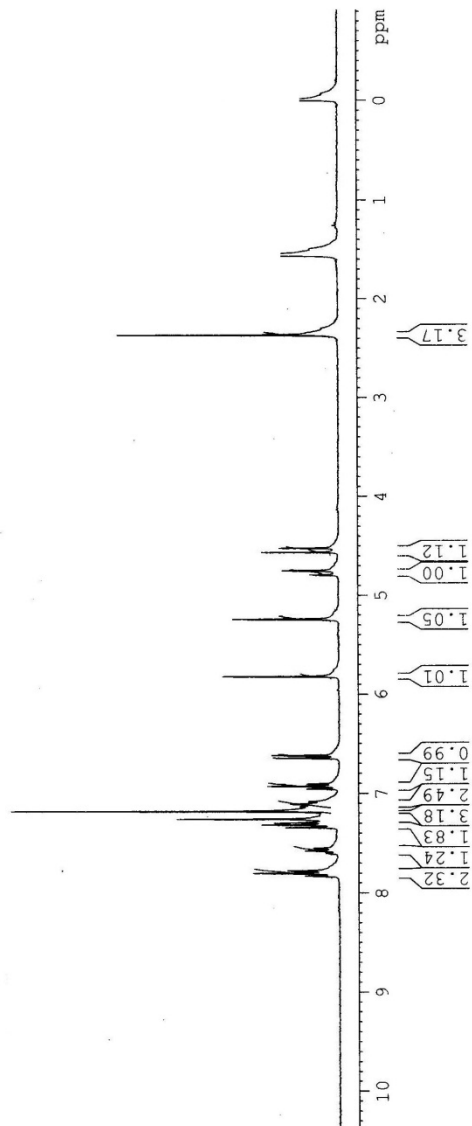
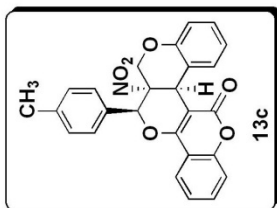
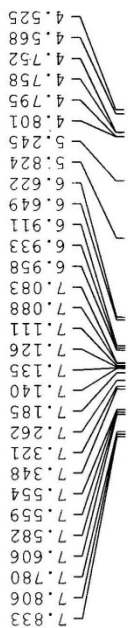
Current Data Parameters
NAME: FM-T1-73
EXPNO: 2
PROCNO: 1

F2 - Acquisition Parameters
Date_: 20100824
Time: 11:12
INSTRUM: spect
PROBHD: 5 mm DUL 13C-1
PULPROG: zg30
TD: 65536
SOLVENT: CDCl3
NS: 12
DS: 2
SWH: 6172.839 Hz
SF: 0.034190 Hz
AQ: 5.3084660 sec
RG: 574.7
DW: 81.000 usec
DE: 60.00 usec
TE: 300.0 K
D1: 1.00000000 sec
TD0: 1

===== CHANNEL F1 =====
NUC1: 13C
P1: 13.15 usec
PL1: 0.00 dB
SFO1: 300.1318534 MHz

F2 - Processing parameters
SI: 32768
SF: 300.130062 MHz
WDW: EM
SSB: 0
LB: 0.30 Hz
GB: 0
PC: 1.00

2.371





Current Data Parameters
 NAME PW-II-73
 EXPNO 3
 PROCNO 1

F2 - Acquisition Parameters

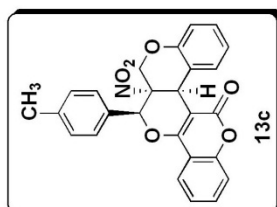
Date_ 20100825
 Time 7.48
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 5488
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.8219508 sec
 RG 362
 DW 27.800 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.0000000 sec
 d11 0.0300000 sec
 DELTA 1.8999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 7.40 usec
 PL1 -2.00 dB
 SFO1 75.4752953 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.68 dB
 PL13 16.00 dB
 SFO2 300.1312005 MHz

F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 WDW EM
 SSB 0
 GB 1.00 Hz
 PC 1.40

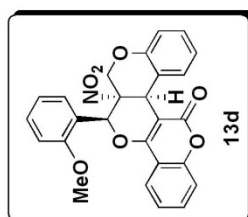
160.50
 158.27
 152.55
 152.20
 140.27
 133.60
 132.81
 129.59
 129.47
 128.40
 126.65
 124.23
 122.93
 121.00
 116.65
 116.27
 116.01
 114.32
 103.25
 86.65
 81.27
 77.43
 77.01
 76.59
 62.15
 38.36
 30.93
 21.25



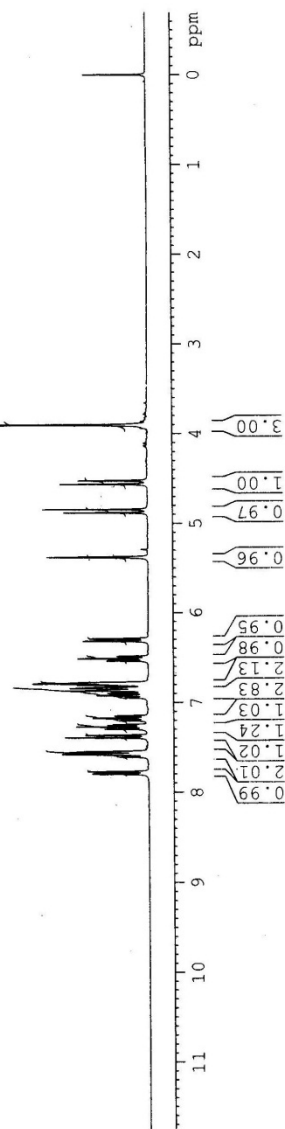
180 160 140 120 100 80 60 40 20 0 ppm



3.903
4.525
4.564
4.844
4.883
5.378
6.293
6.317
6.320
6.488
6.513
6.539
6.781
6.788
6.792
6.801
6.807
6.843
6.859
6.863
6.872
6.895
6.900
6.925
6.946
7.149
7.154
7.178
7.202
7.207
7.250
7.258
7.274
7.300
7.368
7.395
7.556
7.561
7.581
7.609
7.614
7.770
7.775
7.797



Current Data Parameters
NAME NSK-X-2-One-Melt
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100827
Time 10.13
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 2
DS 2
SWH 6172.839 Hz
FIDRES 0.094190 Hz
AQ 5.3084660 sec
RG 768
AQ 81.000 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec
D1 1
===== CHANNEL f1 =====
NUC1 1H
P1 13.15 usec
PL1 0.00 dB
SFO1 300.1318534 MHz
F2 - Processing Parameters
SI 32768
SF 300.1300070 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00





Current Data Parameters
 NAME NSK-X-2-One-Welt
 EXPNO 2
 PROCNO 1

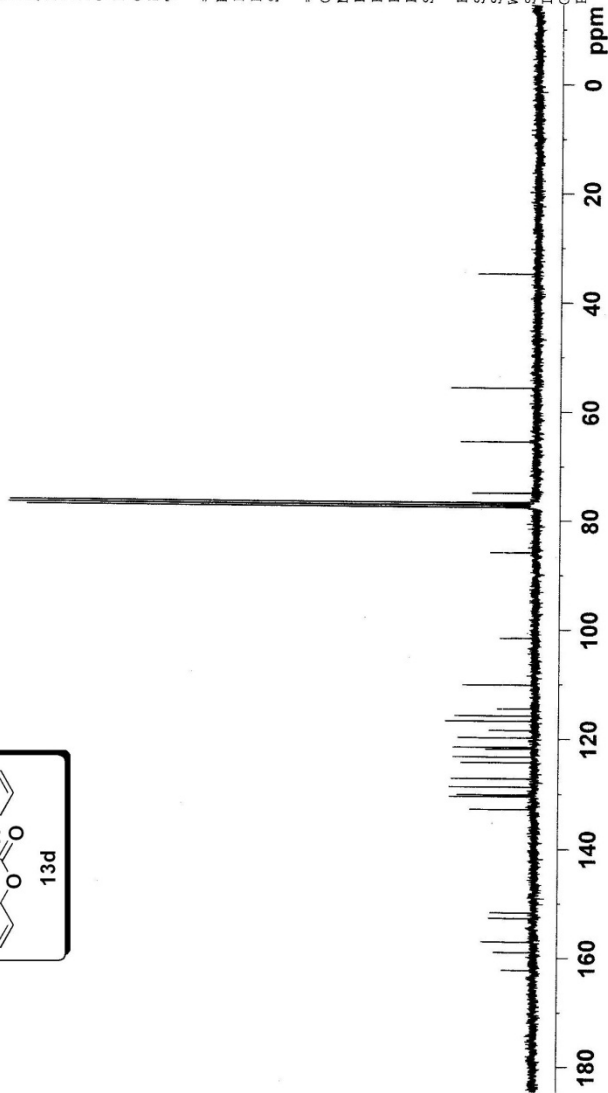
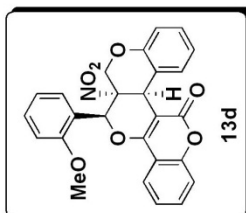
F2 - Acquisition Parameters
 Date_ 20100827
 Time_ 10.18
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65836
 SOLVENT CDCl3
 NS 176
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.8219508 sec
 RG 362
 DW 27.800 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

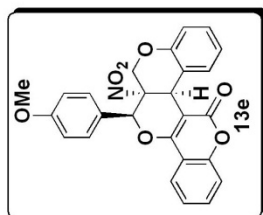
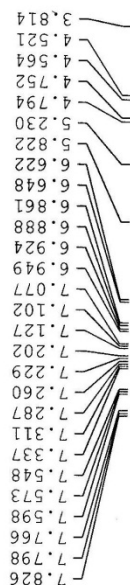
===== CHANNEL f1 =====
 NUC1 13C
 P1 7.40 usec
 PL1 -2.00 dB
 SFO1 75.4752953 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.68 dB
 PL13 16.00 dB
 SFO2 300.1312005 MHz

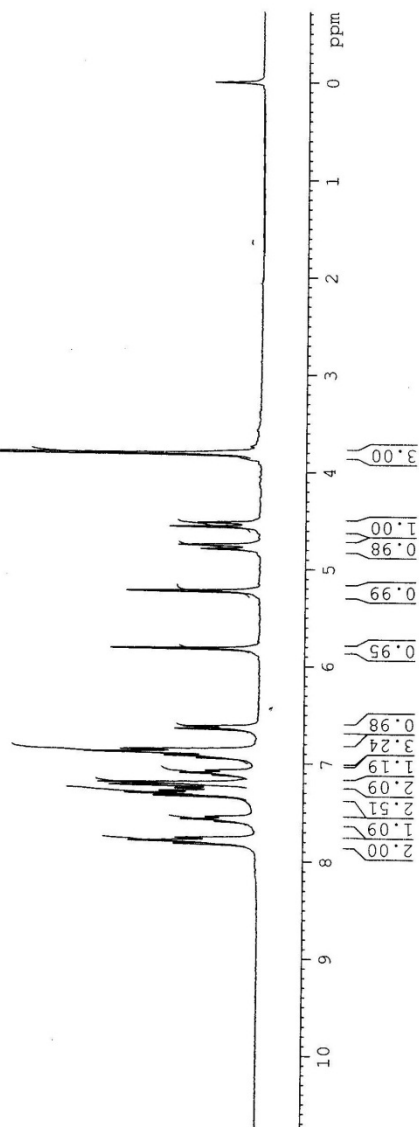
F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 EM 0
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

162.20
158.97
157.04
152.71
151.67
132.75
130.43
130.10
128.69
127.17
124.26
123.21
121.79
121.45
119.73
118.39
116.71
115.76
114.47
110.08
101.50
85.80
77.46
77.04
76.62
74.84
65.44
55.58
34.76





Current Data Parameters	
NAME	PN-11-4OME
EXPNO	2
FPROGNO	1
F2 - Acquisition Parameters	
Date_	20100919
Time	000819
INSTRUM	HFMRB
PULPROG	zgpg30
TD	65536
SOLVENT	CDCl3
NS	2
DS	2
SWH	6172.836 Hz
FIDRES	0.094190 Hz
AQ	5.3084660 sec
RG	143.7
DW	81.000 usec
DE	6.00 usec
TE	300.2 K
TD0	1.00000000 sec
CHANNEL f1 1H	
MUCL	13.13 usec
F1	500.131533 MHz
NUC1	13C
VSFO1	300.1318534 MHz
F2 - Processing parameters	
SI	32768
SF	300.1300065 MHz
WDW	EM
SSB	0.30 Hz
GB	0
PC	1.00





Current Data Parameters
NAME PM-II-40ME
EXPNO 3
PROCNO 1

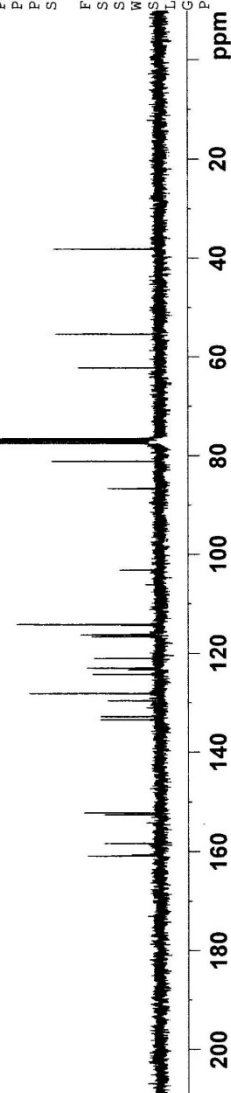
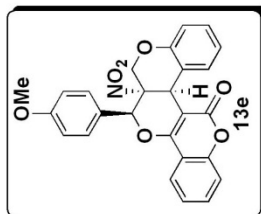
F2 - Acquisition Parameters
Date_ 20100819
Time 16.03
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 152
DS 4
SWH 17985.611 Hz
FIDRES 0.274439 Hz
AQ 1.8219508 sec
RG 362
DW 27.800 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TDO 1

===== CHANNEL f1 =====
NUC1 13C
PI 7.40 usec
PL1 -2.00 dB
SFO1 75.4752953 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.68 dB
PL13 16.00 dB
SFO2 300.1312005 MHz

F2 - Processing parameters
SI 32768
SF 75.4677490 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

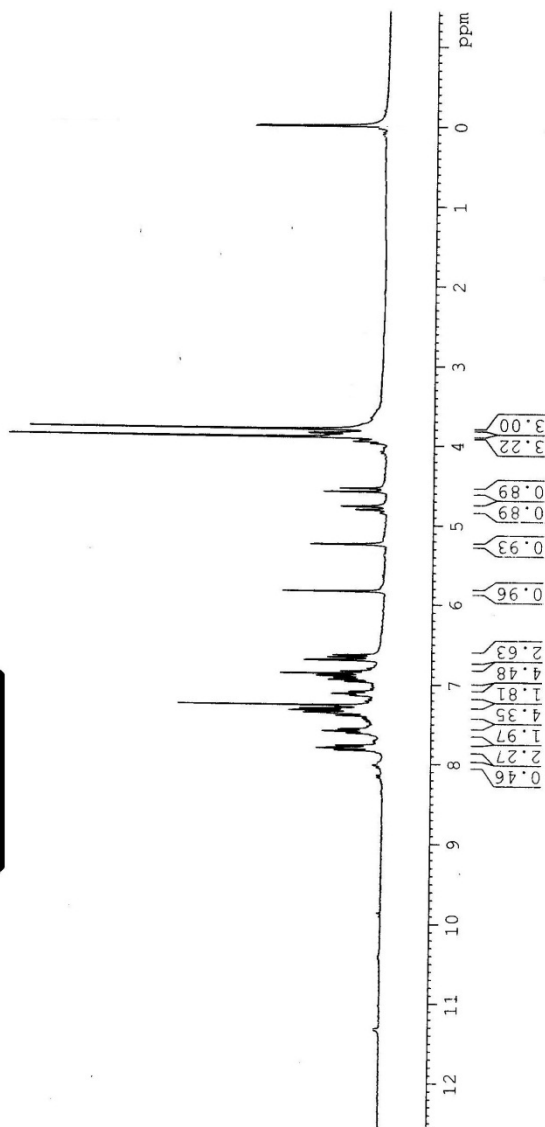
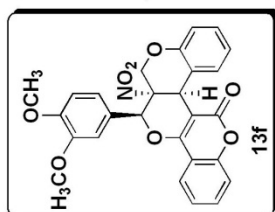
160.84
158.31
152.55
152.16
133.44
132.81
129.58
124.24
123.30
122.95
121.01
116.65
116.27
114.32
114.18
103.15
86.65
81.14
77.46
77.04
76.61
62.24
55.39
38.21





Current Data Parameters
 NAME PM-II-68
 EXPNO 1
 PROCNO 1
 F2 - Acquisition Parameters
 Date 20100820
 Time 15.22
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 6172.839 Hz
 FIDRES 0.094190 Hz
 AQ 5.308460 sec
 RG 322
 DW 81.000 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.00000000 sec
 D10 1
 ===== CHANNEL f1 =====
 NUC1 1H
 P1 13.15 usec
 PL1 0.00 dB
 SFO1 300.1318534 MHz
 F2 - Processing parameters
 SI 32768
 SF 300.130052 MHz
 MDW EM
 SSB 0
 GB 0.3 Hz
 PC 1.00

7.831
7.803
7.771
7.717
7.617
7.590
7.565
7.396
7.369
7.356
7.329
7.305
7.141
7.119
7.094
6.968
6.942
6.897
6.892
6.866
6.838
6.700
6.662
6.636
5.835
5.243
4.807
4.764
4.583
4.540
3.900
3.801





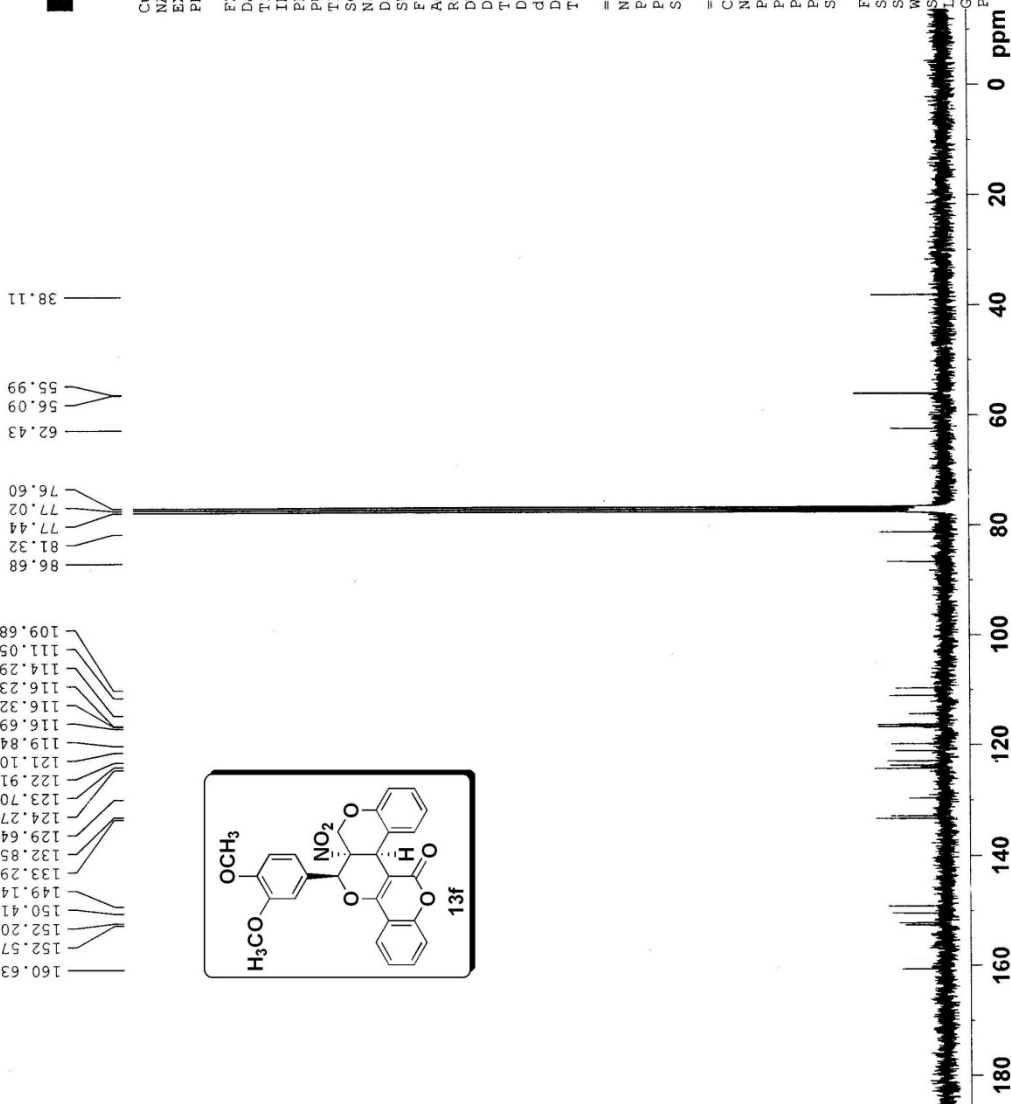
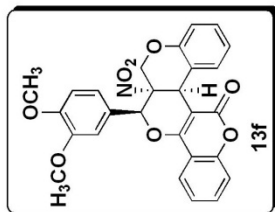
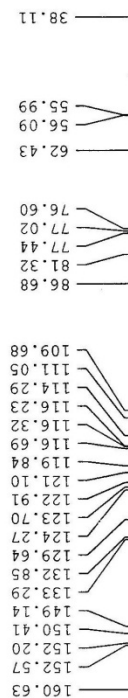
Current Data Parameters
 NAME PN-II-68
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20100823
 Time 12.47
 INSTRUM spect
 PROBD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 1000
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.8219508 sec
 RG 362
 DW 27.800 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 7.40 usec
 PL1 -2.00 dB
 SFO1 75.4752953 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.68 dB
 PL13 16.00 dB
 SFO2 300.1312005 MHz

F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 EM 0
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.3



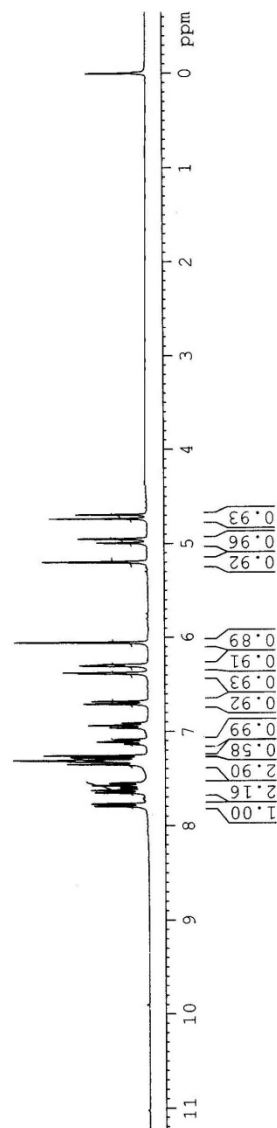
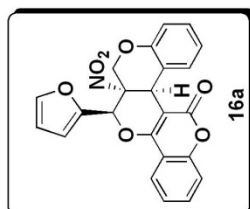


Current Data Parameters
 NAME NSK-X-Furfuryl-Melt
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20100827
 Time_ 10.04
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 13
 DS 2
 SWH 6172.839 Hz
 FIDRES 0.094190 Hz
 AQ 5.305460 sec
 RG 327.68
 DM 81.000 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.0000000 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 13.15 usec
 PL1 0.00 dB
 SFO1 300.1318534 MHz
 F2 - Processing parameters
 SI 32768
 SF 300.1300059 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

7.801
7.797
7.774
7.770
7.656
7.630
7.607
7.603
7.579
7.555
7.551
7.354
7.326
7.312
7.285
7.262
7.141
7.137
7.113
7.089
6.963
6.938
6.913
6.709
6.682
6.387
6.376
6.307
6.297
6.290
6.056
5.199
4.996
4.953
4.737
4.694





Current Data Parameters
 NAME NSK-X-Furyl-melt
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20100828
 Time_ 10.08
 INSTRUM spect
 PROBD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 781
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQC 1.8219508 sec
 RG 362
 DW 27.800 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

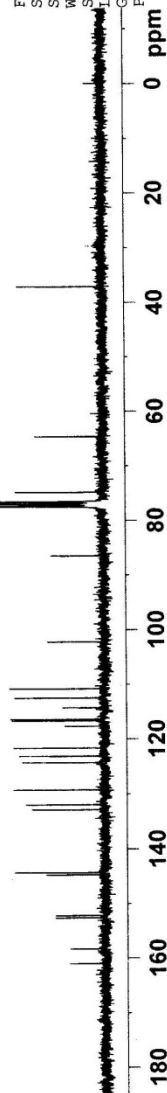
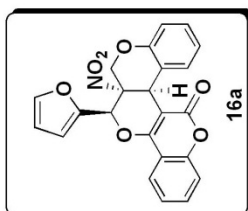
===== CHANNEL f1 =====
 NUC1 13C
 P1 7.40 usec
 PL1 -2.00 dB
 SF01 75.4752953 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.68 dB
 PL13 16.00 dB
 SF02 300.1312005 MHz

F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 WDW EM
 SSB 0
 LB 1.00-Hz
 GB 1.40
 PC

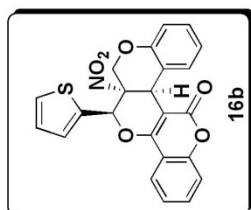
160.98
 158.29
 152.58
 152.16
 144.71
 144.29
 132.83
 131.93
 129.26
 124.25
 123.08
 121.59
 117.64
 116.65
 116.38
 114.26
 112.45
 110.76
 102.15

86.52
 77.44
 77.02
 76.60
 74.82
 64.63
 37.12

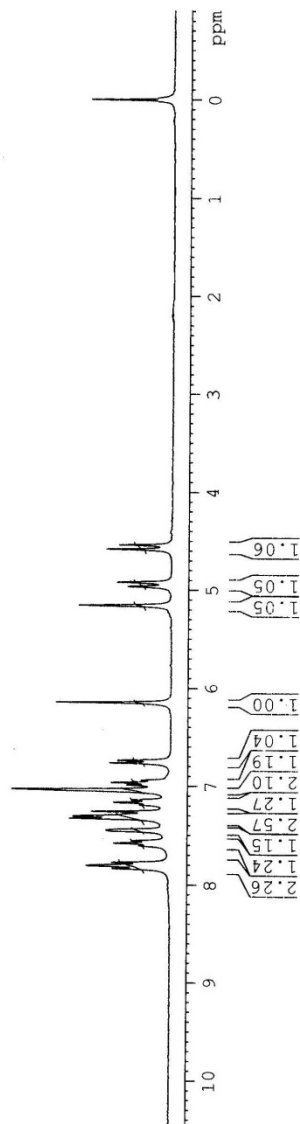




7.840
7.812
7.779
7.779
7.609
7.584
7.559
7.457
7.450
7.333
7.312
7.262
7.195
7.170
7.145
7.039
6.993
6.969
6.944
6.769
6.742
6.149
5.161
4.968
4.925
4.586
4.542



Current Data Parameters
NAME FM-11-75
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100824
Time 16:28
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 13
DS 2
SWH 6172.839 Hz
FIDRES 0.094190 Hz
AQ 5.3084660 sec
RG 455.1
FM 819.00 usec
DE 6.00 usec
TE 300.0 K
D1 1.0000000 sec
TD0 1
===== CHANNEL f1 =====
NUC1 1H
P1 13.15 usec
PL1 0.00 dB
SFO1 300.1318534 MHz
F2 - Processing parameters
SI 32768
SF 300.1300058 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00





Current Data Parameters
 NAME PM-II-75
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20100824
 Time 23.09
 INSTRUM spect
 PROHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 1253
 DS 4
 SWH 17985.611 Hz
 FIDRES 0.274439 Hz
 AQ 1.8219508 sec
 RG 724.1
 DW 27.800 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 7.40 usec
 PL1 -2.00 dB
 SF01 75.4752953 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.68 dB
 PL13 16.00 dB
 SF02 300.1312005 MHz

F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 WDW EM
 SSB EM
 LB Hz
 GB
 PC 1.40

160.02
 157.99
 152.55
 152.51
 133.95
 132.91
 132.65
 129.90
 128.15
 127.62
 127.48
 124.31
 122.98
 121.18
 116.63
 116.52
 116.08
 114.09
 103.44

