Supporting Information

REACTION OF [60]FULLERENE WITH EPOXIDES UNDER PHOTO-IRRADIATION: SYNTHESIS OF C_{60}-FUSED TETRAHYDROFURAN DERIVATIVES

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2a: ^{1}H NMR (500 MHz, CS_2-$CDCl_3$) δ 8.38 (d, J = 7.4 Hz, 2H), 7.81 (d, J = 8.6 Hz, 2H), 7.61 (t, J = 7.4 Hz, 1H), 7.51 (t, J = 7.7 Hz, 2H), 6.96 (d, J = 8.7 Hz, 2H), 6.69 (s, 1H), 6.48 (s, 1H), 3.81 (s, 3H); ^{13}C NMR (125 MHz, CS_2-$CDCl_3$) δ 194.23 (C=O), 160.02 (aryl *C*), 151.53 (2C), 150.87, 150.50, 147.10, 147.07, 146.63, 146.27, 146.25 (2C), 146.23, 146.06 (2C), 145.99, 145.89, 145.85, 145.71, 145.63, 145.53, 145.48, 145.42, 145.37, 145.28, 145.26, 145.24, 145.23, 145.22, 145.10, 144.45, 144.39, 144.19, 144.18, 143.05, 142.93, 142.65 (3C), 142.63, 142.25 (2C), 142.14, 142.10 (2C), 142.09, 142.05 (2C), 141.82, 141.74, 141.61, 141.58, 140.20, 139.85, 139.73, 139.23, 137.11, 136.43 (2*C*), 136.15, 135.92, 133.84 (aryl *C*), 129.98 (2C, aryl *C*), 128.78 (2C, aryl *C*), 128.63 (2C, aryl *C*), 127.60 (aryl *C*), 114.20 (2C, aryl *C*), 92.47 (O*C*H), 92.10 (O*C*H), 78.80 (sp^3-*C* of C_{60}), 75.86 (sp^3-*C* of C_{60}), 55.02 (O*C*H_3); UV-vis ($CHCl_3$) λ_{max} nm (log ε) 258 (5.13), 311 (4.45), 430 (3.64), 698 (2.35); FT-IR ν/cm^{-1} (KBr) 2923, 2855, 1690, 1610, 1595, 1513, 1446, 1427, 1303, 1249, 1221, 1173, 1112, 1033, 1001, 965, 829, 804, 689, 574, 526; MS (-APCI) *m/z* 974;

3a: ^{1}H NMR (500 MHz, CS_2-$CDCl_3$) δ 8.25 (d, J = 7.9 Hz, 2H), 7.75 (d, J = 8.7 Hz, 2H), 7.59 (t, J = 7.4 Hz, 1H), 7.50 (t, J = 7.7 Hz, 2H), 7.37 (s, 1H), 7.35 (s, 1H), 6.92 (d, J = 8.8 Hz, 2H), 3.79 (s, 3H); ^{13}C NMR (125 MHz, CS_2-$CDCl_3$) δ 197.42 (C=O), 159.87, 155.08, 152.60, 152.28, 149.60, 147.22, 147.05, 146.33, 146.27, 146.21 (2C), 146.17, 146.06, 146.02, 145.93, 145.92, 145.91, 145.85, 145.57, 145.48, 145.44, 145.43, 145.34, 145.31, 145.29, 145.26, 145.17, 145.11, 144.47 (2C), 144.46, 144.07, 144.02, 143.21, 143.01, 142.66 (2C), 142.62, 142.60, 142.22, 142.18, 142.15, 142.14, 142.09 (2C), 142.03, 141.94 (2C), 141.84, 141.82, 141.60, 140.25, 140.08, 139.80, 139.27, 137.84, 136.56 (aryl *C*), 136.36, 135.93, 135.53, 134.03 (aryl *C*), 129.07 (2C, aryl *C*), 129.00 (2C, aryl *C*), 128.90 (2C, aryl *C*), 128.61 (aryl *C*), 114.01 (2C, aryl *C*), 92.02 (O*C*H), 87.28 (O*C*H), 78.53 (sp^3-*C* of C_{60}), 74.71 (sp^3-*C* of C_{60}), 55.02 (O*C*H_3); UV-vis ($CHCl_3$) λ_{max} nm (log ε) 258 (5.13), 311 (4.45), 430 (3.64), 698 (2.35); FT-IR ν/cm^{-1} (KBr) 2923, 2854, 1684, 1611, 1593, 1512, 1446, 1427, 1303, 1249, 1219, 1173, 1112, 1032, 1001, 974, 827, 804, 692, 575, 526; MS (-APCI) *m/z* 974;

3b: ^{1}H NMR (300 MHz, CS_2-$CDCl_3$) δ 8.28 (d, J = 7.4 Hz, 2H), 7.75 (d, J = 8.0 Hz, 2H), 7.62 (t, J = 7.4 Hz, 1H), 7.52 (t, J = 7.5 Hz, 2H), 7.42 (s, 1H), 7.40 (s, 1H), 7.25 (d, J = 8.0 Hz, 2H), 2.38 (s, 3H); ^{13}C NMR (75 MHz, CS_2-$CDCl_3$) δ 197.32 (C=O), 154.73, 152.21, 151.94, 149.31, 146.90, 146.74, 146.02, 145.96, 145.93, 145.89, 145.87, 145.75, 145.70, 145.61 (3C), 145.53, 145.27, 145.17, 145.12 (2C), 145.03, 145.01, 144.96, 144.95, 144.86, 144.80, 144.17 (2C), 144.12, 143.76, 143.70, 142.88, 142.70, 142.35 (2C), 142.30 (2C), 141.89, 141.87, 141.82 (2C), 141.77 (2C), 141.72, 141.61 (2C), 141.52 (2C), 141.28, 139.90, 139.76,

139.42, 138.94, 138.20, 137.48, 136.25, 136.02, 135.65, 135.22, 133.87 (aryl *C*), 133.28 (aryl *C*), 129.06 (2C, aryl *C*), 128.86 (2C, aryl *C*), 128.73 (2C, aryl *C*), 127.26 (2C, aryl *C*), 91.88 (O*C*H), 87.07 (O*C*H), 78.11 (sp^3-*C* of C_{60}), 74.45 (sp^3-*C* of C_{60}), 21.23 (*C*H_3); UV-vis ($CHCl_3$) λ_{max} nm (log ε) 257 (5.24), 312 (4.35), 430 (3.84), 695 (2.39); FT-IR ν/cm^{-1} (KBr) 2922, 2854, 1683, 1593, 1512, 1446, 1427, 1221, 1181, 1120, 969, 949, 883, 698, 574, 527; MS (-APCI) *m/z* 958;

3c: ^{1}H NMR (500 MHz, CS_2-$CDCl_3$) δ 8.25 (d, *J* = 7.2 Hz, 2H), 7.84 (d, *J* = 7.5 Hz, 2H), 7.60 (t, *J* = 7.4 Hz, 1H), 7.50 (t, *J* = 7.7 Hz, 2H), 7.42 (t, *J* = 7.5 Hz, 2H), 7.41 (s, 1H), 7.39 (s, 1H), 7.33 (t, *J* = 7.4 Hz, 1H); ^{13}C NMR (125 MHz, CS_2-$CDCl_3$) δ 197.31 (C=O), 154.94, 152.31, 152.06, 149.53, 147.19, 147.03, 146.32, 146.25, 146.20, 146.19, 146.15, 146.00 (2C), 145.91 (2C), 145.89, 145.69, 145.54, 145.47, 145.44, 145.42, 145.32, 145.30, 145.26, 145.24, 145.15, 145.10, 144.45, 144.44, 144.41, 144.03, 144.00, 143.18, 143.00, 142.64 (2C), 142.60, 142.59, 142.18, 142.16, 142.11 (2C), 142.06, 142.04, 142.01, 141.91, 141.89, 141.82, 142.81, 141.58, 140.20, 140.09, 139.68, 139.27, 137.82, 136.58 (aryl *C*), 136.50 (aryl *C*), 136.41, 135.95, 135.50, 13.04 (aryl *C*), 129.07 (2C, aryl *C*), 128.99 (2C, aryl *C*), 128.81 (aryl *C*), 128.61 (2C, aryl *C*), 127.53 (2C, aryl *C*), 92.10 (O*C*H), 87.34 (O*C*H), 78.31 (sp^3-*C* of C_{60}), 74.76 (sp^3-*C* of C_{60}); UV-vis ($CHCl_3$) λ_{max} nm (log ε) 257 (5.31), 312 (4.47), 430 (3.67), 695 (2.35); FT-IR ν/cm^{-1} (KBr) 2923, 2855, 1684, 1593, 1512, 1446, 1426, 1221, 1183, 1120, 970, 950, 882, 698, 575, 526; MS (-APCI) *m/z* 944;

2d: ^{1}H NMR (500 MHz, CS_2-$CDCl_3$) δ 8.34 (d, *J* = 7.3 Hz, 2H), 7.85 (d, *J* = 8.4 Hz, 2H), 7.61 (t, *J* = 7.4 Hz, 1H), 7.51 (t, *J* = 7.7 Hz, 2H), 7.42 (d, *J* = 8.5 Hz, 2H), 6.71 (s, 1H), 6.50 (s, 1H); ^{13}C NMR (125 MHz, CS_2-$CDCl_3$) δ 193.43 (C=O), 150.94, 150.63, 150.55, 150.13, 147.05, 147.03, 146.46, 146.22 (2C), 146.21 (2C), 146.02, 145.97, 145.86, 145.81, 145.74, 145.67, 145.50, 145.43, 145.37, 145.24, 145.23, 145.21, 145.19, 145.18 (3C), 145.08, 144.36, 144.35, 144.13, 144.08, 143.02, 142.90, 142.62 (2C), 142.61 (2C), 142.19, 142.12, 142.07, 142.04 (4C), 141.98, 141.70, 141.65, 141.56, 141.53, 140.19, 139.83, 139.69, 139.25, 136.92, 136.56, 136.27, 136.02, 135.99, 135.26 (aryl *C*), 134.16 (aryl *C*), 133.82 (aryl *C*), 129.82 (2C, aryl *C*), 129.02 (2C, aryl *C*), 128.62 (4C, aryl *C*), 91.80 (O*C*H), 91.73 (O*C*H), 78.31 (sp^3-*C* of C_{60}), 75.73 (sp^3-*C* of C_{60}); UV-vis ($CHCl_3$) λ_{max} nm (log ε) 257 (5.35), 312 (4.39), 430 (3.67), 695 (2.37); FT-IR ν/cm^{-1} (KBr) 2920, 2854, 1689, 1596, 1491, 1446, 1427, 1222, 1182, 1091, 1013, 966, 883, 826, 803, 767, 727, 688, 574, 527; MS (-APCI) *m/z* 978;

3d: ^{1}H NMR (500 MHz, CS_2-$CDCl_3$) δ 8.25 (d, *J* = 7.4 Hz, 2H), 7.80 (d, *J* = 8.4 Hz, 2H), 7.60 (t, *J* = 7.4 Hz, 1H), 7.50 (t, *J* = 7.7 Hz, 2H), 7.42 (s, 1H), 7.40 (d, *J* = 8.4 Hz, 2H), 7.39 (s, 1H); ^{13}C NMR (125 MHz, CS_2-$CDCl_3$) δ 197.31 (C=O), 154.76, 151.83, 151.77, 149.32, 147.25, 147.09, 146.37, 146.30, 146.25,

146.22, 146.06, 145.97 (2C), 145.96 (2C), 145.94, 145.52, 145.51 (3C), 145.46, 145.38, 145.37, 145.30, 145.28, 145.19, 145.17, 144.49, 144.46, 144.43, 144.03, 143.96, 143.23, 143.04, 142.70, 142.69, 142.67, 142.65, 142.18, 142.16, 142.14, 142.10 (2C), 142.05, 142.02, 141.99, 141.91, 141.85 (2C), 141.64, 140.18, 139.85, 139.33, 137.80, 136.50, 136.45, 136.08, 135.43, 135.25 (aryl *C*), 134.93 (aryl *C*), 134.15 (aryl *C*), 129.13 (2C, aryl *C*), 128.99 (2C, aryl *C*), 128.87 (2C, aryl *C*), 128.81 (2C, aryl *C*), 91.40 (O*C*H), 87.31 (O*C*H), 78.13 (sp^3-*C* of C_{60}), 74.74 (sp^3-*C* of C_{60}); UV-vis ($CHCl_3$) λ_{max} nm (log ε) 257 (5.21), 312 (4.45), 430 (3.74), 695 (2.45); FT-IR ν/cm^{-1} (KBr) 2921, 2854, 1682, 1594, 1490, 1445, 1427, 1219, 1182, 1088, 1013, 974, 949, 883, 825, 803, 765, 721, 684, 574, 527; MS (-APCI) *m/z* 978.

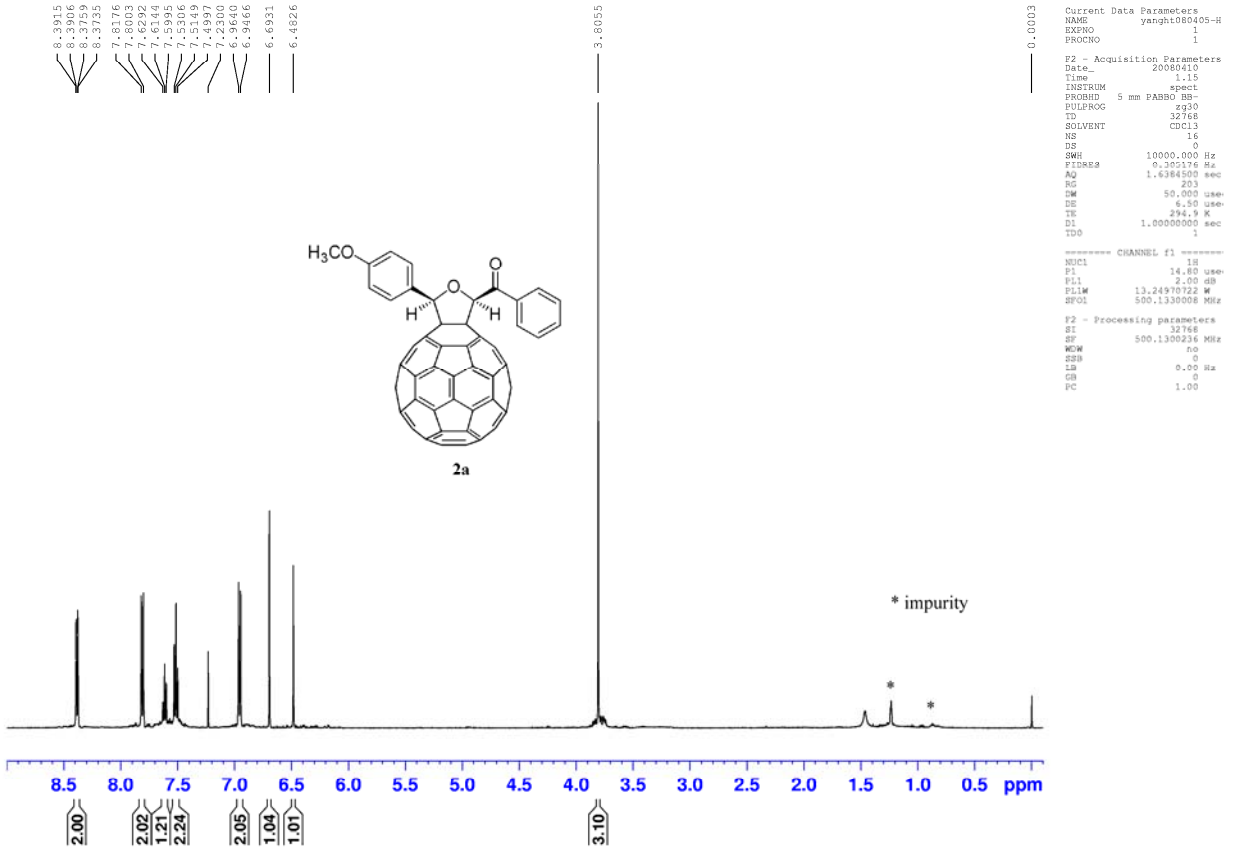
2f: ^{1}H NMR (500 MHz, CS_2-$CDCl_3$) δ 8.43 (d, J = 8.9 Hz, 2H), 7.91 (d, J = 7.5 Hz, 2H), 7.46 (t, J = 7.7 Hz, 2H), 7.38 (t, J = 7.4 Hz, 1H), 6.99 (d, J = 8.9 Hz, 2H), 6.66 (s, 1H), 6.52 (s, 1H), 3.90 (s, 3H); ^{13}C NMR (125 MHz, CS_2-$CDCl_3$) δ 191.97 (C=O), 164.16 (aryl *C*), 151.38, 151.34, 151.02, 150.70, 147.08 (2C), 146.72, 146.25 (4C), 146.10, 146.05, 145.99, 145,89, 145.85, 145.70, 145.54, 145.52, 145.50, 145.41, 145.39, 145.30, 145.24 (2C), 145.21 (2C), 145.12, 144.42 (2C), 144.21, 144.16, 143.05, 142.93, 142.64 (4C), 142.27, 142.25, 142.16, 142.11 (2C), 142.04 (2C), 141.79, 141.77, 141.61, 141.59, 140.15, 139.80, 139.72, 139.33, 136.96, 136.54, 136.06, 136.02, 135.69, 132.47 (2C, aryl *C*), 129.27 (aryl *C*), 129.01 (aryl *C*), 128.80 (2C, aryl *C*), 127.46 (2C, aryl *C*), 113.92 (2C, aryl *C*), 92,62 (O*C*H), 92.32 (O*C*H), 78.57 (sp^3-*C* of C_{60}), 76.03 (sp^3-*C* of C_{60}), 55.30 (O*C*H_3); UV-vis ($CHCl_3$) λ_{max} nm (log ε) 258 (5.13), 311 (4.45), 430 (3.64), 698 (2.35); FT-IR ν/cm^{-1} (KBr) 2923, 2855, 1682, 1598, 1509, 1454, 1421, 1309, 1261, 1238, 1173, 1112, 1027, 965, 904, 838, 730, 698, 574, 527; MS (-APCI) *m/z* 974;

3f: ^{1}H NMR (500 MHz, CS_2-$CDCl_3$) δ 8.25 (d, J = 8.9 Hz, 2H), 7.83 (d, J = 7.5 Hz, 2H), 7.45 (s, 1H), 7.41 (t, J = 7.6 Hz, 2H), 7.34 (s, 1H), 7.33 (t, J = 7.5 Hz, 1H), 6.96 (d, J = 8.9 Hz, 2H), 3.86 (s, 3H); ^{13}C NMR (125 MHz, CS_2-$CDCl_3$) δ 195.57 (C=O), 164.25 (aryl *C*), 155.10, 152.45, 152.19, 149.84, 147.19, 147.04, 146.31, 146.25, 146.23, 146.20, 146.15, 146.06, 146.00, 145.90 (3C), 145.76, 145.55, 145.44 (2C), 145.40, 145.34, 145.31, 145.26 (2C), 145.15, 145.10, 144.46 (2C), 144.43, 144.11, 144.04, 143.18, 143.08, 143.01, 142.65 (2C), 142.60 (2C), 142.21 (2C), 142.17, 142.07, 142.04, 142.01, 141.94, 141.89, 141.83, 141.81, 141.59, 140.18, 140.09, 139.67, 139.34, 137.85, 136/73, 136.52, 135.95, 135.47, 131.37 (2C, aryl *C*), 129.41 (aryl *C*), 128.75 (aryl *C*), 128.58 (2C, aryl *C*), 127.54 (2C, aryl *C*), 114.31 (2C, aryl *C*), 92.10 (O*C*H), 87.04 (O*C*H), 78.32 (sp^3-*C* of C_{60}), 74.93 (sp^3-*C* of C_{60}), 55.35 (O*C*H_3); UV-vis ($CHCl_3$) λ_{max} nm (log ε) 258 (5.13), 311 (4.45), 430 (3.64), 698 (2.35); FT-IR ν/cm^{-1} (KBr) 2922, 2853, 1676, 1596, 1571, 1509, 1454, 1421, 1307, 1260, 1230, 1171, 1114, 1027, 971, 904, 834, 769, 730, 698, 574, 526; MS

(-APCI) *m/z* 974;

2g: ^{1}H NMR (500 MHz, CS_2-$CDCl_3$) δ 8.41 (d, J = 8.6 Hz, 2H), 7.88 (d, J = 7.5 Hz, 2H), 7.52 (d, J = 8.6 Hz, 2H), 7.47-7.39 (m, 3H), 6.62 (s, 1H), 6.52 (s, 1H); ^{13}C NMR (125 MHz, CS_2-$CDCl_3$) δ 193.31 (C=O), 151.14 (2C), 150.70, 150.06, 147.12 (2C), 146.51, 146.28 (4C), 146.09, 146.01, 145.99 (2C), 145.89, 145.75, 145.55, 145.49 (2C), 145.42, 145.37, 145.30 (3C), 145.25 (2C), 145.12, 144.43, 144.39, 144.23, 144.18, 143.08, 142.98, 142.68 (4C), 142.29, 142.24, 142.13 (4C), 142.05 (2C), 141.77, 141.68 (3C), 140.80, 140.19, 139.92, 139.81, 139.37, 137.10, 136.36, 136.15, 136.01, 135.47, 134.61, 131.47 (2C, aryl *C*), 129.15 (aryl *C*), 129.02 (aryl *C*), 128.88 (2C, aryl *C*), 127.40 (2C, aryl *C*), 92.74 (O*C*H), 92.67 (O*C*H), 78.42 (sp^3-*C* of C_{60}), 75.94 (sp^3-*C* of C_{60}); UV-vis ($CHCl_3$) λ_{max} nm (log ε) 257 (5.35), 312 (4.39), 430 (3.67), 695 (2.37); FT-IR ν/cm^{-1} (KBr) 2920, 2854, 1691, 1586, 1487, 1454, 1427, 1401, 1216, 1177, 1091, 1013, 966, 911, 875, 830, 732, 698, 574, 527; MS (-APCI) *m/z* 978;

3g: ^{1}H NMR (500 MHz, CS_2-$CDCl_3$) δ 8.23 (d, J = 8.6 Hz, 2H), 7.85 (d, J = 7.5 Hz, 2H), 7.49 (d, J = 8.6 Hz, 2H), 7.43 (t, J = 7.7 Hz, 2H), 7.39 (s, 1H), 7.36 (s, 1H), 7.35 (t, J = 7.4 Hz, 1H); ^{13}C NMR (125 MHz, CS_2-$CDCl_3$) δ 196.54 (C=O), 154.79, 152.24, 152.02, 149.34, 147.30, 147.15, 146.42, 146.36, 146.29, 146.25, 146.20, 146.11 (3C), 146.01, 145.68, 145.62, 145.60, 145.53 (2C), 145.43, 145.35, 145.33 (2C), 145.26, 145.20, 144.54 (2C), 144.49, 144.07, 143.95, 143.28, 143.11, 142.75 (2C), 142.70 (2C), 142.24 (2C), 142.20, 142.17, 142.15, 142.11, 142.09, 142.00, 141.95 (3C), 141.65, 141.06, 140.31, 140.22, 139.77, 139.48, 137.92, 136.52 (aryl *C*), 136.41, 136.00, 135.62, 134.76 (aryl *C*), 130.40 (2C, aryl *C*), 129.53 (2C, aryl *C*), 128.97 (aryl *C*), 128.70 (2C, aryl *C*), 127.60 (2C, aryl *C*), 92.27 (O*C*H), 87.45 (O*C*H), 78.34 (sp^3-*C* of C_{60}), 74.79 (sp^3-*C* of C_{60}); UV-vis ($CHCl_3$) λ_{max} nm (log ε) 257 (5.21), 312 (4.45), 430 (3.74), 695 (2.45); FT-IR ν/cm^{-1} (KBr) 2920, 2854, 1683, 1586, 1487, 1453, 1426, 1400, 1217, 1178, 1091, 1012, 969, 948, 905, 883, 832, 730, 699, 575, 526; MS (-APCI) *m/z* 978.

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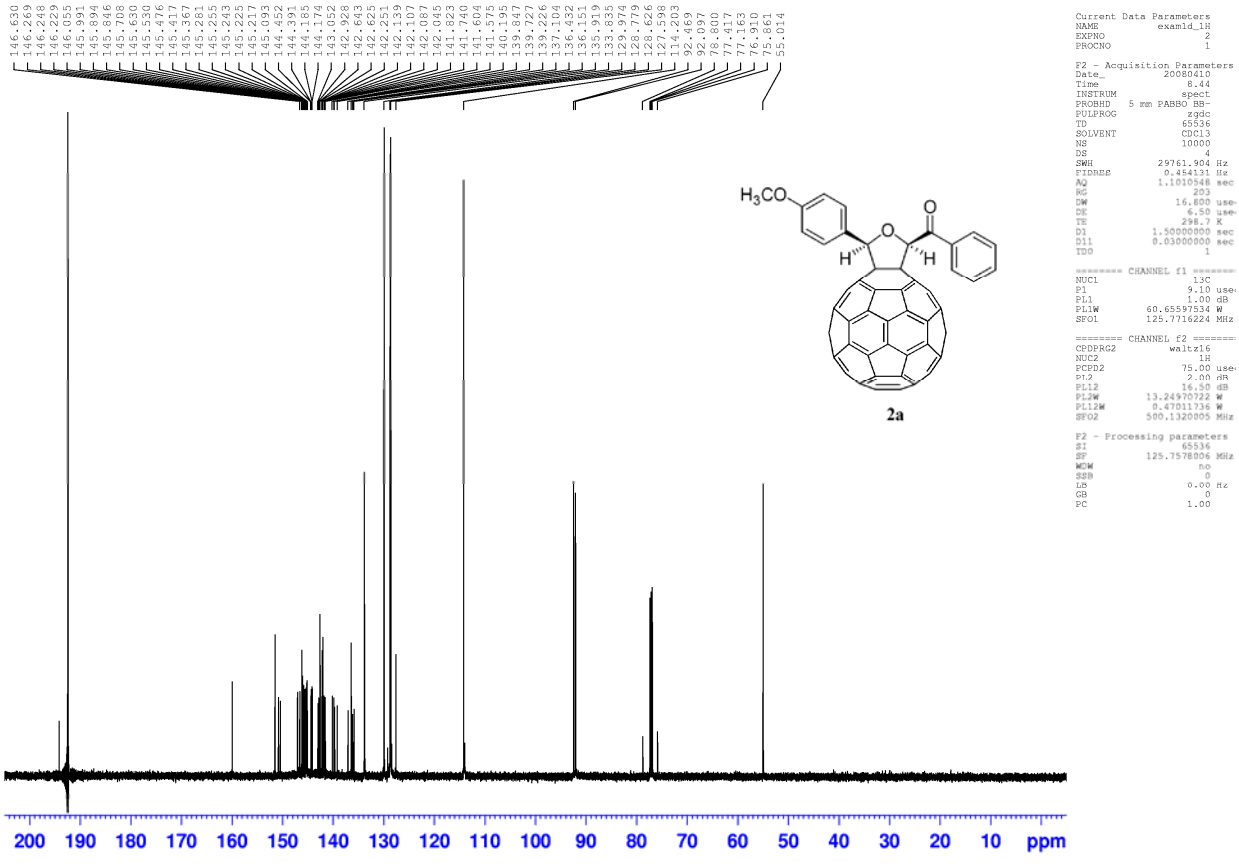


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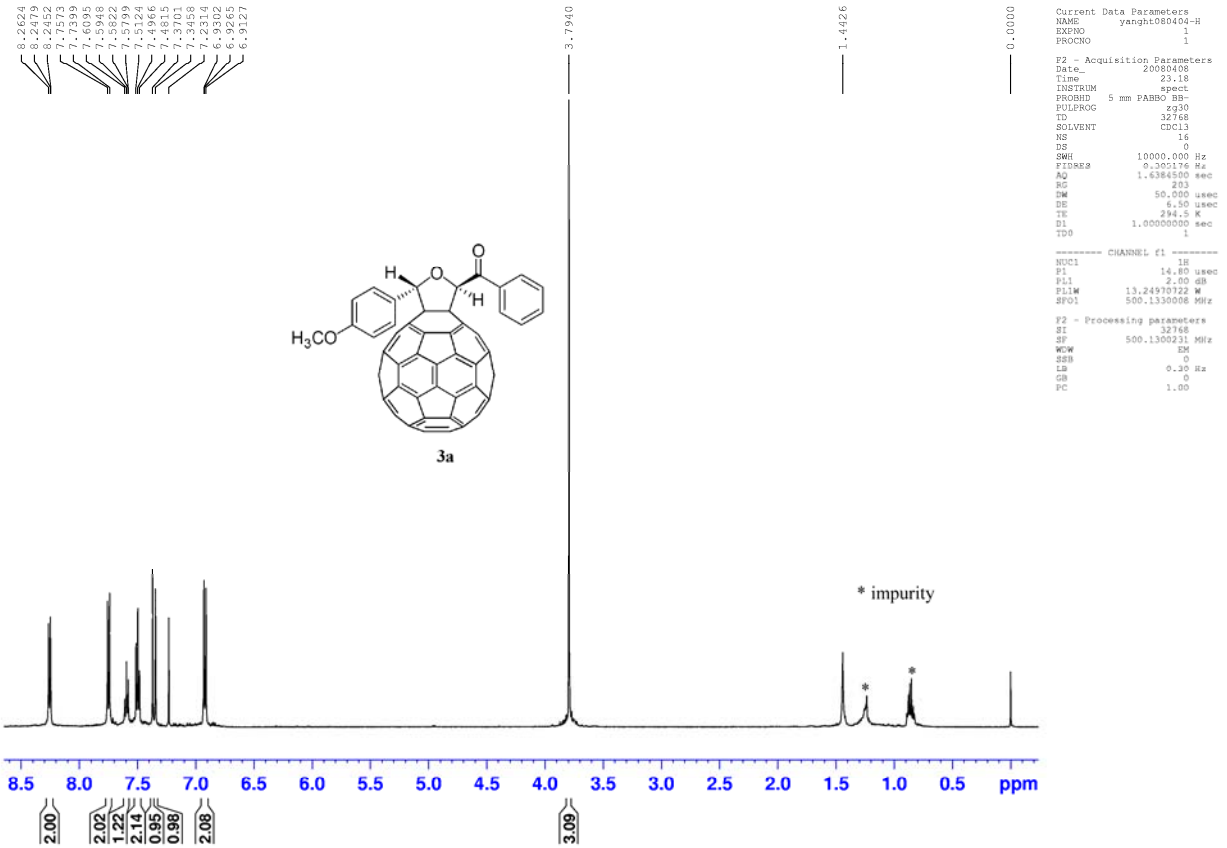


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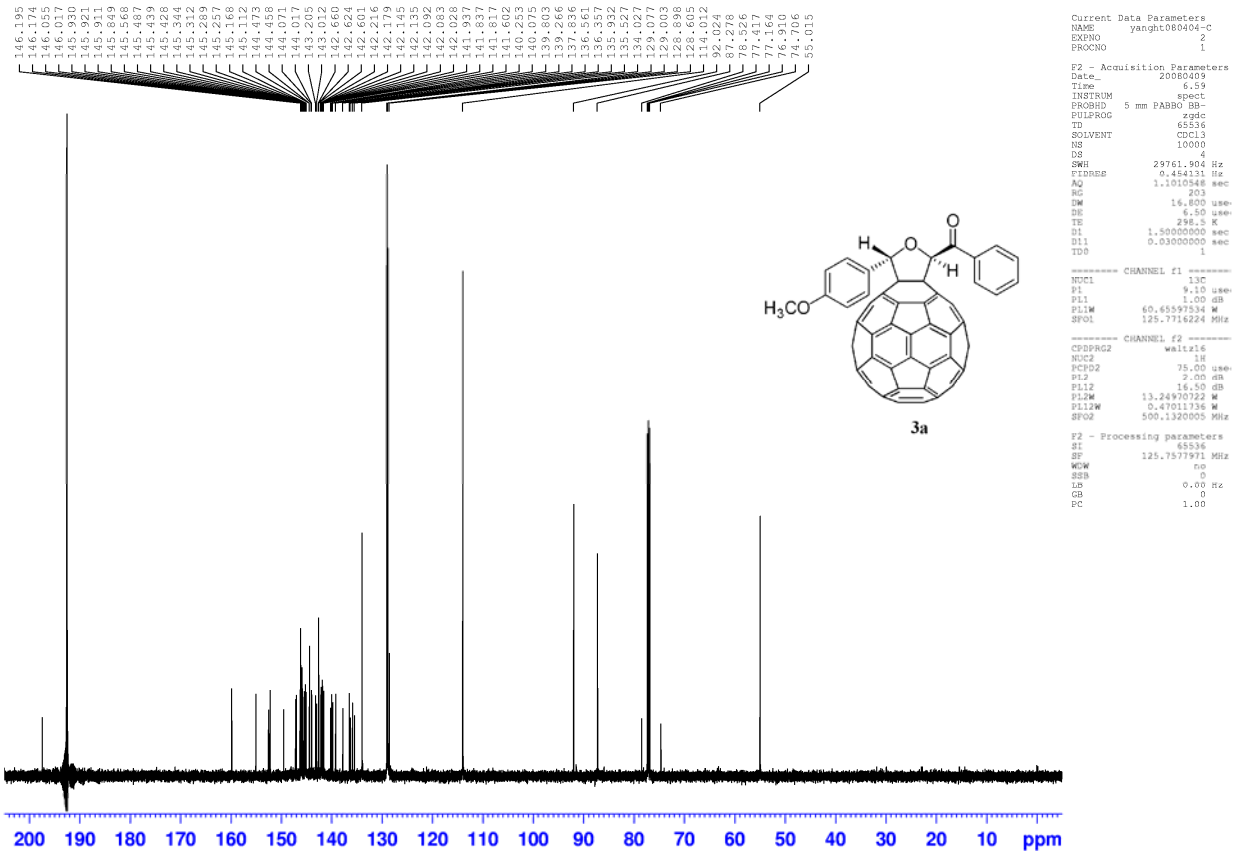


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FIDRES         0.454131 Hz
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RG                     203
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DE                 6.50 use
TE                298.5 K
D1             1.50000000 sec
D11            0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
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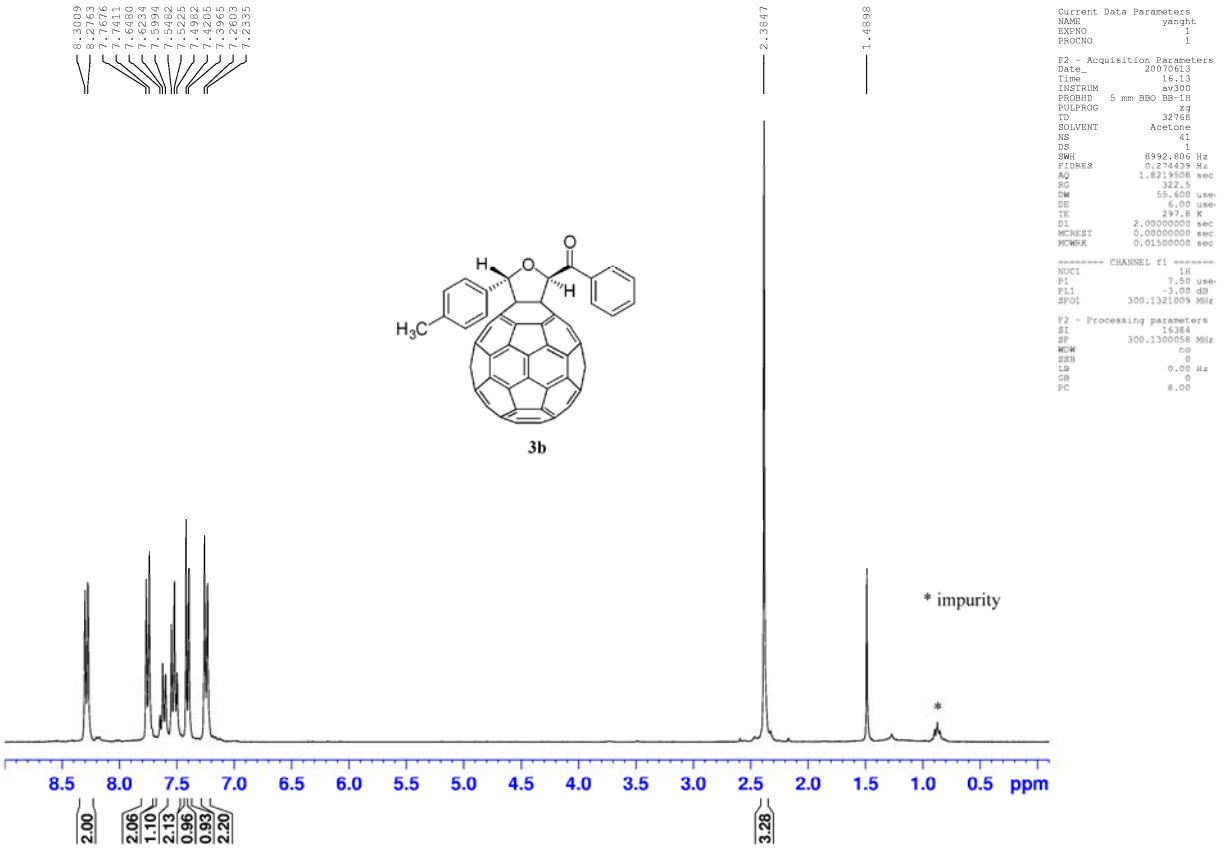
P1                   9.10 use
PL1                  1.00 dB
PL1W          60.65597534 W
SFO1         125.7716224 MHz

======== CHANNEL f2 ========
CPDPRG2           waltz16
NUC2                   1H
PCPD2                75.00 use
PL2                  2.00 dB
PL12                16.50 dB
PL2W          13.24970722 W
PL12W          0.47011736 W
SFO2         500.1320005 MHz

F2 - Processing parameters
SI                   65536
SF           125.7577971 MHz
WDW                     no
SSB                      0
LB                    0.00 Hz
GB                       0
PC                    1.00
```

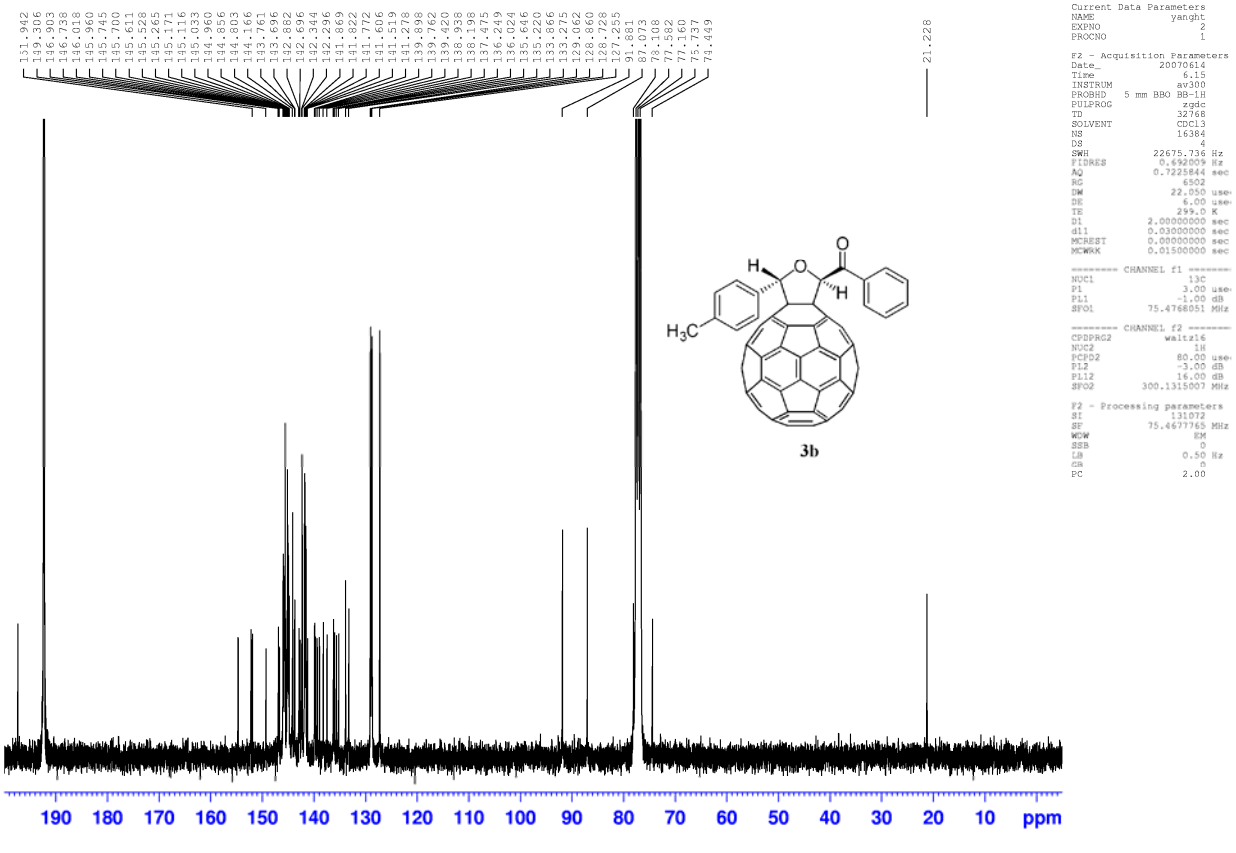



```
Current Data Parameters
NAME                  yanght
EXPNO                      1
PROCNO                     1

F2 - Acquisition Parameters
Date_              20070613
Time                  16.13
INSTRUM               av300
PROBHD   5 mm BBO BB-1H
PULPROG                zg
TD                    32768
SOLVENT             Acetone
NS                         4
DS                         1
SWH                8992.806 Hz
FIDRES             0.274439 Hz
AQ                 1.8219508 sec
RG                     322.5
DW                    55.600 use
DE                     6.00 use
TE                   297.8 K
D1                 2.00000000 sec
MCREST             0.00000000 sec
MCWRK              0.01500000 sec

======== CHANNEL f1 ========
NUC1                       1H
P1                       7.50 use
PL1                     -3.00 dB
SFO1           300.1321009 MHz

F2 - Processing parameters
SI                        16384
SF                 300.1300058 MHz
WDW                          no
SSB                           0
LB                         0.00 Hz
GB                            0
PC                         8.00
```



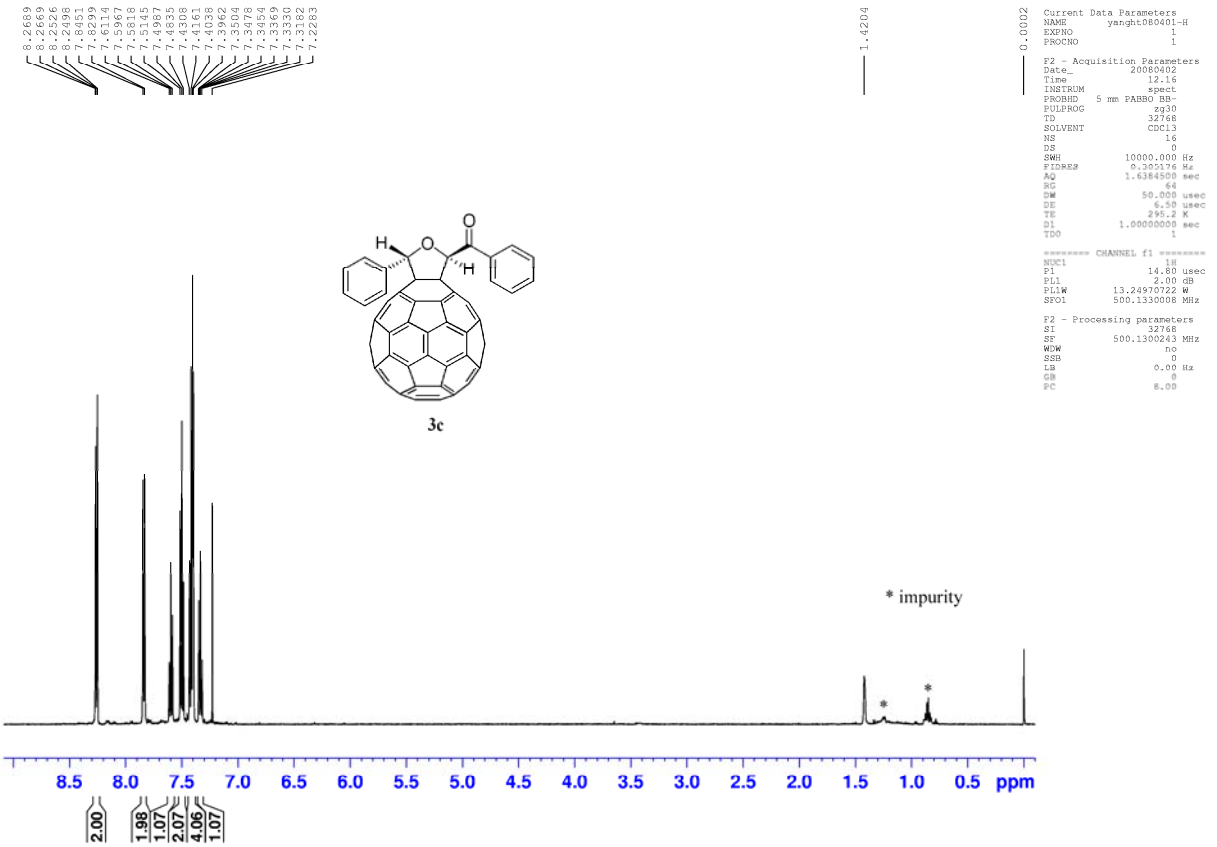

```
Current Data Parameters
NAME                  yanght
EXPNO                      2
PROCNO                     1

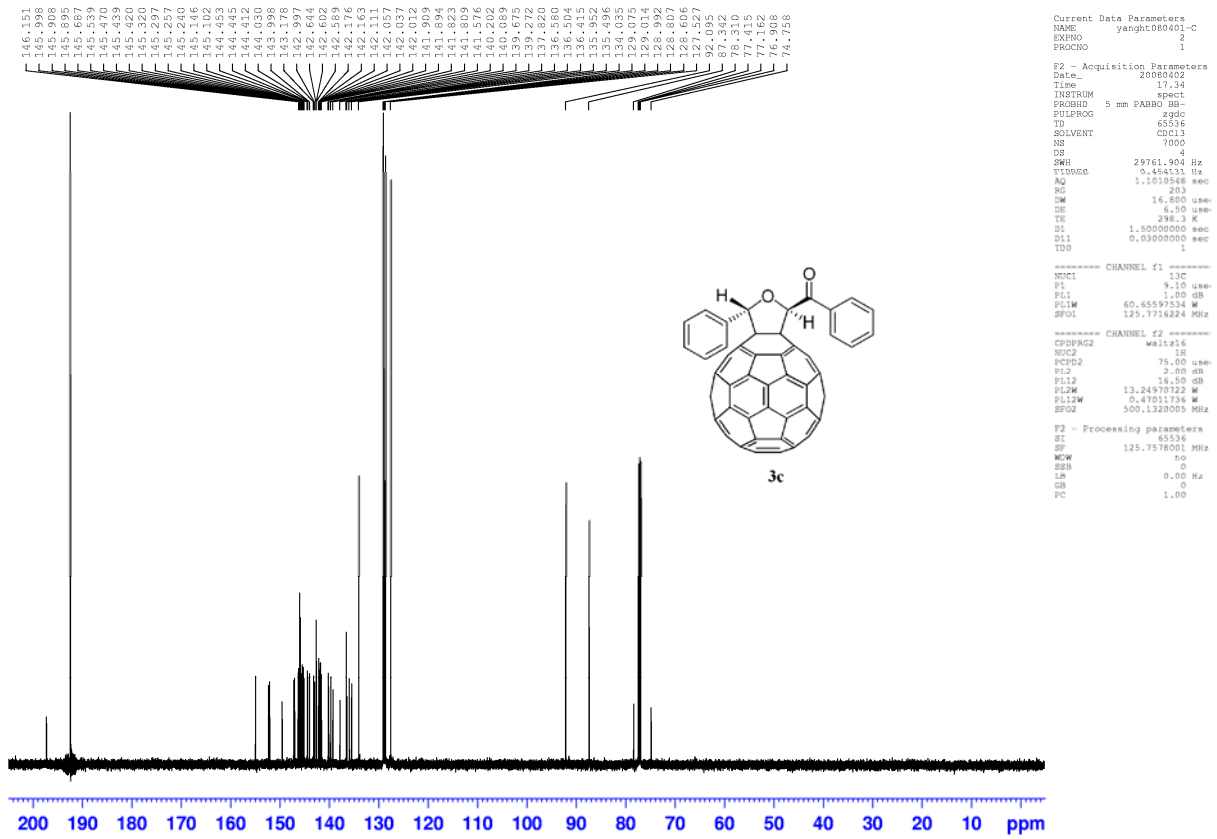
F2 - Acquisition Parameters
Date_              20070614
Time                   6.15
INSTRUM               av300
PROBHD   5 mm BBO BB-1H
PULPROG                zgdc
TD                    32768
SOLVENT             CDCl3
NS                     16384
DS                         4
SWH               22675.736 Hz
FIDRES             0.692009 Hz
AQ                 0.7225844 sec
RG                      6502
DW                    22.050 use
DE                     6.00 use
TE                   299.0 K
D1                 2.00000000 sec
d11                0.03000000 sec
MCREST             0.00000000 sec
MCWRK              0.01500000 sec

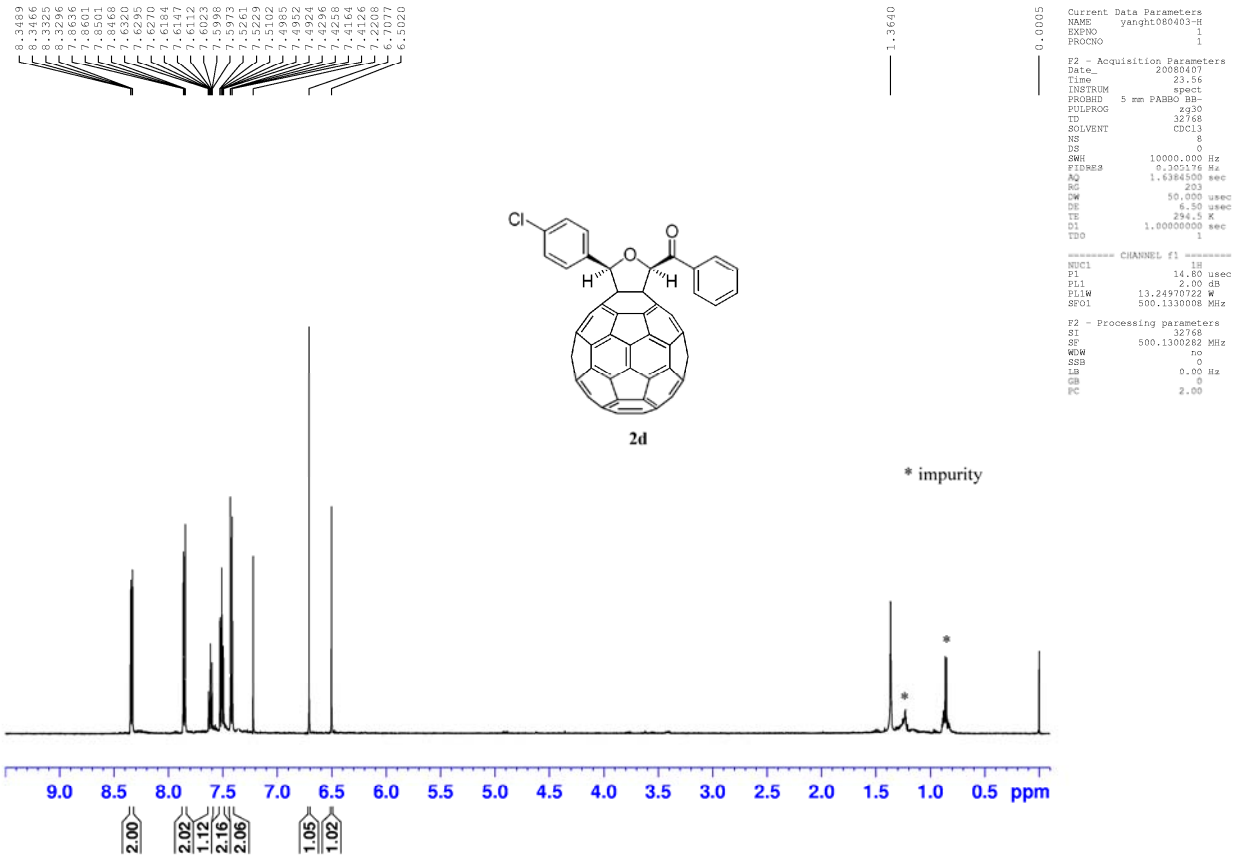
======== CHANNEL f1 ========
NUC1                      13C
P1                       3.00 use
PL1                     -1.00 dB
SFO1           75.4768051 MHz

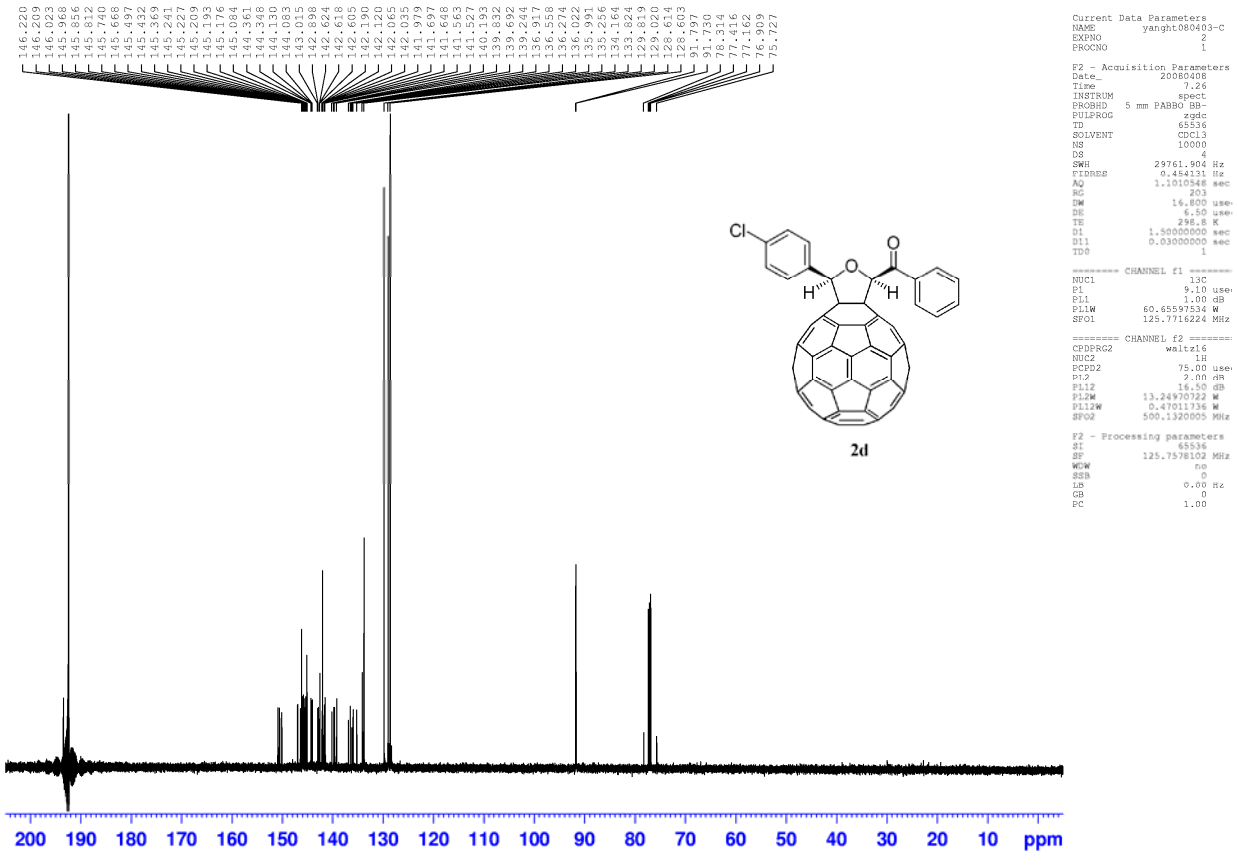
======== CHANNEL f2 ========
CPDPRG2                waltz16
NUC2                       1H
PCPD2                   80.00 use
PL2                     -3.00 dB
PL12                    16.00 dB
SFO2           300.1315007 MHz

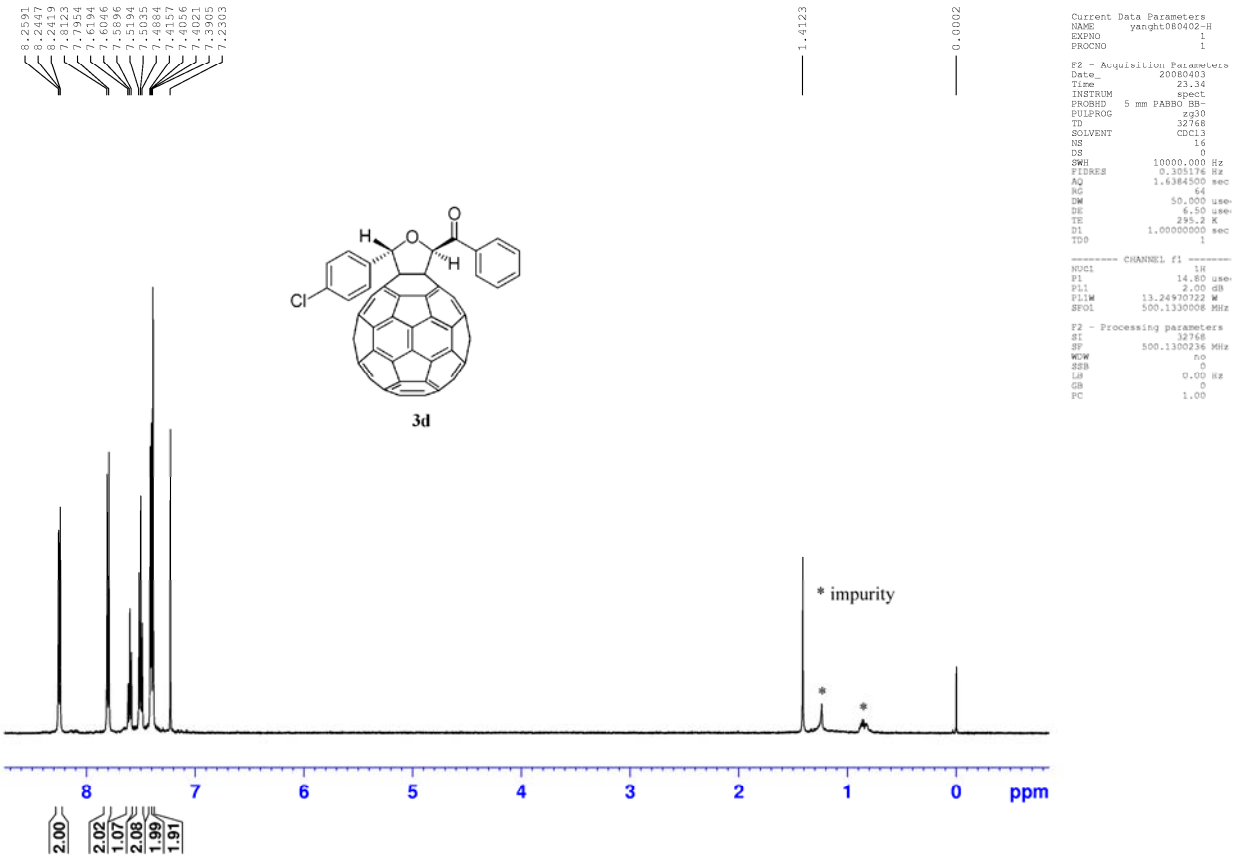
F2 - Processing parameters
SI                       131072
SF                 75.4677765 MHz
WDW                          EM
SSB                           0
LB                         0.50 Hz
GB                            0
PC                         2.00
```


8.2689
8.2669
8.2536
8.2498
7.8451
7.8299
7.6114
7.5967
7.5818
7.5145
7.4987
7.4835
7.4308
7.4161
7.4038
7.3962
7.3504
7.3456
7.3369
7.3330
7.3182
7.2283
1.4204
0.0002
Current Data Parameters
NAME yanght080401-H
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20080402
Time 12.16
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 16
DS 0
SWH 10000.000 Hz
FIDRES 0.305176 Hz
AQ 1.6384500 sec
RG 64
DW 50.000 usec
DE 6.50 usec
TE 295.2 K
D1 1.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 14.80 usec
PL1 2.00 dB
PL1W 13.24970722 W
SFO1 500.1330008 MHz
F2 - Processing parameters
SI 32768
SF 500.1300243 MHz
WDW no
SSB 0
LB 0.00 Hz
GB 0
PC 8.00
3c
* impurity
8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 ppm
2.00 1.98 1.07 2.07 4.06 1.07


146.151
145.908
145.695
145.539
145.487
145.470
145.439
145.420
145.320
145.297
145.257
145.240
145.146
145.102
144.453
144.445
144.412
144.030
143.998
143.178
142.997
142.644
142.602
142.589
142.176
142.163
142.111
142.057
142.037
142.012
141.909
141.894
141.823
141.809
141.576
140.202
140.089
139.675
137.272
137.220
136.580
136.504
136.415
135.952
135.496
134.035
129.075
129.014
128.992
128.807
128.606
128.227
92.035
87.342
78.310
77.415
77.162
76.908
74.758
Current Data Parameters
NAME yanght080401-C
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20080402
Time 17.34
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgdc
TD 65536
SOLVENT CDCl3
NS 7000
DS 4
SWH 29761.904 Hz
FIDRES 0.454131 Hz
AQ 1.1010568 sec
RG 203
DW 16.800 use
DE 6.50 use
TE 298.3 K
D1 1.50000000 sec
D11 0.03000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 9.10 use
PL1 1.00 dB
PL1W 60.65597534 W
SFO1 125.7716224 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 75.00 use
PL2 2.00 dB
PL12 16.50 dB
PL2W 13.24970722 W
PL12W 0.47011736 W
SFO2 500.1320005 MHz
F2 - Processing parameters
SI 65536
SF 125.7578001 MHz
WDW no
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
3c
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ppm


8.3469
8.3466
8.3325
8.3296
7.8636
7.8601
7.8501
7.8468
7.6320
7.6295
7.6270
7.6184
7.6147
7.6112
7.6023
7.5998
7.5273
7.5261
7.5229
7.5102
7.4985
7.4952
7.4924
7.4296
7.4258
7.4164
7.4126
7.2208
6.7077
6.5020
1.3640
0.0005
Current Data Parameters
NAME yanght080403-H
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20080407
Time 23.56
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 8
DS 0
SWH 10000.000 Hz
FIDRES 0.305176 Hz
AQ 1.6384500 sec
RG 203
DW 50.000 usec
DE 6.50 usec
TE 294.5 K
D1 1.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 14.80 usec
PL1 2.00 dB
PL1W 13.24970722 W
SFO1 500.1330008 MHz
F2 - Processing parameters
SI 32768
SF 500.1300282 MHz
WDW no
SSB 0
LB 0.00 Hz
GB 0
PC 2.00
Cl
O
H
H
O
2d
* impurity
*
*
9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 ppm
2.00
2.02
1.12
2.16
2.06
1.05
1.02


146.220
146.209
146.023
145.968
145.856
145.812
145.740
145.668
145.497
145.432
145.369
145.241
145.227
145.209
145.193
145.176
145.084
144.946
144.361
144.130
144.053
144.015
143.898
142.624
142.618
142.605
142.190
142.120
142.065
142.035
141.979
141.697
141.648
141.563
141.527
140.193
139.632
139.592
139.294
138.917
136.558
136.274
136.022
135.991
135.256
134.164
133.824
129.819
129.020
128.614
128.603
91.797
91.730
78.214
77.416
77.162
76.909
75.727
Current Data Parameters
NAME yanght080403-C
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20080408
Time 7.26
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgdc
TD 65536
SOLVENT CDCl3
NS 10000
DS 4
SWH 29761.904 Hz
FIDRES 0.454131 Hz
AQ 1.1010548 sec
RG 203
DW 16.800 use
DE 6.50 use
TE 298.8 K
D1 1.50000000 sec
D11 0.03000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 9.10 use
PL1 1.00 dB
PL1W 60.65597534 W
SFO1 125.7716224 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 75.00 use
PL2 2.00 dB
PL12 16.50 dB
PL2W 13.24970722 W
PL12W 0.47011736 W
SFO2 500.1320005 MHz
F2 - Processing parameters
SI 65536
SF 125.7578102 MHz
WDW no
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
Cl
O
H
H
O
2d
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ppm

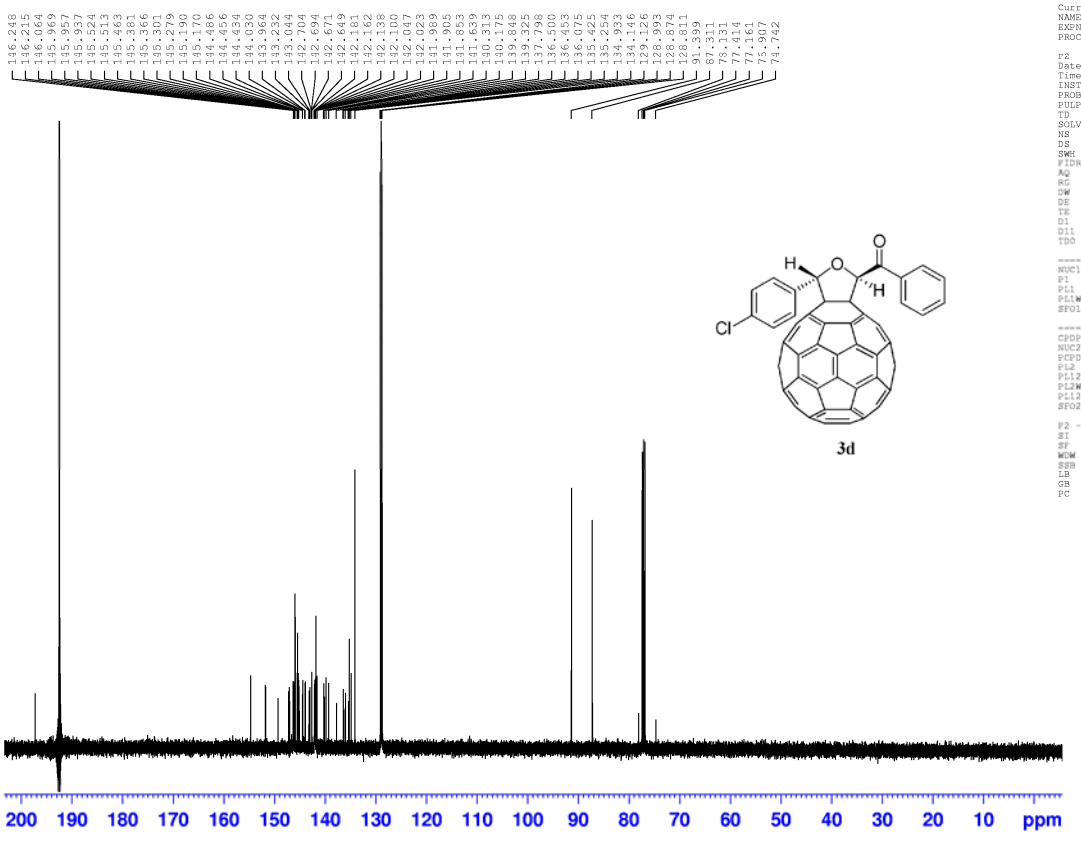



```
Current Data Parameters
NAME        yanght080402-H
EXPNO                    1
PROCNO                   1

F2 - Acquisition Parameters
Date_              20080403
Time                 23.34
INSTRUM              spect
PROBHD   5 mm PABBO BB-
PULPROG              zg30
TD                  32768
SOLVENT              CDCl3
NS                      16
DS                       0
SWH             10000.000 Hz
FIDRES              0.305176 Hz
AQ                1.6384500 sec
RG                      64
DW                 50.000 use
DE                  6.50 use
TE                 295.2 K
D1                1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
NUC1                    1H
P1                   14.80 use
PL1                   2.00 dB
PL1W            13.24970722 W
SFO1           500.1330008 MHz

F2 - Processing parameters
SI                   32768
SF             500.1300236 MHz
WDW                     no
SSB                      0
LB                    0.00 Hz
GB                       0
PC                    1.00
```



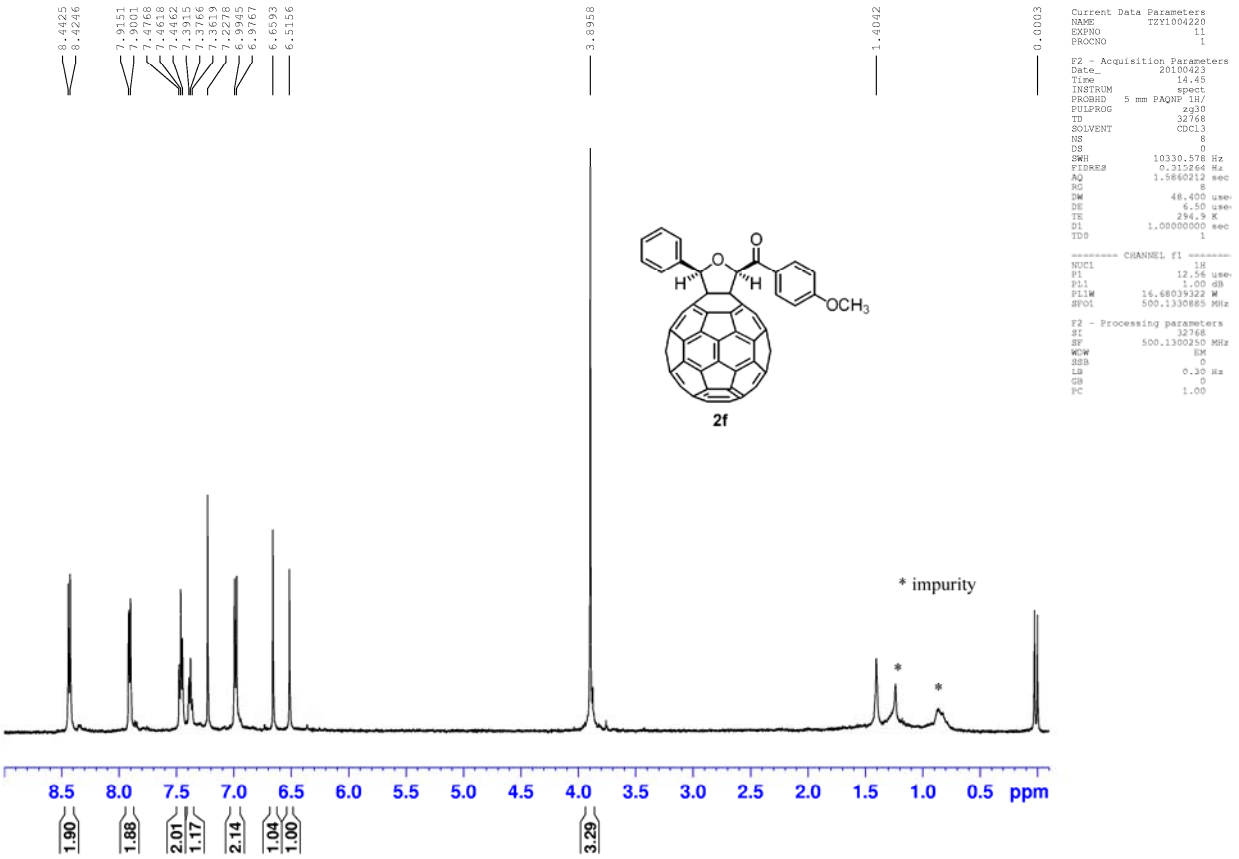

```
Current Data Parameters
NAME        yanght080402-C
EXPNO                    2
PROCNO                   1

F2 - Acquisition Parameters
Date_              20080404
Time                  4.49
INSTRUM              spect
PROBHD   5 mm PABBO BB-
PULPROG              zgdc
TD                  65536
SOLVENT              CDCl3
NS                    7000
DS                       4
SWH             29761.904 Hz
FIDRES              0.454131 Hz
AQ                1.1010548 sec
RG                     203
DW                16.800 usec
DE                 6.50 usec
TE                 299.1 K
D1                1.50000000 sec
D11               0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
NUC1                    13C
P1                   9.10 usec
PL1                   1.00 dB
PL1W           60.65597534 W
SFO1           125.7716224 MHz

======== CHANNEL f2 ========
CPDPRG2             waltz16
NUC2                    1H
PCPD2                75.00 usec
PL2                   2.00 dB
PL12                 16.50 dB
PL2W            13.24970722 W
PL12W            0.47011736 W
SFO2           500.1320005 MHz

F2 - Processing parameters
SI                   65536
SF             125.7577930 MHz
WDW                     no
SSB                      0
LB                    0.00 Hz
GB                       0
PC                    1.40
```

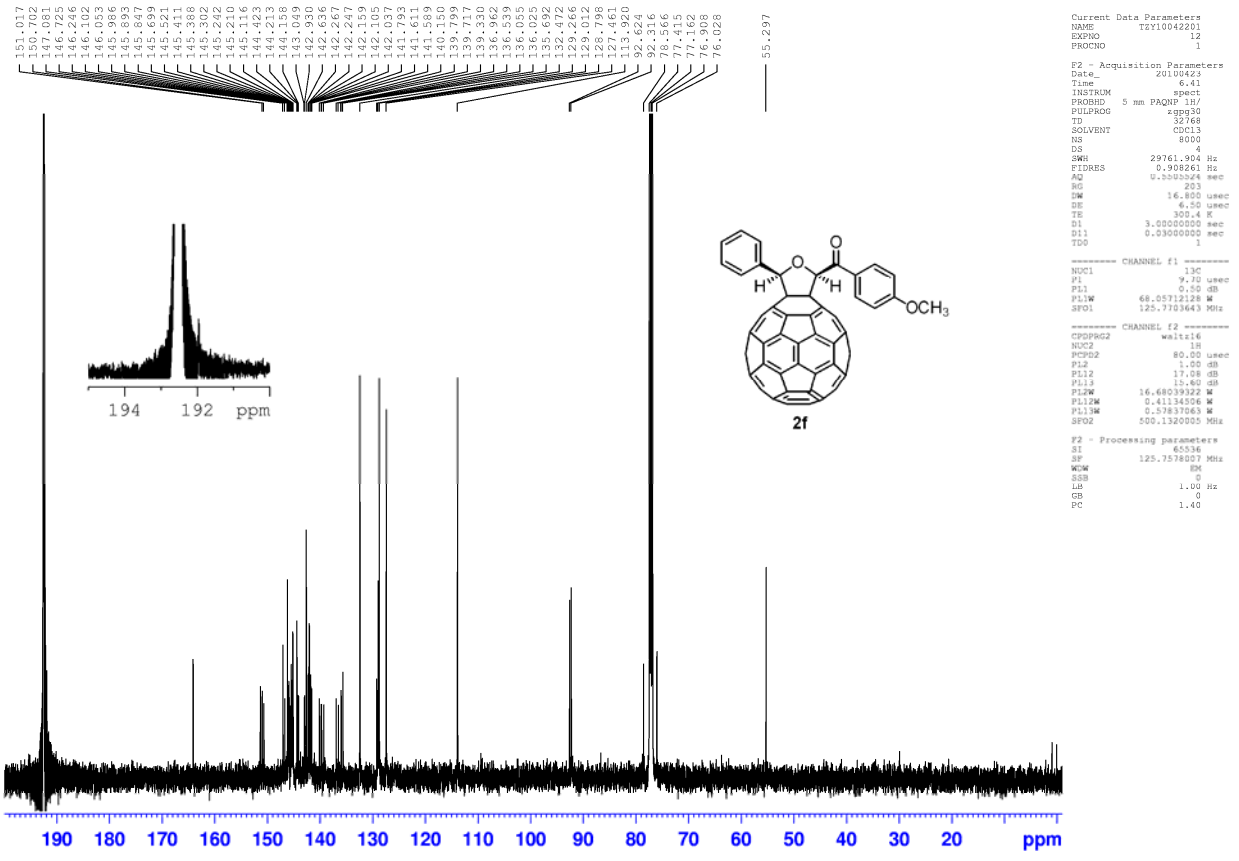



```
Current Data Parameters
NAME                 TZY1004220
EXPNO                        11
PROCNO                        1

F2 - Acquisition Parameters
Date_               20100423
Time                   14.45
INSTRUM                spect
PROBHD     5 mm PAQNP 1H/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        0
SWH                10330.578 Hz
FIDRES             0.315264 Hz
AQ                 1.5860212 sec
RG                        8
DW                   48.400 usec
DE                    6.50 usec
TE                   294.9 K
D1                 1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
NUC1                      1H
P1                    12.56 usec
PL1                    1.00 dB
PL1W              16.68039922 W
SFO1             500.1330885 MHz

F2 - Processing parameters
SI                        32768
SF                   500.1300250 MHz
WDW                          EM
SSB                           0
LB                         0.30 Hz
GB                            0
PC                         1.00
```



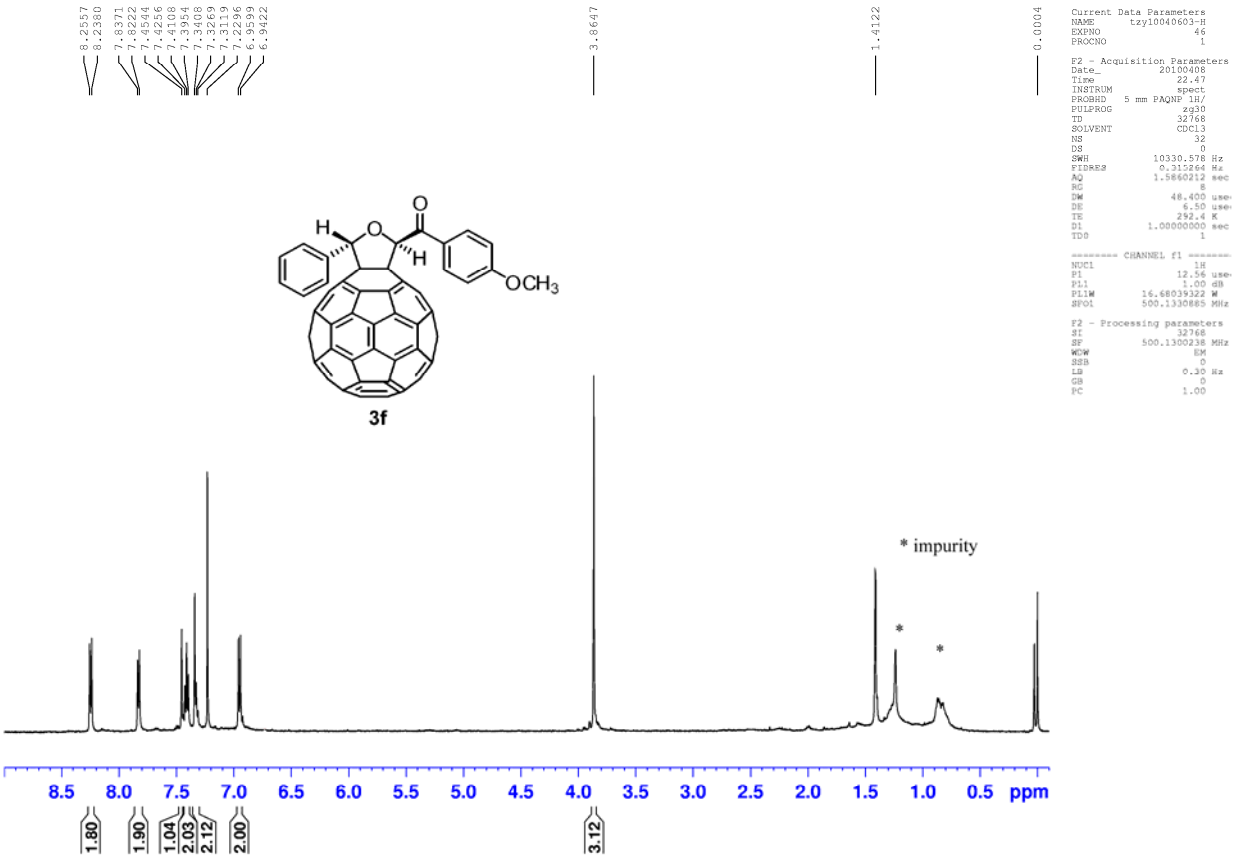

```
Current Data Parameters
NAME                 TZY1004220
EXPNO                        12
PROCNO                        1

F2 - Acquisition Parameters
Date_               20100423
Time                   16.41
INSTRUM                spect
PROBHD     5 mm PAQNP 1H/
PULPROG              zgpg30
TD                    32768
SOLVENT               CDCl3
NS                      8000
DS                        4
SWH                29761.904 Hz
FIDRES             0.908261 Hz
AQ                 0.5505024 sec
RG                      203
DW                   16.800 usec
DE                    6.50 usec
TE                   300.4 K
D1                 3.00000000 sec
D11                0.03000000 sec
TD0                       1

======== CHANNEL f1 ========
NUC1                      13C
P1                     9.70 usec
PL1                    0.50 dB
PL1W              68.05712128 W
SFO1             125.7703643 MHz

======== CHANNEL f2 ========
CPDPRG2                waltz16
NUC2                      1H
PCPD2                 80.00 usec
PL2                    1.00 dB
PL12                  17.08 dB
PL13                  19.40 dB
PL2W              16.68039922 W
PL12W             0.41134506 W
PL13W             0.57837063 W
SFO2             500.1320005 MHz

F2 - Processing parameters
SI                        65536
SF                   125.7578007 MHz
WDW                          EM
SSB                           0
LB                         1.00 Hz
GB                            0
PC                         1.40
```

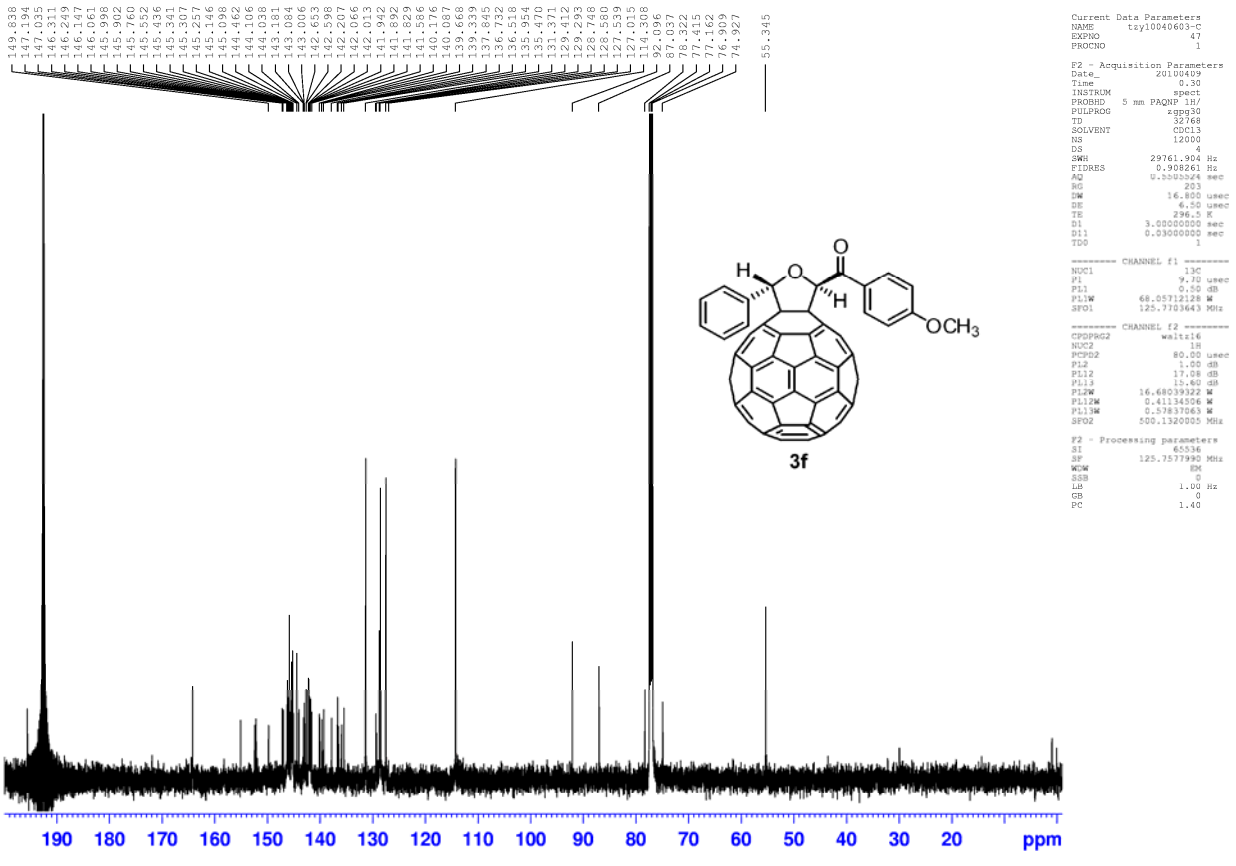



```
Current Data Parameters
NAME         tzy10040603-H
EXPNO                   46
PROCNO                   1

F2 - Acquisition Parameters
Date_          20100408
Time              22.47
INSTRUM           spect
PROBHD  5 mm PAQNP 1H/
PULPROG           zg30
TD               32768
SOLVENT          CDCl3
NS                  32
DS                   0
SWH          10330.578 Hz
FIDRES        0.315264 Hz
AQ            1.5860212 sec
RG                   8
DW              48.400 usec
DE               6.50 usec
TE             292.4 K
D1            1.00000000 sec
TD0                  1

======== CHANNEL f1 ========
NUC1                1H
P1                12.56 usec
PL1               1.00 dB
PL1W        16.68039322 W
SFO1        500.1330885 MHz

F2 - Processing parameters
SI               32768
SF          500.1300238 MHz
WDW                 EM
SSB                  0
LB                0.30 Hz
GB                   0
PC                1.00
```



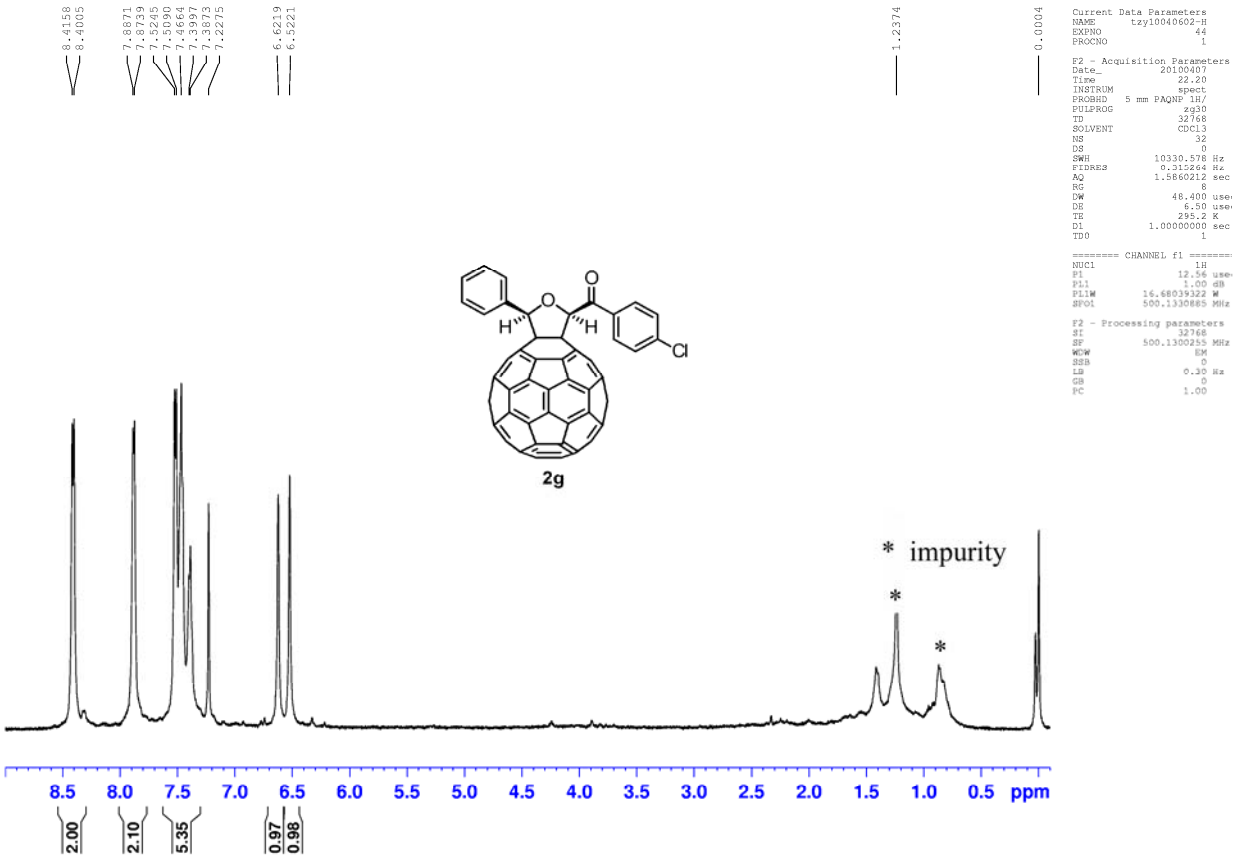

```
Current Data Parameters
NAME         tzy10040603-C
EXPNO                   47
PROCNO                   1

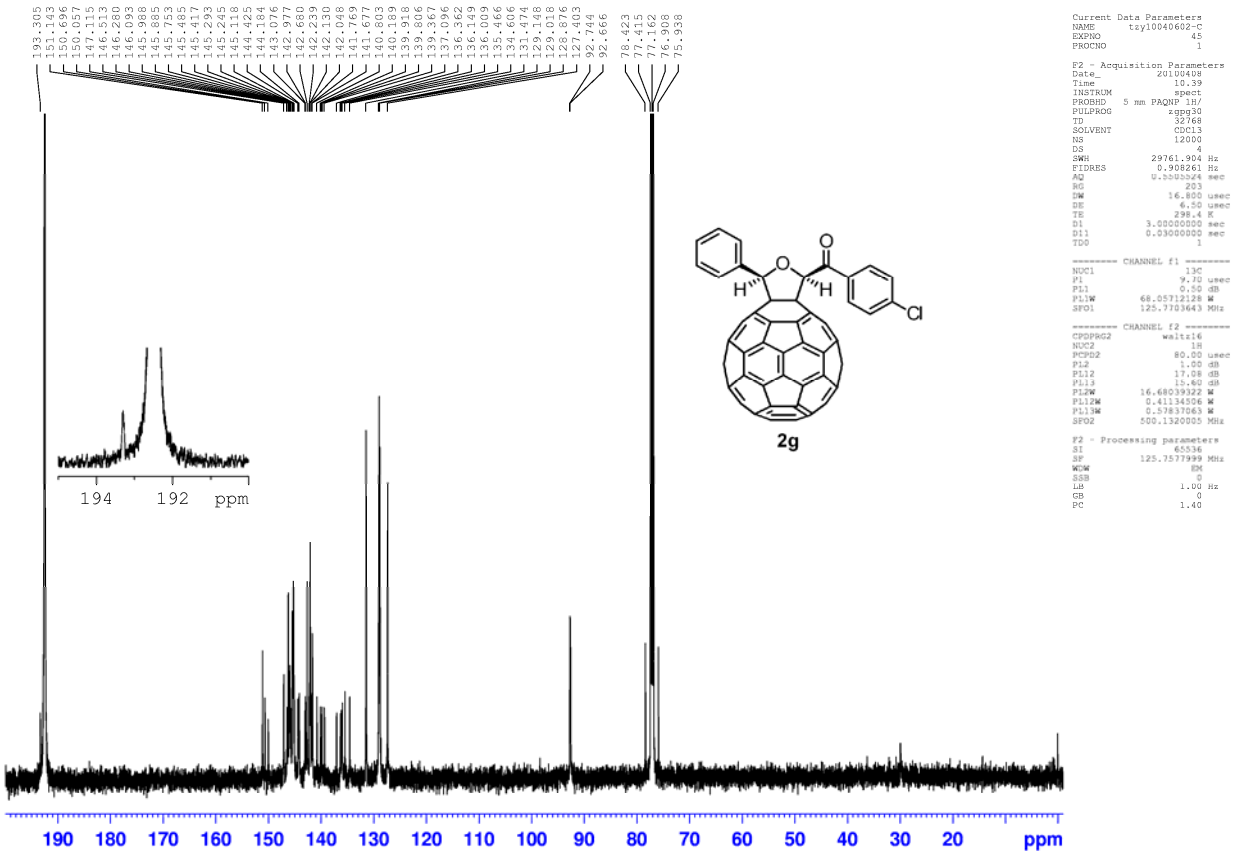
F2 - Acquisition Parameters
Date_          20100409
Time              0.30
INSTRUM           spect
PROBHD  5 mm PAQNP 1H/
PULPROG          zgpg30
TD               32768
SOLVENT          CDCl3
NS               12000
DS                   4
SWH          29761.904 Hz
FIDRES        0.908261 Hz
AQ            0.5505024 sec
RG                 203
DW              16.800 usec
DE               6.50 usec
TE             296.5 K
D1            3.00000000 sec
D11           0.03000000 sec
TD0                  1

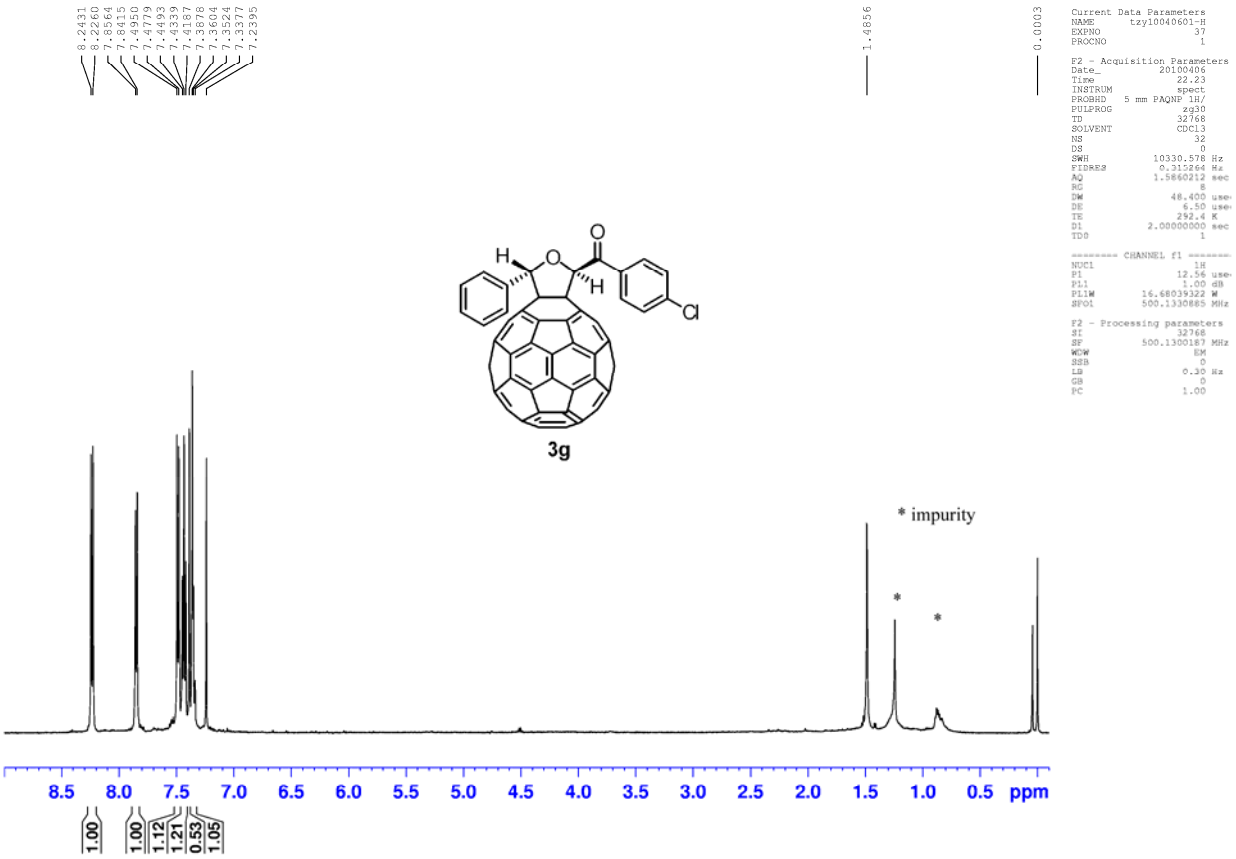
======== CHANNEL f1 ========
NUC1                13C
P1                9.70 usec
PL1               0.50 dB
PL1W        68.05712128 W
SFO1        125.7703643 MHz

======== CHANNEL f2 ========
CPDPRG2          waltz16
NUC2                1H
PCPD2            80.00 usec
PL2               1.00 dB
PL12             17.08 dB
PL13             19.40 dB
PL2W        16.68039322 W
PL12W       0.41134506 W
PL13W       0.57837063 W
SFO2        500.1320005 MHz

F2 - Processing parameters
SI               65536
SF          125.7577990 MHz
WDW                 EM
SSB                  0
LB                1.00 Hz
GB                   0
PC                1.40
```


8.4158
8.4005
7.8871
7.8739
7.5245
7.5090
7.4664
7.3997
7.3873
7.2275
6.6219
6.5221
1.2374
0.0004
Current Data Parameters
NAME tzy10040602-H
EXPNO 44
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100407
Time 22.20
INSTRUM spect
PROBHD 5 mm PAQNP 1H/
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 32
DS 0
SWH 10330.578 Hz
FIDRES 0.315264 Hz
AQ 1.5860212 sec
RG 8
DW 48.400 use
DE 6.50 use
TE 295.2 K
D1 1.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 12.56 use
PL1 1.00 dB
PL1W 16.68039322 W
SFO1 500.1330885 MHz
F2 - Processing parameters
SI 32768
SF 500.1300255 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00
2g
* impurity
8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 ppm
2.00
2.10
5.35
0.97
0.98


193.305
151.143
150.696
150.157
147.515
147.213
146.280
146.093
145.988
145.885
145.753
145.485
145.417
145.293
145.245
145.118
144.425
144.184
143.076
142.977
142.680
142.589
142.130
142.048
141.769
141.677
140.803
140.189
139.918
139.806
139.367
137.096
136.362
136.149
136.009
135.466
134.606
134.474
133.148
129.018
128.876
127.403
92.744
92.666
78.423
77.415
77.162
76.908
75.938
Current Data Parameters
NAME tzy10040602-C
EXPNO 45
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100408
Time 10.39
INSTRUM spect
PROBHD 5 mm PAQNP 1H/
PULPROG zgpg30
TD 32768
SOLVENT CDCl3
NS 12000
DS 4
SWH 29761.904 Hz
FIDRES 0.908261 Hz
AQ 0.5505024 sec
RG 203
DW 16.800 usec
DE 6.50 usec
TE 298.4 K
D1 3.00000000 sec
D11 0.03000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 9.70 usec
PL1 0.50 dB
PL1W 68.05712128 W
SFO1 125.7703643 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 1.00 dB
PL12 17.08 dB
PL13 19.40 dB
PL2W 16.68039322 W
PL12W 0.41134506 W
PL13W 0.57837063 W
SFO2 500.1320005 MHz
F2 - Processing parameters
SI 65536
SF 125.7577999 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40
2g
194 192 ppm
190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 ppm

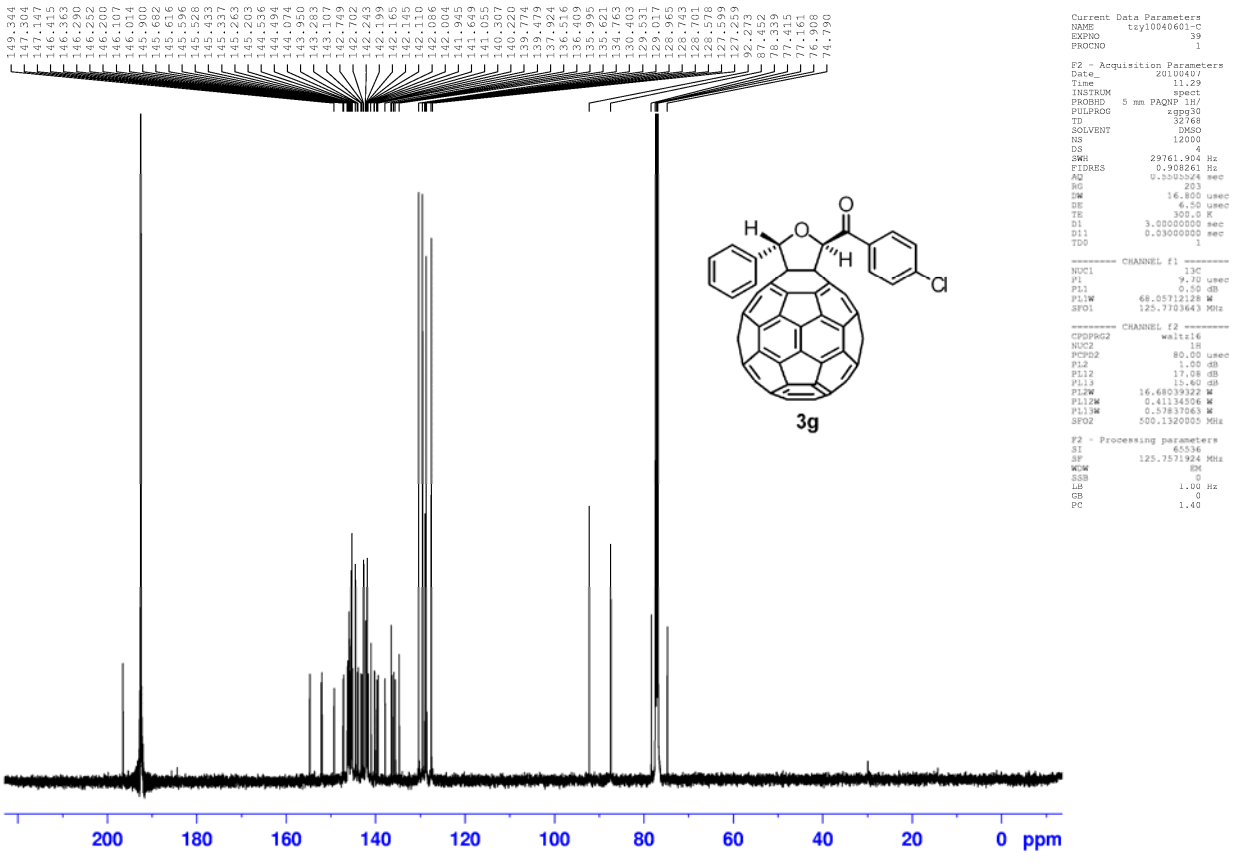



```
Current Data Parameters
NAME        tzy10040601-H
EXPNO               37
PROCNO               1

F2 - Acquisition Parameters
Date_         20100406
Time            22.23
INSTRUM         spect
PROBHD   5 mm PAQNP 1H/
PULPROG         zg30
TD             32768
SOLVENT         CDCl3
NS                32
DS                 0
SWH         10330.578 Hz
FIDRES       0.315264 Hz
AQ           1.5860212 sec
RG                 8
DW            48.400 use
DE             6.50 use
TE            292.4 K
D1         2.00000000 sec
TD0                1

======== CHANNEL f1 ========
NUC1               1H
P1             12.56 use
PL1             1.00 dB
PL1W      16.68039322 W
SFO1     500.1330885 MHz

F2 - Processing parameters
SI             32768
SF        500.1300187 MHz
WDW               EM
SSB                0
LB              0.30 Hz
GB                 0
PC              1.00
```




```
Current Data Parameters
NAME        tzy10040601-C
EXPNO               39
PROCNO               1

F2 - Acquisition Parameters
Date_         20100407
Time            11.29
INSTRUM         spect
PROBHD   5 mm PAQNP 1H/
PULPROG         zgpg30
TD             32768
SOLVENT          DMSO
NS               12000
DS                 4
SWH         29761.904 Hz
FIDRES       0.908261 Hz
AQ           0.5505024 sec
RG               203
DW            16.800 usec
DE             6.50 usec
TE            300.0 K
D1         3.00000000 sec
D11        0.03000000 sec
TD0                1

======== CHANNEL f1 ========
NUC1              13C
P1              9.70 usec
PL1             0.50 dB
PL1W      68.05712128 W
SFO1     125.7703643 MHz

======== CHANNEL f2 ========
CPDPRG2         waltz16
NUC2               1H
PCPD2          80.00 usec
PL2             1.00 dB
PL12           17.08 dB
PL13           19.40 dB
PL2W      16.68039322 W
PL12W      0.41134506 W
PL13W      0.57837063 W
SFO2     500.1320005 MHz

F2 - Processing parameters
SI             65536
SF        125.7571924 MHz
WDW               EM
SSB                0
LB              1.00 Hz
GB                 0
PC              1.40
```