Quinacetophenone: A Simple Precursor for Synthesis of Phenoxazines

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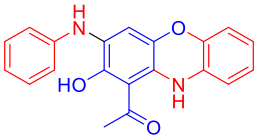
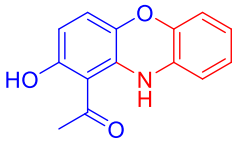
Supporting information

1-(2-hydroxy-3-(phenylamino)-10*H*-phenoxazin-1-yl)ethan-1-one (1D):



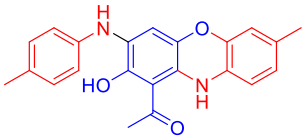
Red Solid; Yield- 60%, m.p = 240-242 °C, R_f 0.4 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO-d_6): δ 11.31 (s, 1H), 9.55 (s, 1H), 7.46 (t, *J* = 7.8 Hz, 2H), 7.41 (d, *J* = 7.5 Hz, 2H), 7.35 (t, *J* = 7.8 Hz, 2H), 7.27 (t, *J* = 7.3 Hz, 1H), 7.22 (t, *J* = 7.4 Hz, 1H), 7.19 (d, *J* = 7.5 Hz, 2H), 5.81 (s, 1H), 2.31 (s, 3H), ^{13}C NMR (125 MHz, DMSO- d_6): δ 199.77, 179.00, 178.79, 178.77, 148.09, 148.07, 139.74, 139.72, 129.83, 129.81, 129.20, 124.67, 124.40, 109.65, 96.93, 32.41. IR (neat, cm^{-1}): 3290.74, 3047.55, 2803.77, 1649.96, 1565.33, 1488.15, 1329.90, 1287.72, HRMS *m/z* calculated for $C_{20}H_{16}N_2O_3$ [M+H] $^+$: 333.1234 found 333.1235.

1-(2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (1C):



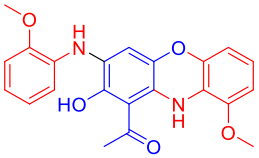
Red Solid; Yield- 20%, m.p = 156-158 °C, R_f 0.3 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, $CDCl_3$): δ 11.60 (s, 1H), 7.24 (t, *J* = 10 Hz, 2H), 7.17 (d, *J* = 10 Hz, 1H), 6.89 (m, 2H), 6.67 (d, *J* = 10 Hz, 2H), 2.51(s, 3H), ^{13}C NMR (125 MHz, $CDCl_3$): δ 204.39, 156.27, 144.94, 144.75, 129.97, 129.26, 126.60, 124.56, 123.50, 120.59, 118.59, 116.23, 114.25, 29.70. IR (neat, cm^{-1}): 3347.52, 2923.45, 2852.67, 1726.35, 1631.90, 1597.84, 1495.19, 1282.93, 1078.38. HRMS *m/z* calculated for $C_{14}H_{11}NO_3$ [M+H]$^+$: 242.0817 found 242.0818.

1-(2-hydroxy-7-methyl-3-(p-tolylamino)-10*H*-phenoxazin-1-yl)ethan-1-one (2D):



Black Solid; Yield- 62%, m.p = 252-254 °C, R_f 0.4 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO- d_6): δ 9.48 (s, 1H), 7.26 (s, 4H), 7.15 (d, *J* = 8.1 Hz, 2H), 7.06 (d, *J* = 8.3 Hz, 2H), 5.74 (s, 1H), 2.33 (s, 3H), 2.30 (s, 6H), ^{13}C NMR (125 MHz, DMSO-d_6): δ 199.71, 178.72, 178.60, 148.30, 137.09, 136.07, 135.79, 135.42, 130.24, 129.65, 124.43, 124.31, 32.42, 21.08, 21.05. IR (neat, cm^{-1}): 3233.68, 3211.48, 1693.66, 1477.80, 1347.01, 1260.66, 813.10, 716.63. HRMS *m/z* calculated for $C_{22}H_{20}N_2O_3$ [M+H] $^+$: 361.1547 found 361.1550.

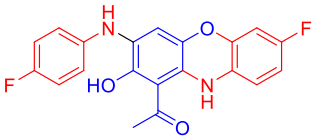
1-(2-hydroxy-9-methoxy-3-((2-methoxyphenyl)amino)-10*H*-phenoxazin-1-yl)ethan-1-one(3D):



Brown Solid; Yield 50%, m.p = 158-160 °C, R_f 0.3 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO- d_6): δ 11.99 (bs, 1H), 9.01 (s, 1H), 7.37 (d, *J* = 7.8 Hz, 1H), 7.29 (t, *J* = 7.9 Hz, 1H), 7.24 (d, *J* = 7.8 Hz, 1H), 7.20 - 7.14 (m, 2H), 7.06 (s, 1H), 7.04 (d, *J* = 5.0 Hz, 1H), 6.93 (t, *J* = 7.6 Hz, 1H), 5.57 (s, 1H), 3.87 (s, 3H), 3.78 (s, 3H), 2.40 (s, 3H). ^{13}C NMR (125 MHz, DMSO- d_6): δ 199.38, 178.29, 178.13, 152.69, 147.05, 128.40, 128.06, 127.67, 126.28, 125.75, 124.28, 121.34, 120.79, 112.65, 112.21, 108.76, 97.68, 56.32, 56.12,

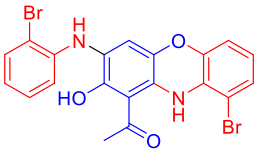
32.53. IR (neat, cm^{-1}): 3320.48, 3276.86, 2923.61, 2842.89, 1740.00, 1651.44, 1485.19, 1319.04, 1252.83, 844.34, 722.90. HRMS *m/z* calculated for $C_{22}H_{20}N_2O_5$ $[M+H]^+$: 393.1445 found 393.1448.

1-(7-fluoro-3-((4-fluorophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (4D):



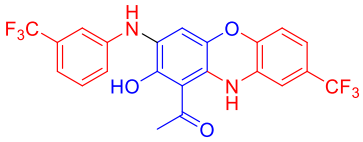
Orange Solid; Yield- 50%, m.p = 228-230 °C, R_f 0.4 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO- d_6): δ 11.21 (s, 1H), 9.55 (s, 1H), 7.42 (dd, *J* = 8.0 Hz, *J* = 5.3 Hz, 2H), 7.30 (t, *J* = 8.7 Hz, 2H), 7.24 - 7.15 (m, 4H), 5.71 (s, 1H), 2.31 (s, 3H), ^{13}C NMR (125 MHz, DMSO- d_6): δ 199.86, 178.94, 178.79, 160.57 (d, *J* = 243.33 Hz), 160.21 (d, *J* = 243.35 Hz), 148.40, 136.14, 134.38, 126.85, 126.79, 126.72, 126.65, 116.61 (d, *J* = 22.70 Hz), 115.96 (d, *J* = 22.81 Hz), 109.56, 96.68, 32.46. IR (neat, cm^{-1}): 3303.13, 1738.54, 1578.02, 1358.11, 1216.92, 908.84, 831.11. HRMS *m/z* calculated for $C_{20}H_{14}F_2N_2O_3$ $[M+H]^+$: 369.1045 found 369.1047.

1-(9-bromo-3-((2-bromophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (5D):



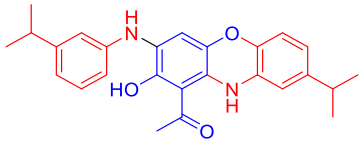
Brown Solid; Yield- 48%, m.p = 202-202 °C, R_f 0.3 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO- d_6): δ 12.34 (s, 1H), 9.39 (s, 1H), 7.80 (d, *J* = 8.0 Hz, 1H), 7.68 (d, *J* = 8.0 Hz, 1H), 7.51 (t, *J* = 8.0 Hz, 1H), 7.46 (d, *J* = 6.5 Hz, 1H), 7.37 (t, *J* = 7.6 Hz, 1H), 7.32 (d, *J* = 7.0 Hz, 2H), 7.23 (t, *J* = 7.6 Hz, 1H), 5.19 (s, 1H), 2.44 (s, 3H), ^{13}C NMR (125 MHz, DMSO- d_6): δ 200.27, 178.31, 178.02, 148.45, 138.84, 136.37, 133.95, 133.08, 129.49, 129.05, 128.65, 128.39, 127.95, 120.71, 119.56, 108.86, 98.03, 32.59. IR (neat, cm^{-1}): 3277.84, 3003.17,2 779.41, 1737.20, 1356.93, 1288.47, 1027.99, 759.24, 661.20. HRMS *m/z* calculated for $C_{20}H_{14}Br_2N_2O_3$ $[M+H]^+$: 490.9429 found 490.9431

1-(2-hydroxy-8-(trifluoromethyl)-3-((3-(trifluoromethyl)phenyl)amino)-10*H*-phenoxazin-1-yl)ethan-1-one (6D):



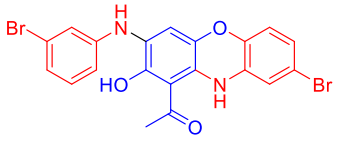
Violet Solid; Yield- 61%, m.p = 168-170 °C, R_f 0.3 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO- d_6): δ 11.18 (s, 1H), 9.72 (s, 1H), 7.77 - 7.67 (m, 3H), 7.61 - 7.55 (m, 4H), 7.48 (d, *J* = 7.5 Hz, 1H), 5.90 (s, 1H), 2.31 (s, 3H), ^{13}C NMR (125 MHz, DMSO- d_6): δ 199.75, 179.70, 179.18, 148.92, 147.45, 140.80, 139.15, 131.10, 130.67, 130.41, 129.84 (q, *J* = 31.99 Hz), 128.67, 127.85, 124.32 (q, *J* = 272.40 Hz), 124.30 (q, *J* = 272.54 Hz), 123.03 (q, *J* = 3.83 Hz), 122.45, 121.18, 120.87(q, *J* = 3.85 Hz), 110.24, 97.72, 32.31. IR (neat, cm^{-1}): 3271.46, 3236.94, 3073.67, 2823.71, 1736.45, 1326.88, 1218.26, 1073.13, 804.19, 689.87. HRMS *m/z* calculated for $C_{22}H_{14}F_6N_2O_3$ $[M+H]^+$: 469.0981 found 469.0997.

1-(2-hydroxy-8-isopropyl-3-((3-isopropylphenyl)amino)-10*H*-phenoxazin-1-yl)ethan-1-one (7D):



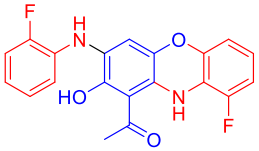
Black Solid; Yield - 54%, m.p = 169-171 °C, R_f 0.4 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO- d_6): δ 11.09 (s, 1H), 9.49 (s, 1H), 7.37 (t, *J* = 7.8 Hz, 1H), 7.26 (d, *J* = 7.8 Hz, 2H), 7.20 (d, *J* = 7.8 Hz, 1H), 7.15 (d, *J* = 7.7 Hz, 1H), 7.10 (d, *J* = 7.7 Hz, 1H), 7.04 (s, 1H), 6.98 (d, *J* = 7.8 Hz, 1H), 5.78 (s, 1H), 2.90 (sept, *J* = 10 Hz, 1H), 2.86 (sept, *J* = 10 Hz, 1H), 2.27 (s, 3H), 1.22 (d, *J* = 6.9 Hz, 6H), 1.19 (d, *J* = 6.9 Hz, 6H), ^{13}C NMR (125 MHz, DMSO- d_6): δ 199.40, 178.96, 178.64, 150.25, 149.44, 148.17, 139.54, 138.01, 129.71, 129.17, 124.80, 124.44, 122.43, 122.40, 122.33, 121.78, 109.63, 96.62, 33.77, 33.73, 32.45, 24.21, 24.06. IR (neat, cm^{-1}): 3209.20, 290.50, 2866.69, 1698.65, 1436.93, 1346.93, 1278.25, 1000.71, 840.06, 697.90. HRMS *m/z* calculated for $C_{26}H_{28}N_2O_3$ $[M+H]^+$: 417.2173 found 417.2183.

1-(8-bromo-3-((3-bromophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (8D):



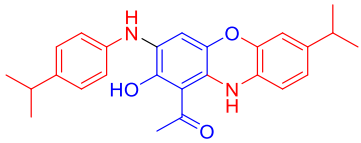
Red Solid; Yield- 43%, m.p = 215-217 °C, R_f 0.3 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO- d_6): δ 11.07 (s, 1H), 9.60 (s, 1H), 7.61 (s, 1H), 7.47 - 7.38 (m, 5H), 7.31 (t, *J* = 8.0 Hz, 1H), 7.19 (d, *J* = 8.8 Hz, 1H), 5.86 (s, 1H), 2.32 (s, 3H), ^{13}C NMR (125 MHz, DMSO- d_6): δ 199.81, 179.56, 179.04, 147.46, 139.92, 131.69, 131.08, 129.31, 128.87, 127.12, 126.8, 123.67, 123.0, 122.3, 121.74, 110.26, 97.69, 32.30. IR (neat, cm^{-1}): 3300.03, 3000.28, 2950.35, 1737.20, 1653.44, 1310.23, 1215.30, 1000.25, 820.30, 650.80. HRMS *m/z* calculated for $C_{20}H_{14}Br_2N_2O_3$ [M+H] $^+$: 490.9429 found 490.9425.

1-(9-fluoro-3-((2-fluorophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (9D):



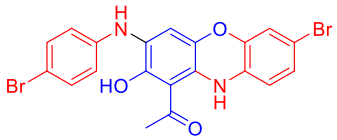
Red Solid; Yield- 49%, m.p = 165-167 °C, R_f 0.3 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO- d_6): δ 11.86 (broad s, 1H), 9.46 (s, 1H), 7.44 (t, *J* = 10 Hz, 1H), 7.41-7.39 (m, 2H), 7.35-7.29 (m, 3H), 7.27-7.23 (m, 1H), 7.19 (t, *J* = Hz, 1H), 5.28 (s, 1H), 2.38 (s, 3H). ^{13}C NMR (125 MHz, DMSO- d_6): δ 199.98, 178.54, 178.49, 156.56 (d, *J* = 249.20 Hz), 156.20 (d, *J* = 247.38 Hz), 148.68, 129.35, 128.98, 128.27, 127.70, 127.60, 127.31, 125.71, 125.37, 125.27, 125.03, 117.09 (d, *J* = 19.40 Hz), 116.25 (d, *J* = 19.50 Hz), 109.52, 97.78, 32.46. IR (neat, cm^{-1}): 3320.03, 1725.38, 1615.21, 1429.80, 1370.20, 1250.38, 1005. 65, 900.23, 825.32. HRMS *m/z* calculated for $C_{20}H_{14}F_2N_2O_3$ [M+H] $^+$: 369.1051 found 369.1095

1-(2-hydroxy-7-isopropyl-3-((4-isopropylphenyl)amino)-10*H*-phenoxazin-1-yl)ethan-1-one (10D):



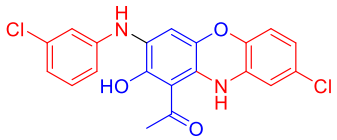
Black Solid; Yield- 58%, m.p = 163-165 °C, R_f 0.4 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO- d_6): δ 11.39 (s, 1H), 9.52 (s, 1H), 7.31 (q, *J* = 8.7 Hz, 4H), 7.21 (d, *J* = 8.4 Hz, 2H), 7.08 (d, *J* = 8.4 Hz, 2H), 5.75 (s, 1H), 2.90 (septate, *J* = 10 Hz, 2H), 2.30 (s, 3H), 1.23 (s, 3H), 1.21 (s, 3H), 1.21 (s, 3H), 1.20 (s, 3H), ^{13}C NMR (125 MHz, DMSO- d_6): δ 199.74, 178.72, 178.59, 148.25, 146.97, 146.68, 137.37, 135.71, 127.59, 127.00, 124.56, 124.36, 109.42, 98.68, 33.49, 33.43, 32.43, 24.28, 24.26. IR (neat, cm^{-1}): 3217.84, 2960.86, 2869.21, 1738.65, 1554.37, 1343.98, 1285.96, 1053.72, 819.87, 721.11. HRMS *m/z* calculated for $C_{26}H_{28}N_2O_3$ [M+H] $^+$: 417.2173 found 417.2190.

1-(7-bromo-3-((4-bromophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (11D):



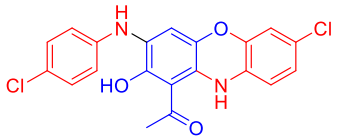
Red Solid; Yield - 52%, m.p = 235-237 °C, R_f 0.3 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO- d_6): δ 11.21 (s, 1H), 9.59 (s, 1H), 7.63 (d, *J* = 8.8 Hz, 2H), 7.53 (d, *J* = 8.7 Hz, 2H), 7.37 (d, *J* = 8.8 Hz, 2H), 7.14 (d, *J* = 8.7 Hz, 2H), 5.86 (s, 1H), 2.33 (s, 3H). ^{13}C NMR (125 MHz, DMSO- d_6): δ 199.79, 179.28, 178.94, 147.50, 139.25, 137.56, 132.67, 132.04, 126.68, 126.20, 119.07, 118.36, 109.91, 97.52, 32.44. IR (neat, cm^{-1}): 3255.59, 3084.73, 3053.98, 1737.20, 1294.59, 1218.58, 1013.87, 829.72, 709.77. HRMS *m/z* calculated for $C_{20}H_{14}Br_2N_2O_3$ [M+H]$^+$: 490.9425 found 490.9429

1-(8-chloro-3-((3-chlorophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (12D):



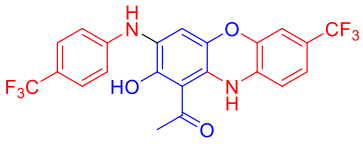
Red Solid; Yield- 50%, m.p = 190-192 °C, R_f 0.4 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO- d_6): δ 11.09 (s, 1H), 9.60 (s, 1H), 7.48 (t, *J* = 8.0 Hz, 2H), 7.38 (dd, *J* = 15.8 Hz, *J* = 7.8 Hz, 2H), 7.32-7.26 (m, 3H) 7.15 (d, *J* = 7.2 Hz, 1H), 5.88 (s, 1H), 2.31 (s, 3H), ^{13}C NMR (125 MHz, DMSO- d_6): δ 199.82, 179.53, 179.08, 148.85, 147.40, 141.38, 139.79, 134.04, 133.42, 131.43, 130.80, 126.47, 125.96, 124.43, 123.97, 123.31, 122.67, 110.27, 97.78, 32.28. IR (neat, cm^{-1}): 3272.00, 2971.14, 2746.41, 1738.32, 1624.63, 1357.26, 1230.48, 881.77, 777.18. HRMS *m/z* calculated for $C_{20}H_{14}Cl_2N_2O_3$ [M+H] $^+$: 401.0454 found 401.0463.

1-(7-chloro-3-((4-chlorophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (13D):



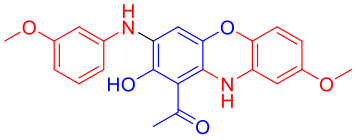
Brick-red Solid; Yield- 55%, m.p = 240-242 °C, R_f 0.4 (30:70 Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO- d_6): δ 11.20 (s, 1H), 9.60 (s, 1H), 7.51 (d, *J* = 8.8 Hz, 2H), 7.41 (dd, *J* = 14.2 Hz, *J* = 8.8 Hz, 4H), 7.20 (d, *J* = 8.7 Hz, 2H), 5.84 (s, 1H), 2.33 (s, 3H), ^{13}C NMR (125 MHz, DMSO- d_6): δ 199.79, 179.27, 178.91, 147.63, 138.86, 137.13, 130.74, 130.14, 129.76, 129.12, 126.37, 125.93, 109.88, 97.42, 32.44. IR (neat, cm^{-1}): 3289.00, 3076.75, 2971.19, 1905.01, 1737.11, 1594.00, 1330.55, 1286.56, 1010.03, 828.79, 624.96. HRMS *m/z* calculated for $C_{20}H_{14}Cl_2N_2O_3$ $[M+H]^+$: 401.0454 found 401.0462.

1-(2-hydroxy-7-(trifluoromethyl)-3-((4-(trifluoromethyl)phenyl)amino)-10*H*-phenoxazin-1-yl)ethan-1-one (14D):



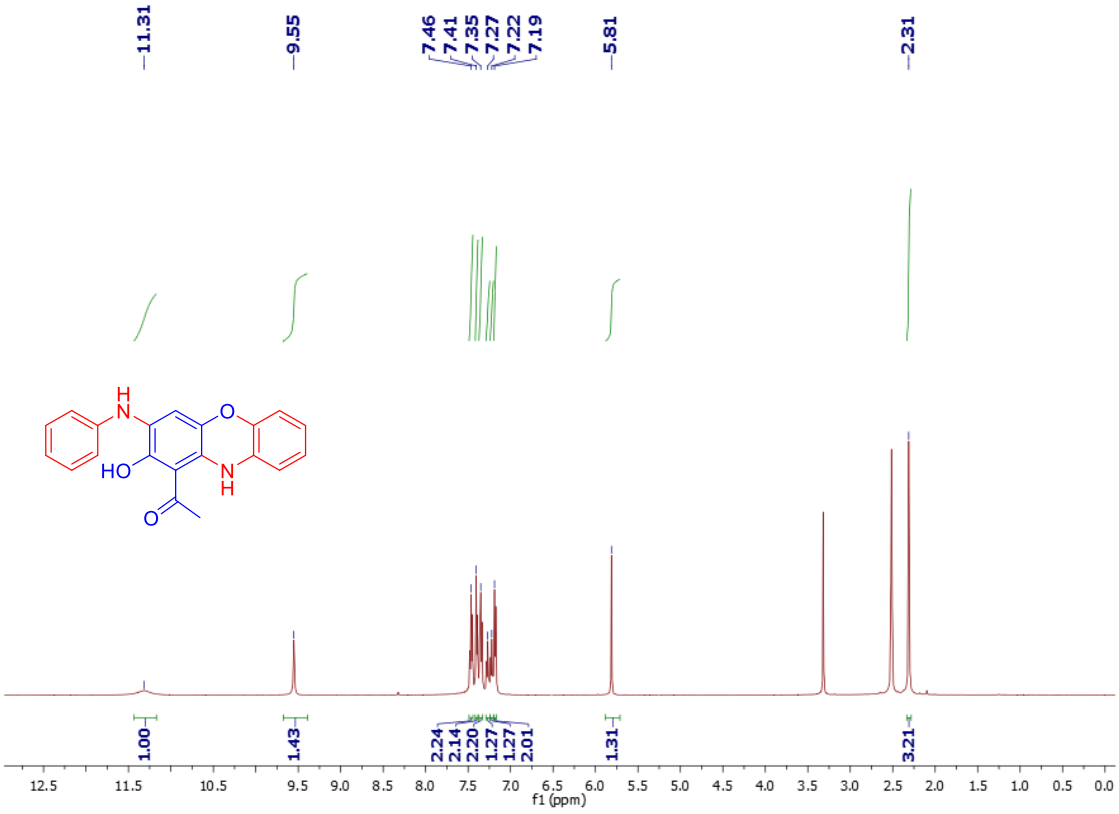
Red Solid; Yield- 53%, m.p = 190-192 °C, R_f 0.4 (30:70 : Ethyl acetate: Hexane); ^{1}H NMR (500 MHz, DMSO- d_6): δ 11.31 (s, 1H), 9.74 (s, 1H), 7.80 (d, *J* = 8.5 Hz, 2H), 7.71 (d, *J* = 8.4 Hz, 2H), 7.64 (d, *J* = 8.4 Hz, 2H), 7.39 (d, *J* = 8.3 Hz, 2H), 6.06 (s, 1H), 2.35 (s, 3H), ^{13}C NMR (125 MHz, DMSO- d_6): δ 199.87, 179.92, 179.28, 148.84, 146.79, 143.69, 142.11, 134.83, 133.66, 132.38, 128.75 (q, *J* = 34.11 Hz), 127.84, 126.96 (q, *J* = 3.75 Hz),, 126.59, 126.30 (q, *J* = 3.34 Hz), 125.68 (q, *J* = 31.87 Hz), 124.98, 124.54 (q, *J* = 252.98 Hz), 124.03, 123.54, 110.61, 98.70, 32.39. IR (neat, cm^{-1}): 3280.12, 2970.90, 1737.09, 1568.37, 1319.37, 1287.81, 1066.92, 827.05, 733.96. HRMS *m/z* calculated for $C_{22}H_{14}F_6N_2O_3$ $[M+H]^+$: 469.0981 found 469.0986.

1-(2-hydroxy-8-methoxy-3-((3-methoxyphenyl)amino)-10*H*-phenoxazin-1-yl)ethan-1-one (15D):

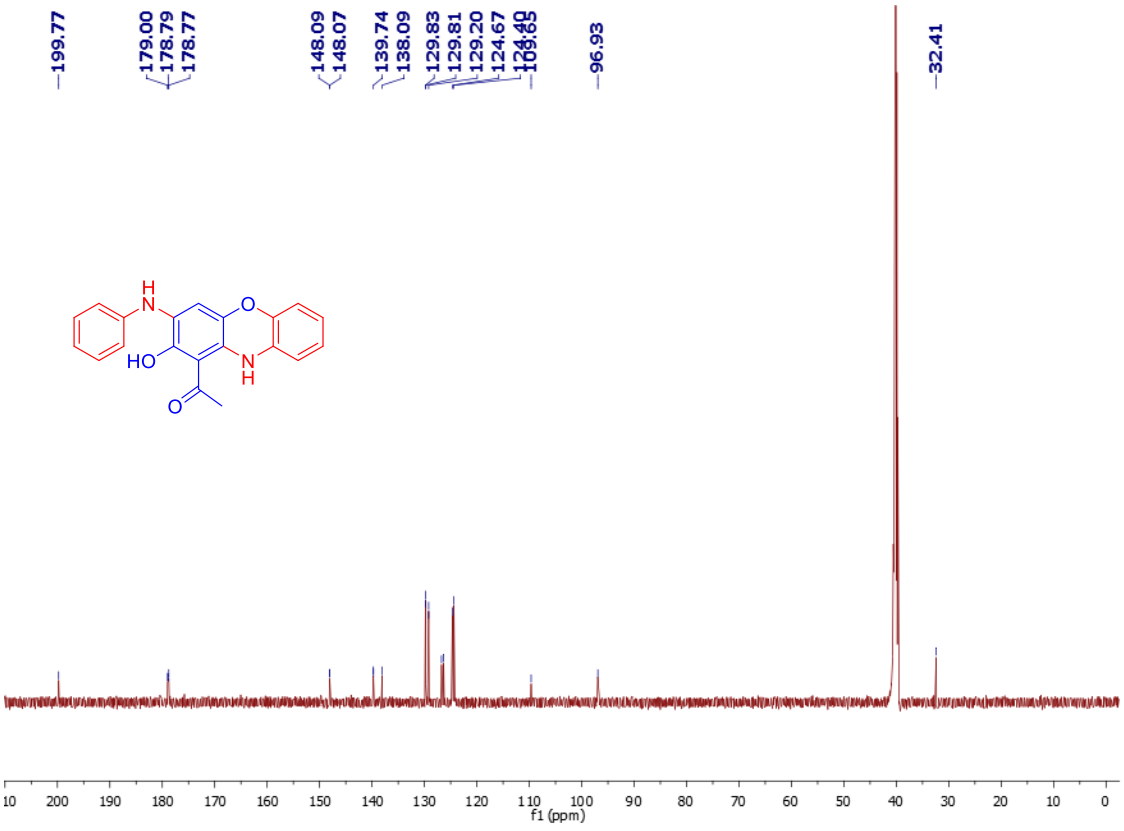


Brown Solid; Yield- 48%, m.p = 161-163 °C, R_f = 0.3 (30:70 Ethyl acetate: Hexane: Ethyl acetate); ^{1}H NMR (500 MHz, DMSO-d_6):δ 11.03 (s, 1H), 9.48 (s, 1H), 7.36 (t, *J* = 8.1 Hz, 1H), 7.24 (t, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 7.2 Hz, 2H), 6.86 – 6.83 (m, 1H), 6.80 (d, *J* = 5.0 Hz, 1H), 6.79 (s, 1H), 6.74 (d, *J* = 8.5 Hz, 1H), 5.85 (s, 1H), 3.78 (s, 3H), 3.75 (s, 3H), 2.28 (s, 3H). ^{13}C NMR (125 MHz, DMSO- d_6): δ 199.59, 179.15, 178.79, 160.41, 159.97, 147.82, 140.83, 139.28, 130.61, 130.00, 116.82, 116.21, 112.45, 111.89, 110.39, 110.19, 55.75, 55.70, 32.28. IR (neat, cm^{-1}): 3291.26, 2971.35, 2922.74, 2838.76, 1738.76, 1588.89, 1356.29, 1275.75, 1047.87, 866.65. HRMS *m/z* calculated for $C_{22}H_{20}N_2O_5$ $[M+H]^+$: 393.1450 found 393.1445

1-(2-hydroxy-3-(phenylamino)-10*H*-phenoxazin-1-yl)ethan-1-one (1D):

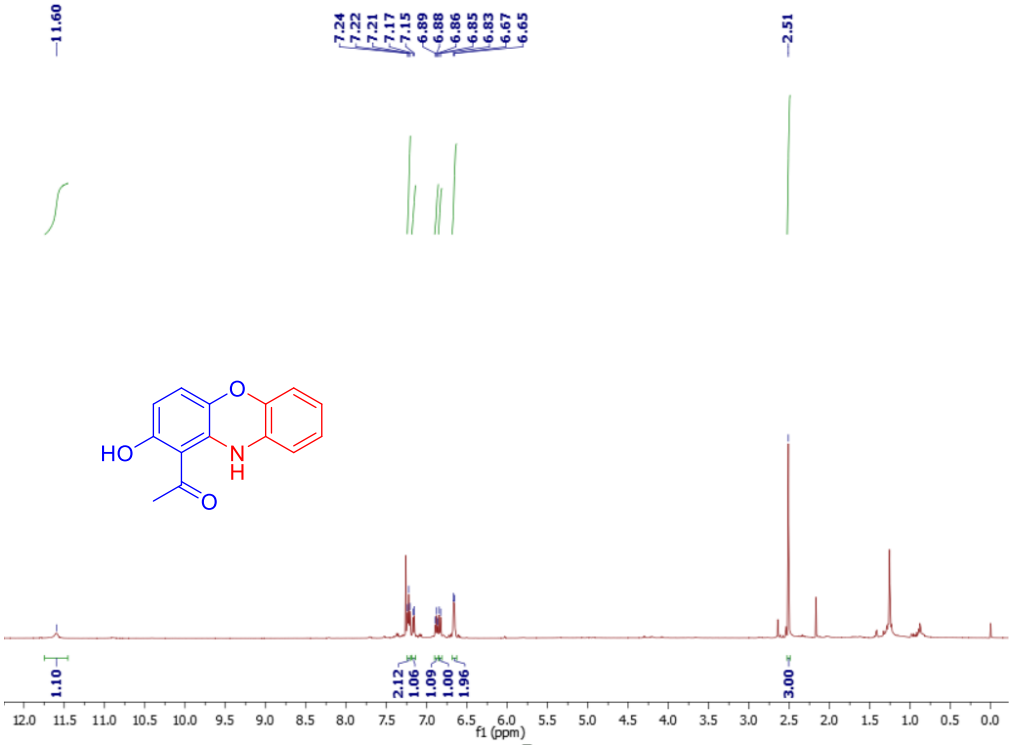


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 1D

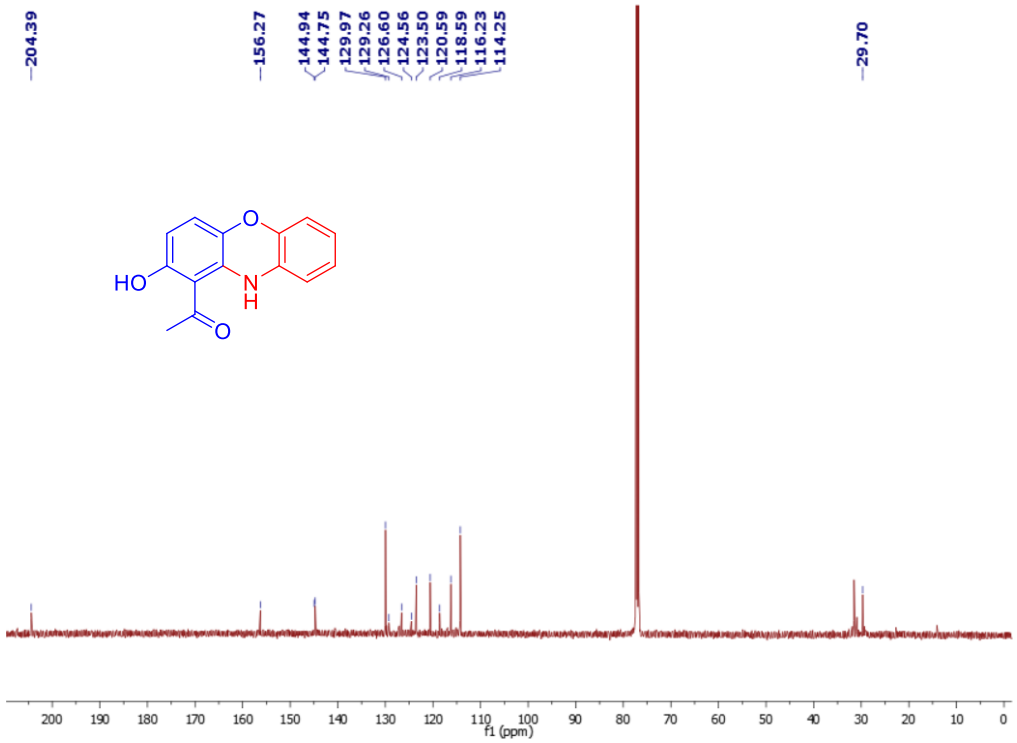


^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 1D

1-(2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (1C):

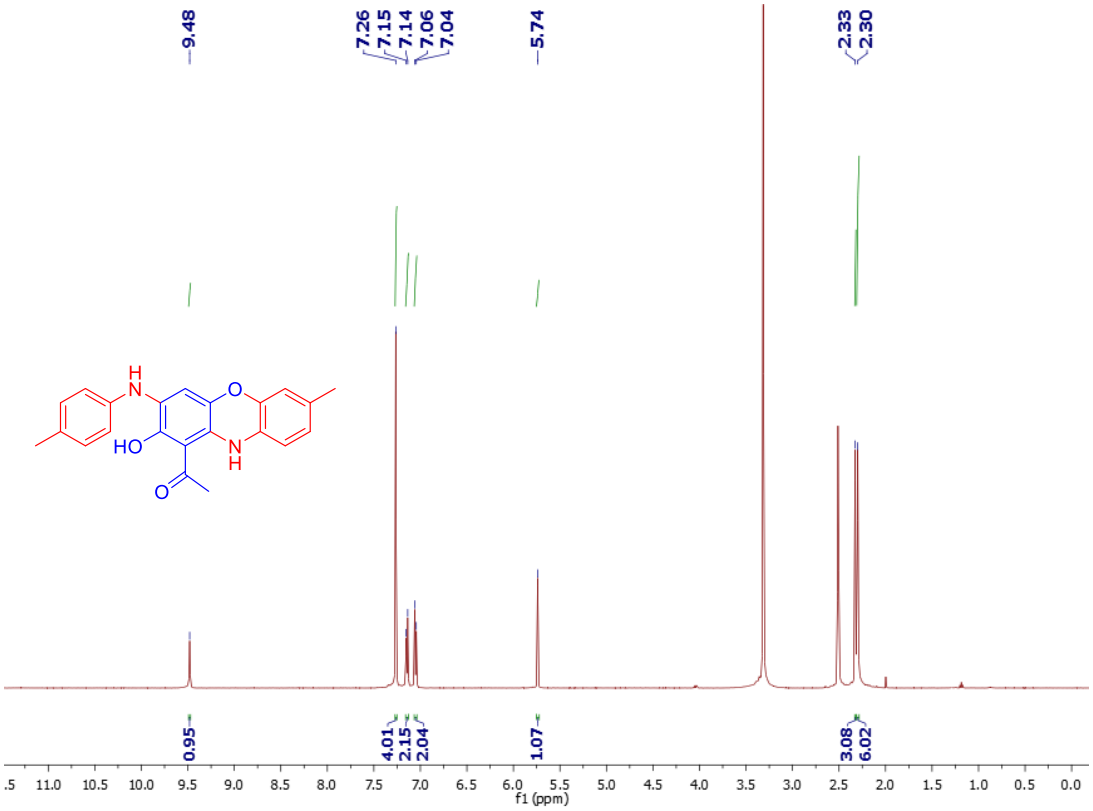


^{1}H NMR spectrum (500 MHz, $CDCl_3$) of 1C

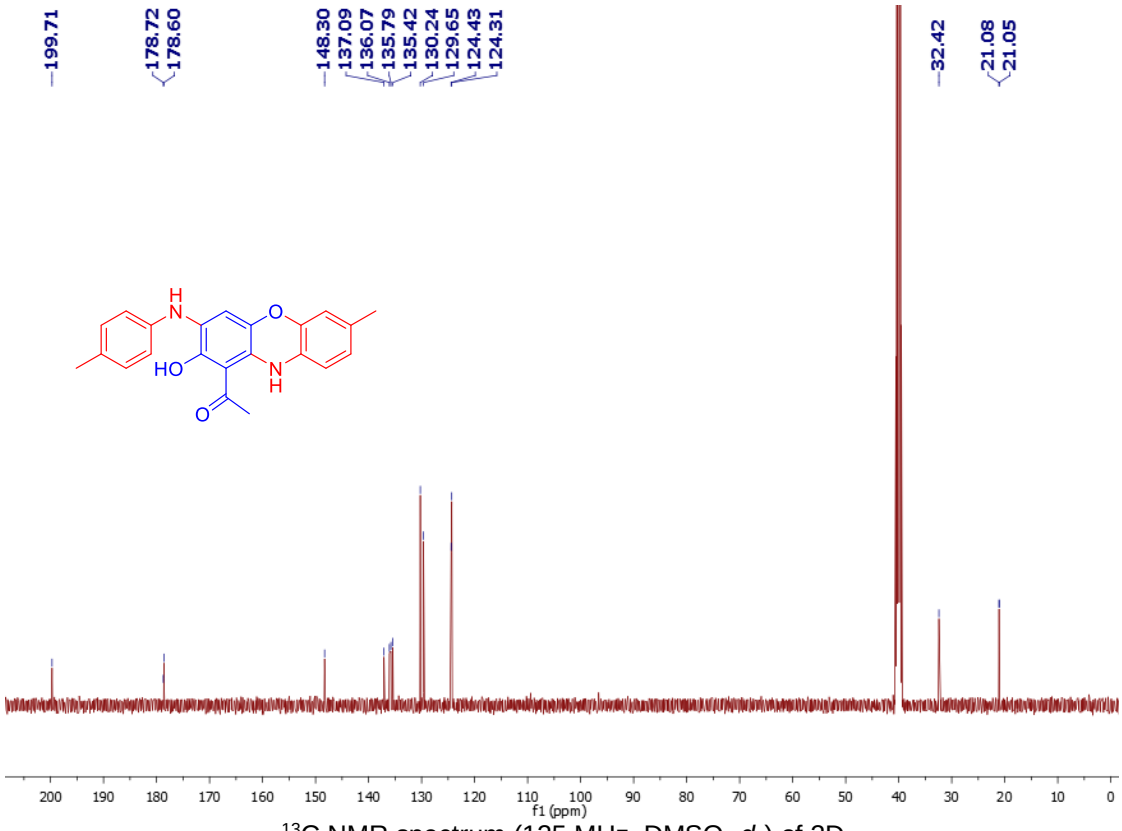


^{13}C NMR spectrum (125 MHz, $CDCl_3$) of 1C

1-(2-hydroxy-7-methyl-3-(p-tolylamino)-10*H*-phenoxazin-1-yl)ethan-1-one (2D):

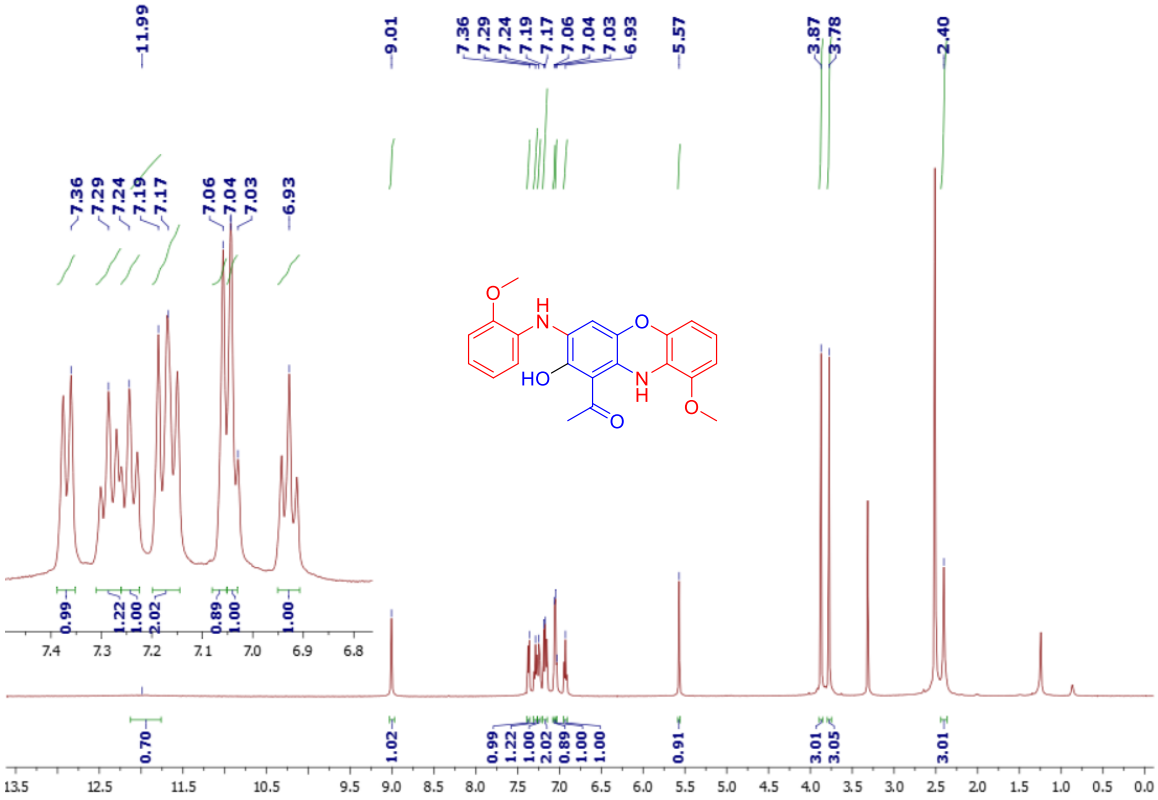


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 2D

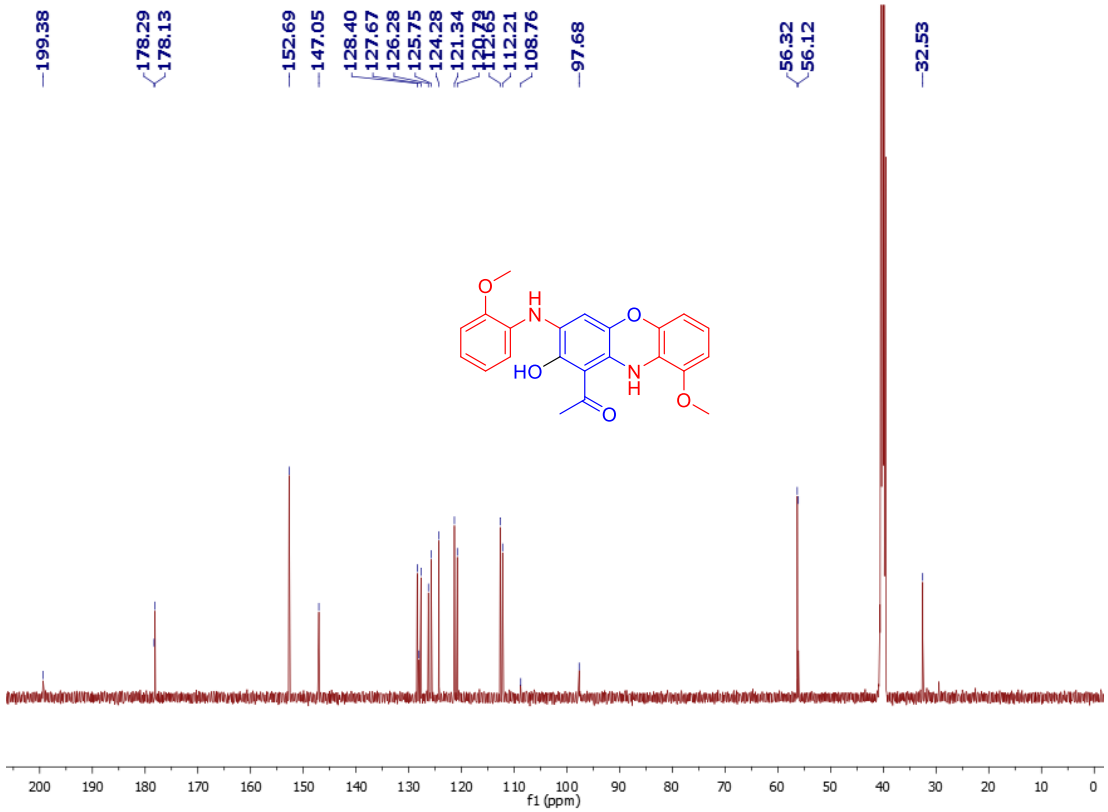


^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 2D

1-(2-hydroxy-9-methoxy-3-((2-methoxyphenyl)amino)-10*H*-phenoxazin-1-yl)ethan-1-one(3D):

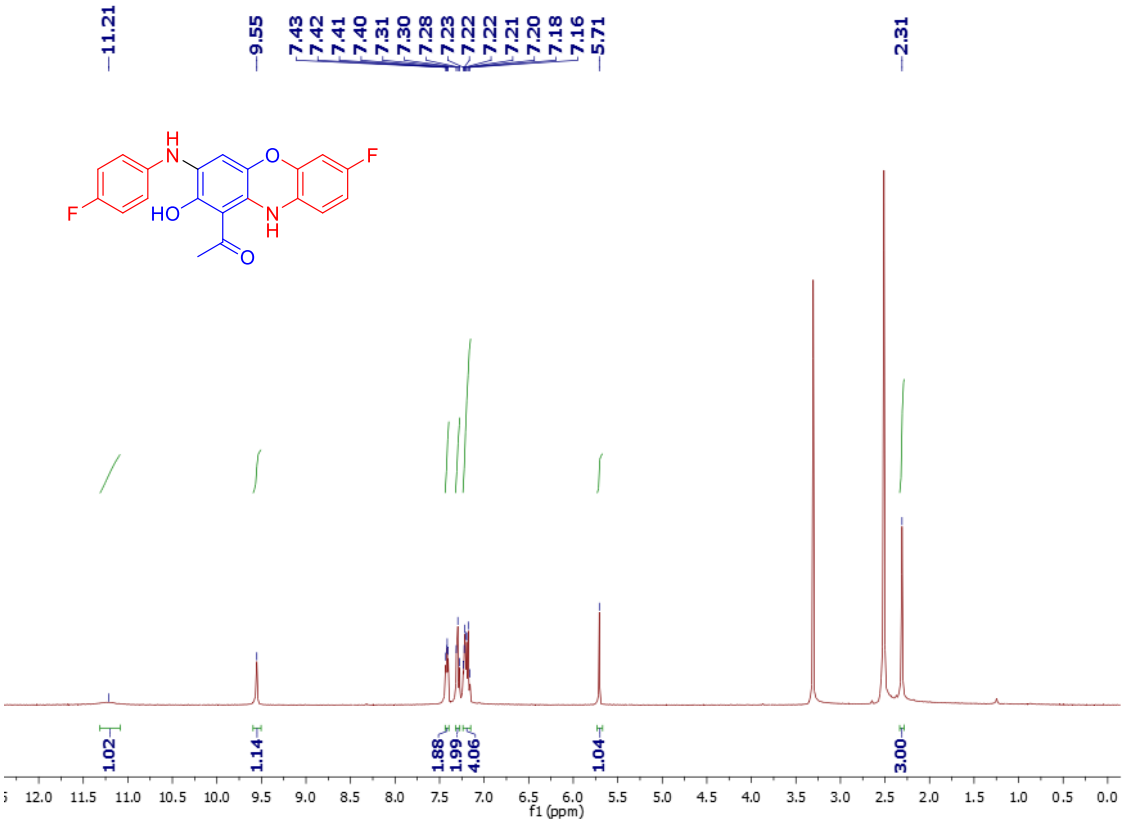


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 3D

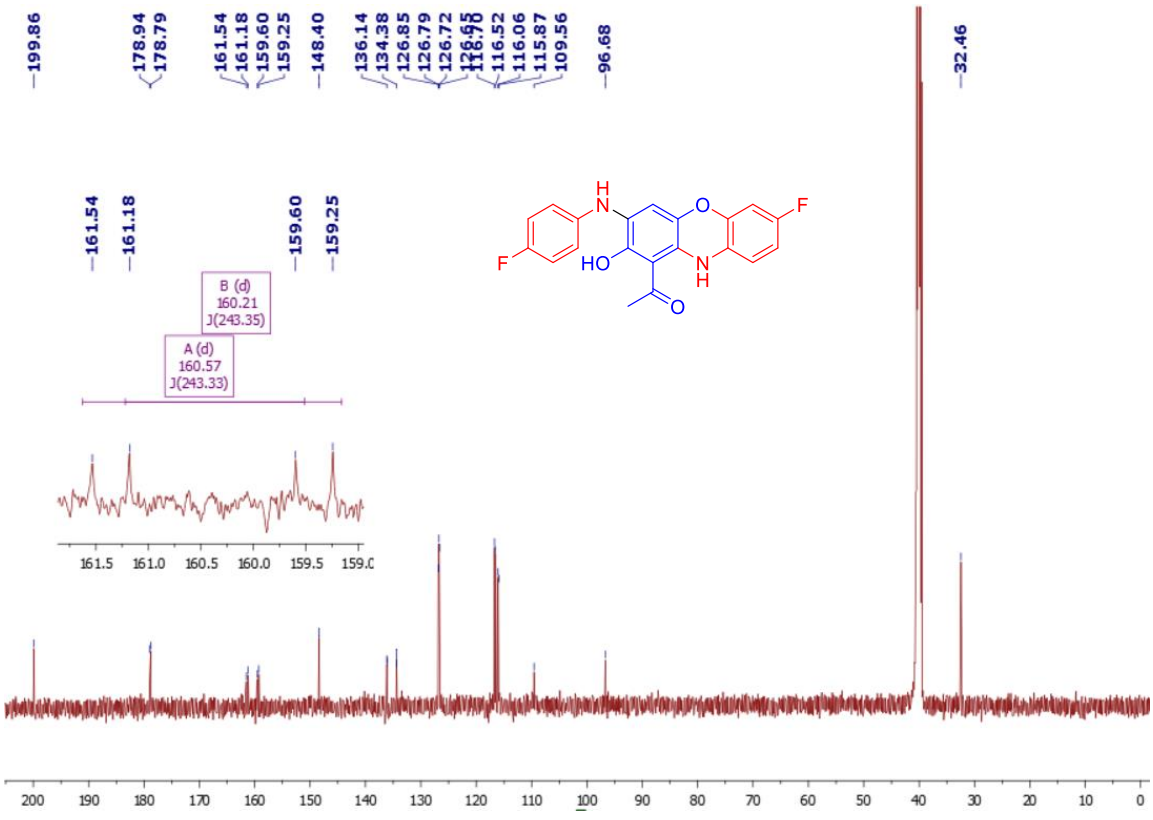


^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 3D

1-(7-fluoro-3-((4-fluorophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (4D):

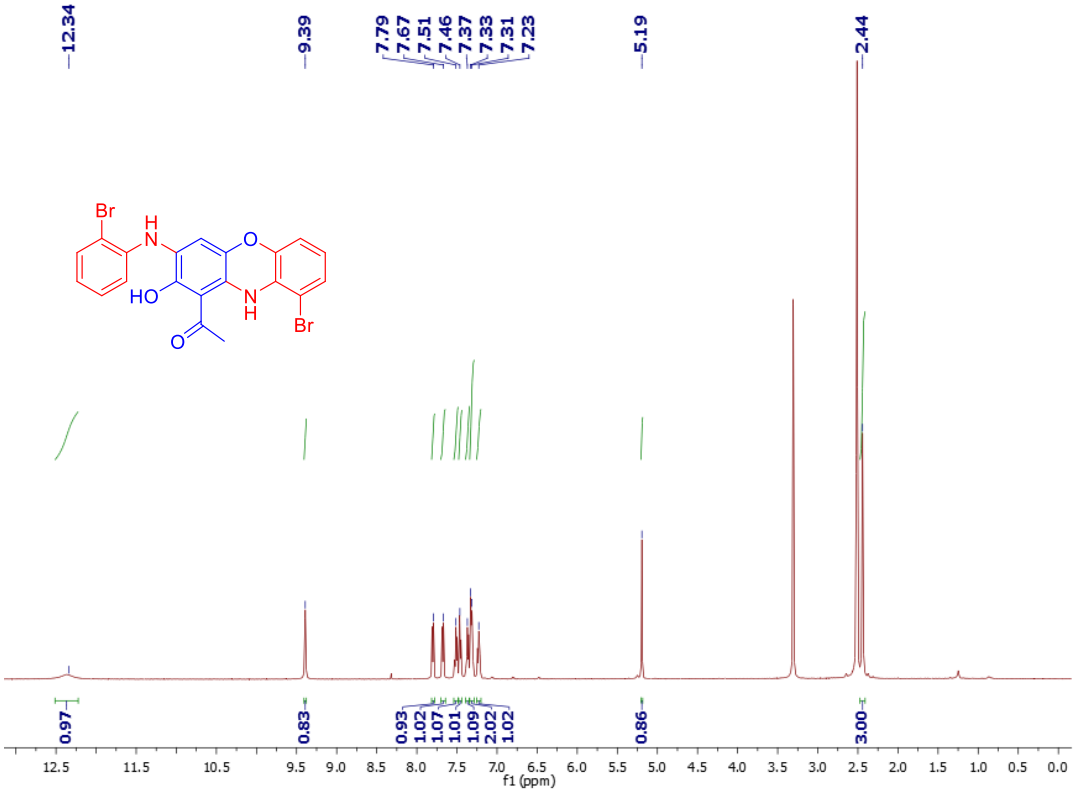


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 4D

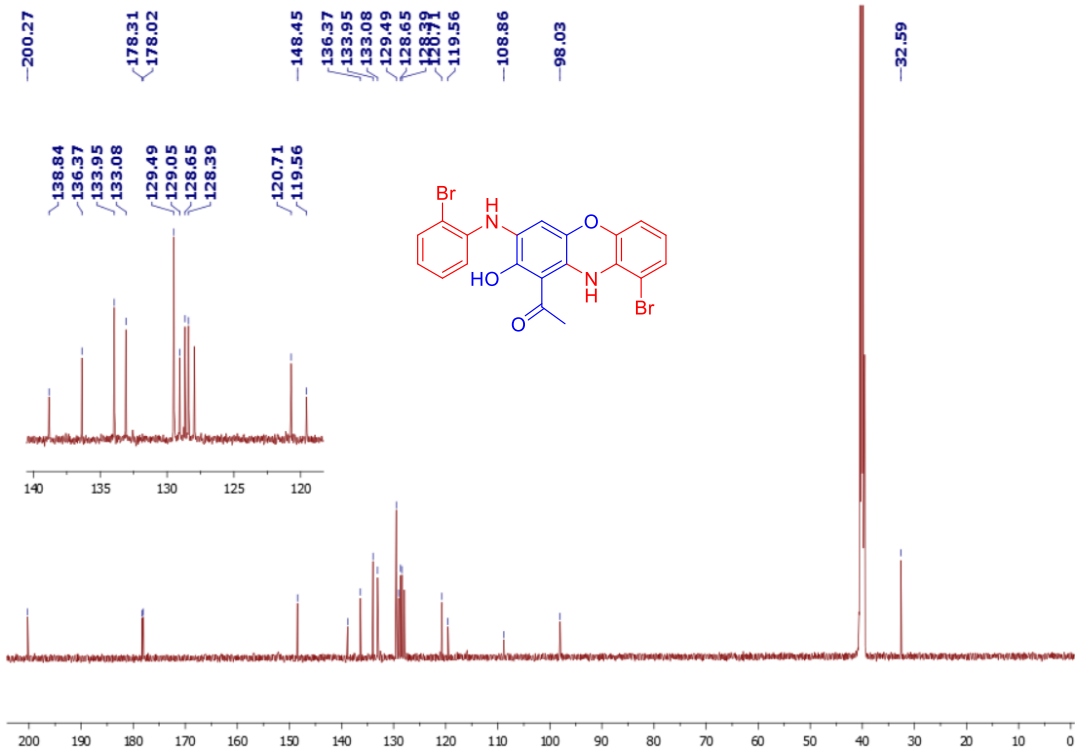


^{13}C NMR spectrum (125 MHz, DMSO-d_6) of 4D

1-(9-bromo-3-((2-bromophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (5D):

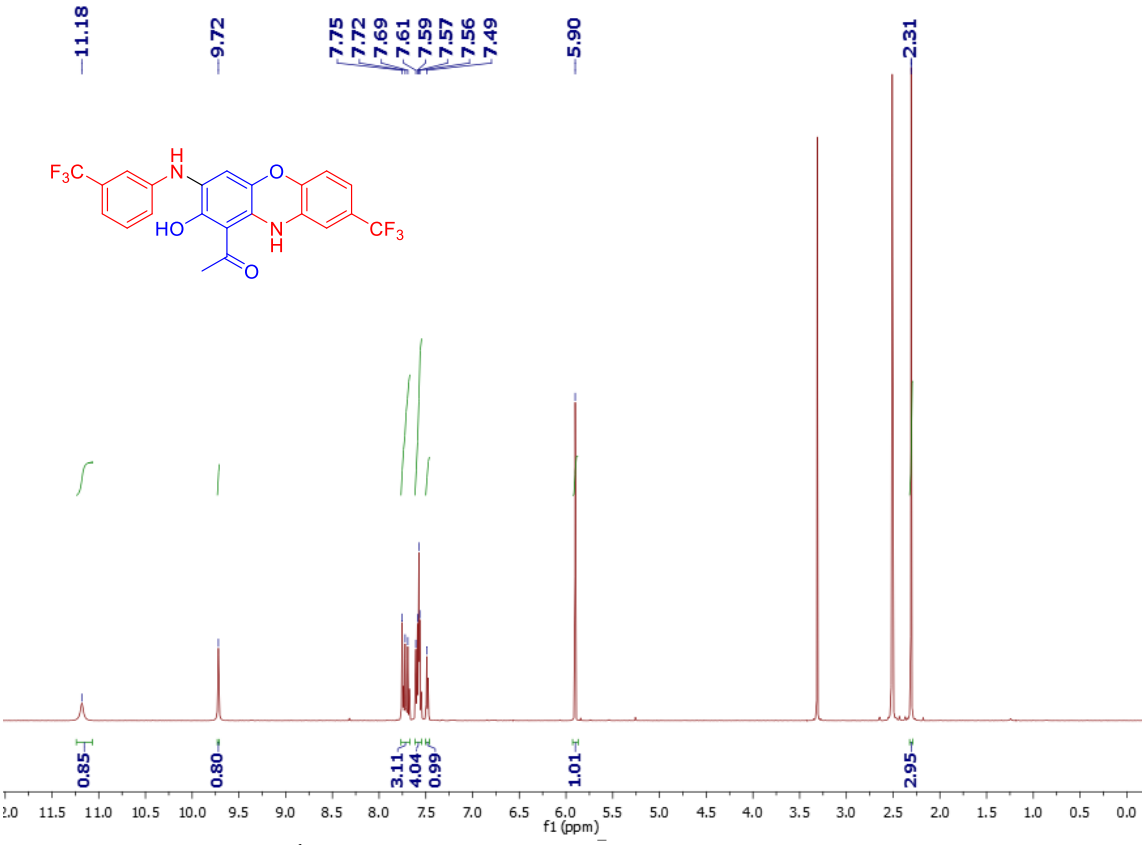


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 5D

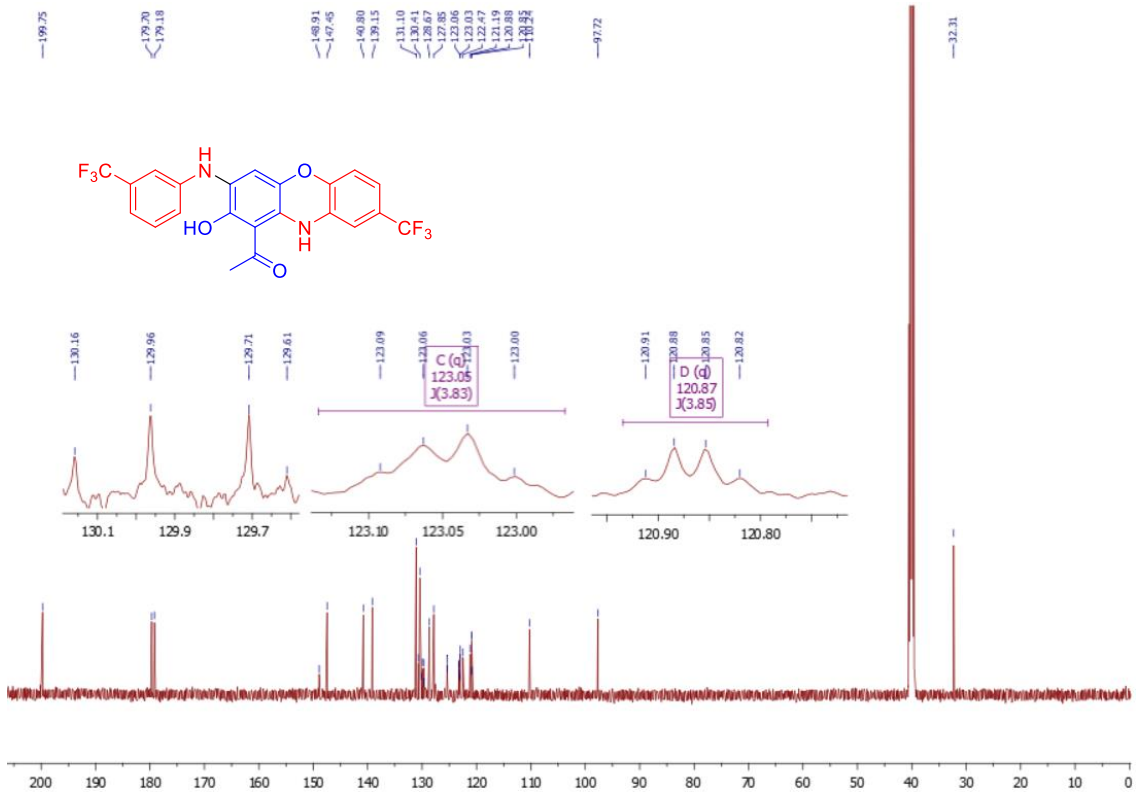


^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 5D

1-(2-hydroxy-8-(trifluoromethyl)-3-((3-(trifluoromethyl)phenyl)amino)-10*H*-phenoxazin-1-yl)ethan-1-one (6D):

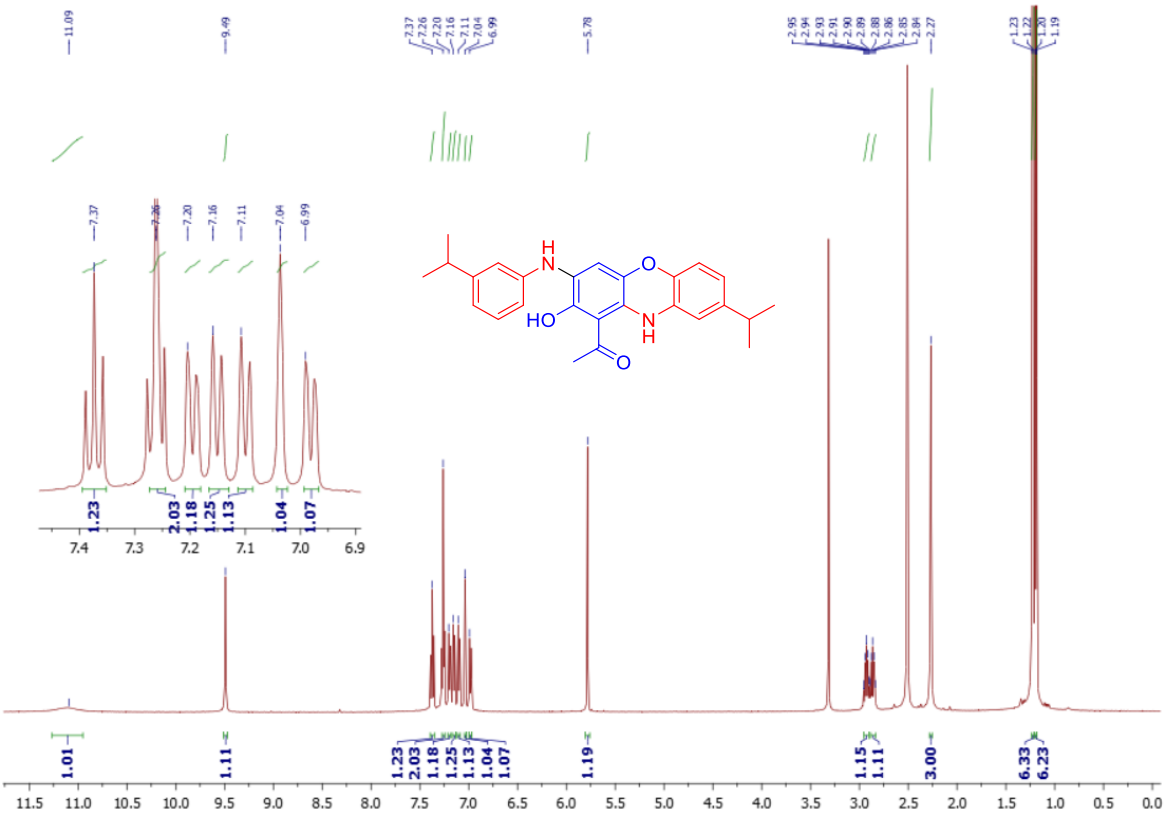


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 6D

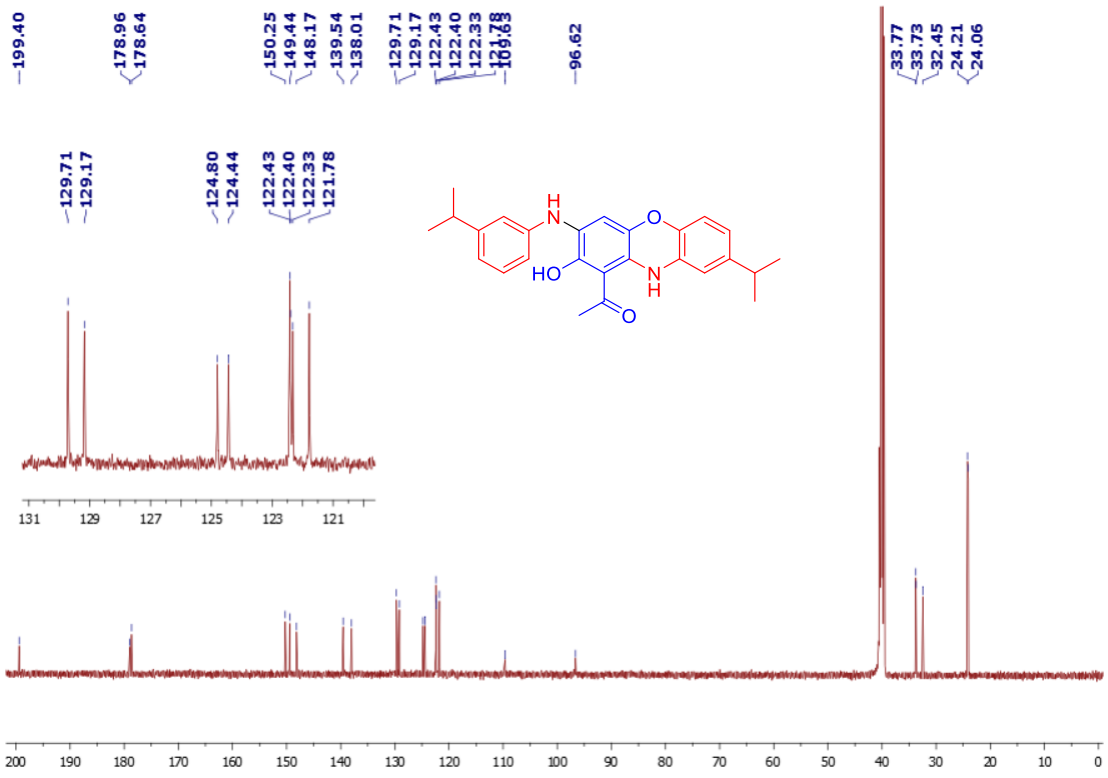


^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 6D

1-(2-hydroxy-8-isopropyl-3-((3-isopropylphenyl)amino)-10*H*-phenoxazin-1-yl)ethan-1-one (7D):

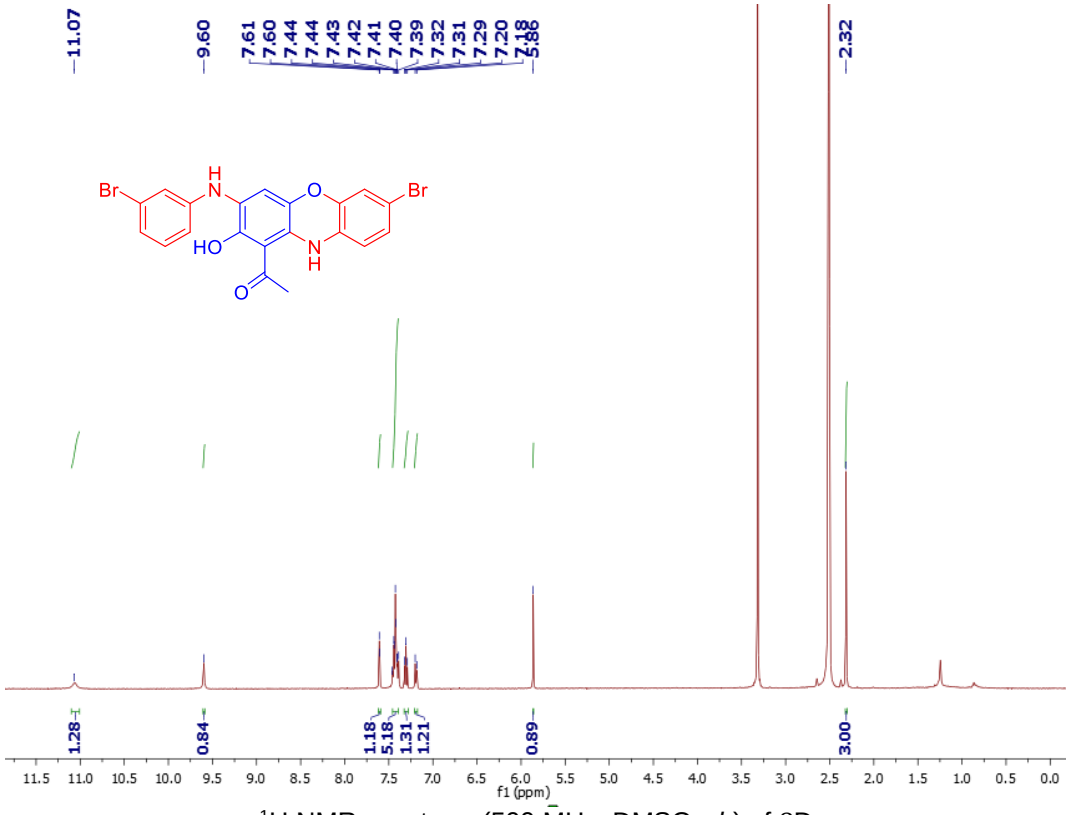


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 7D

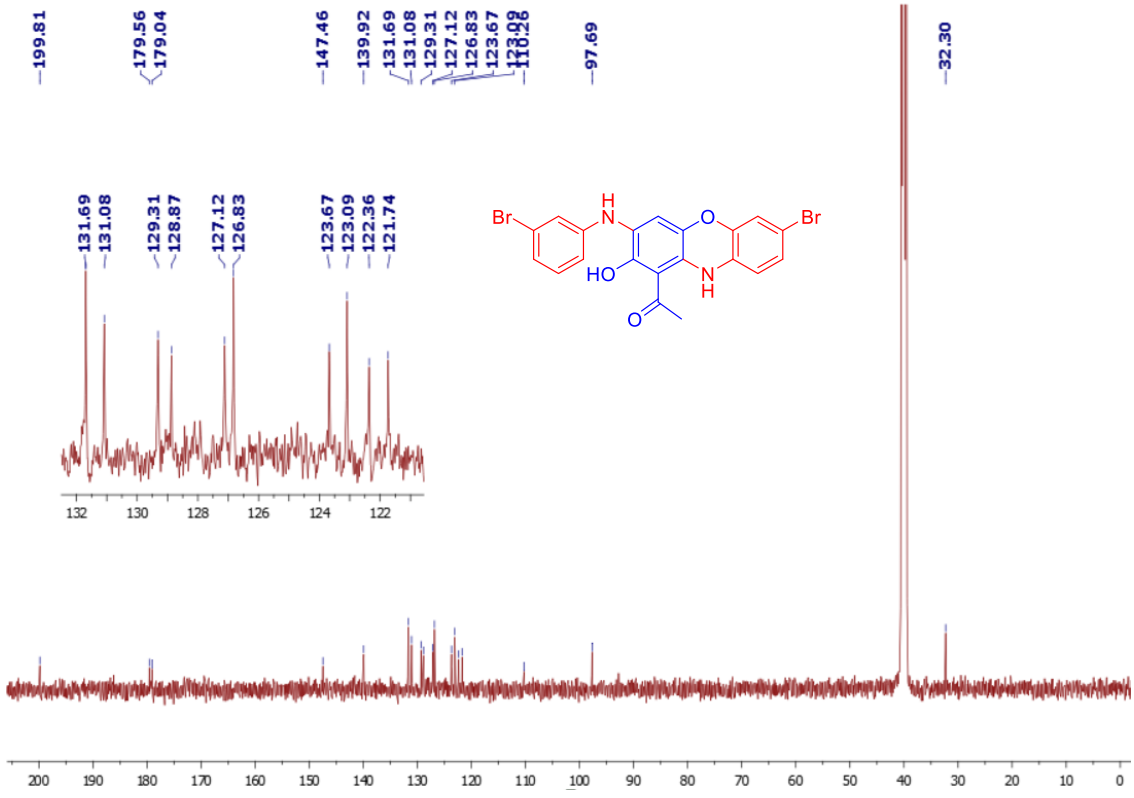


^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 7D

1-(8-bromo-3-((3-bromophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (8D):

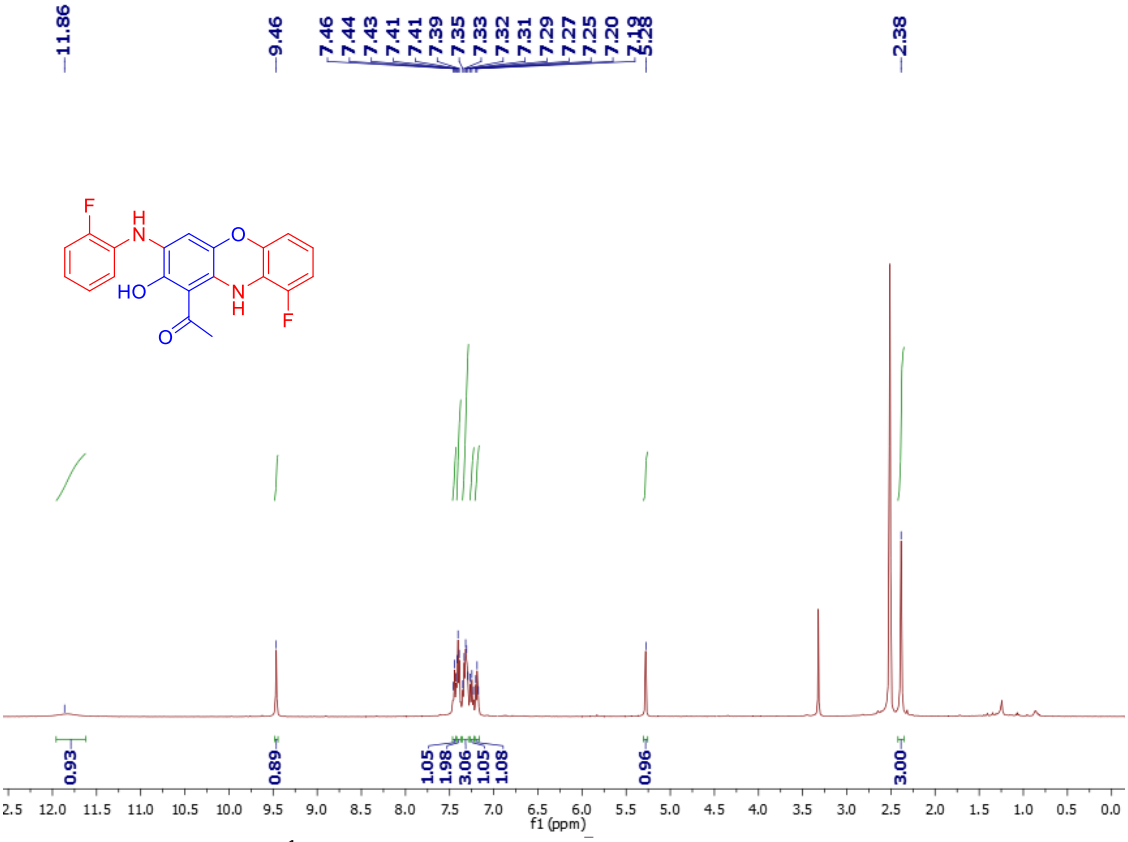


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 8D

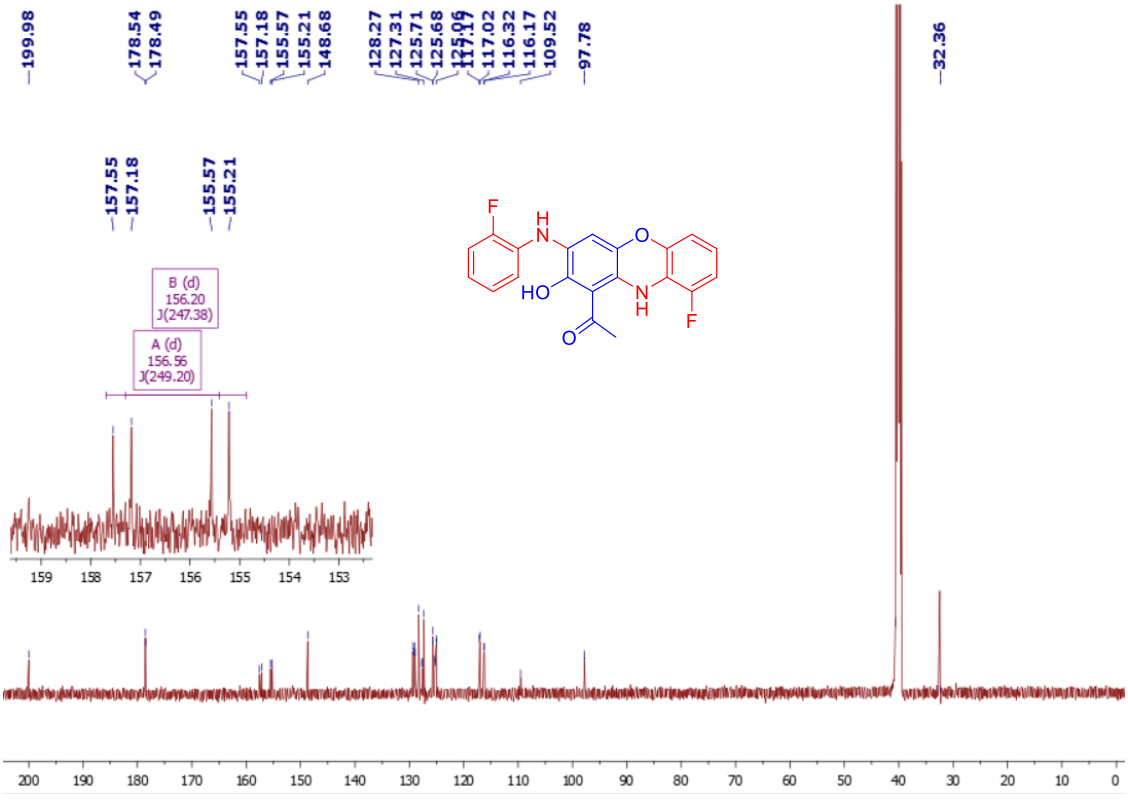


^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 8D

1-(9-fluoro-3-((2-fluorophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (9D):

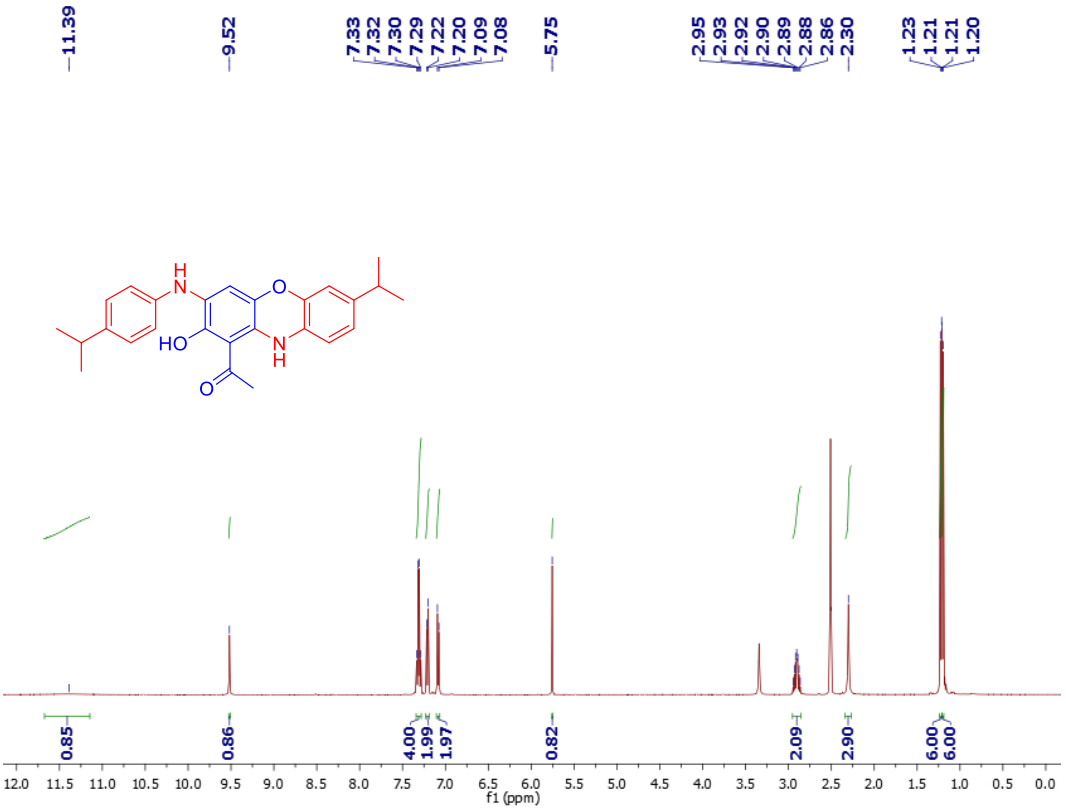


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 9D

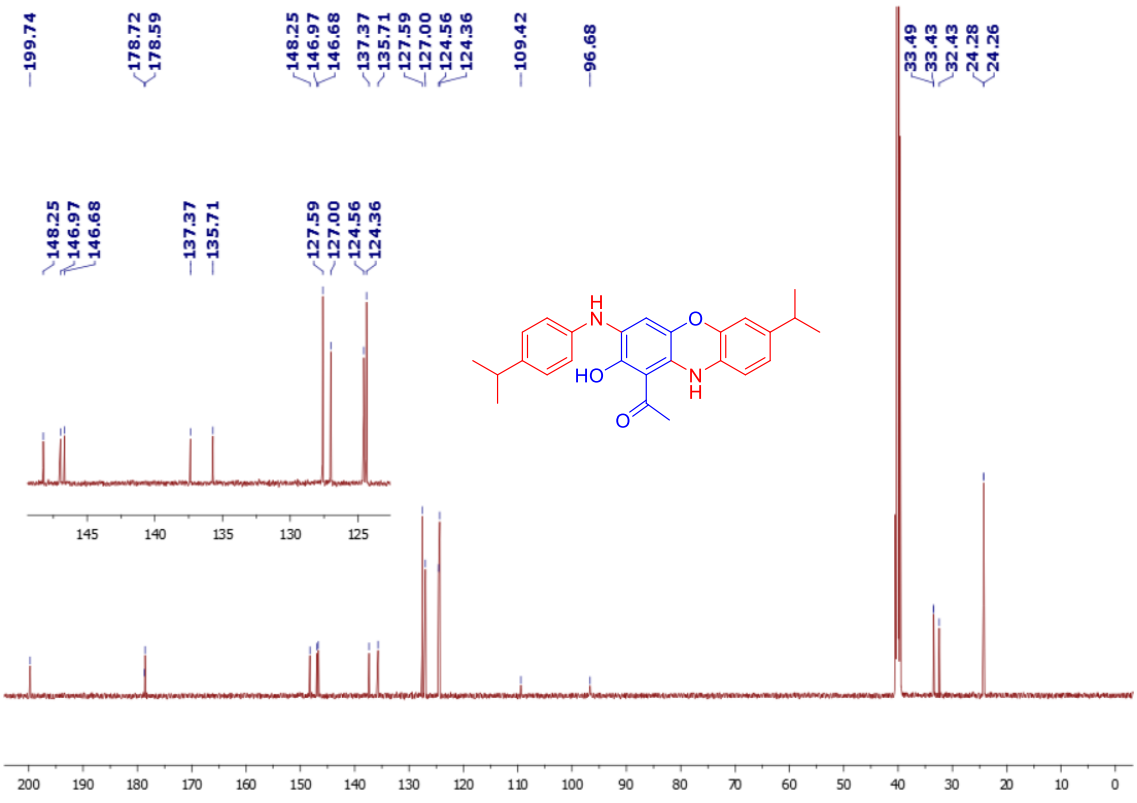


^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 9D

1-(2-hydroxy-7-isopropyl-3-((4-isopropylphenyl)amino)-10*H*-phenoxazin-1-yl)ethan-1-one (10D):

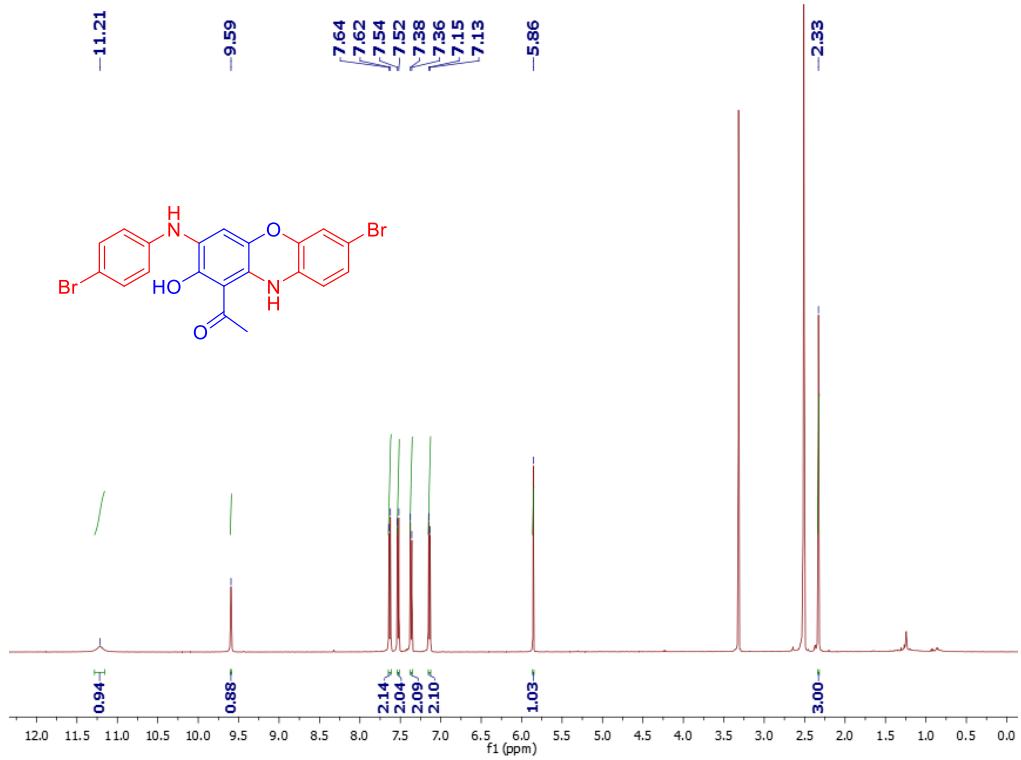


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 10D

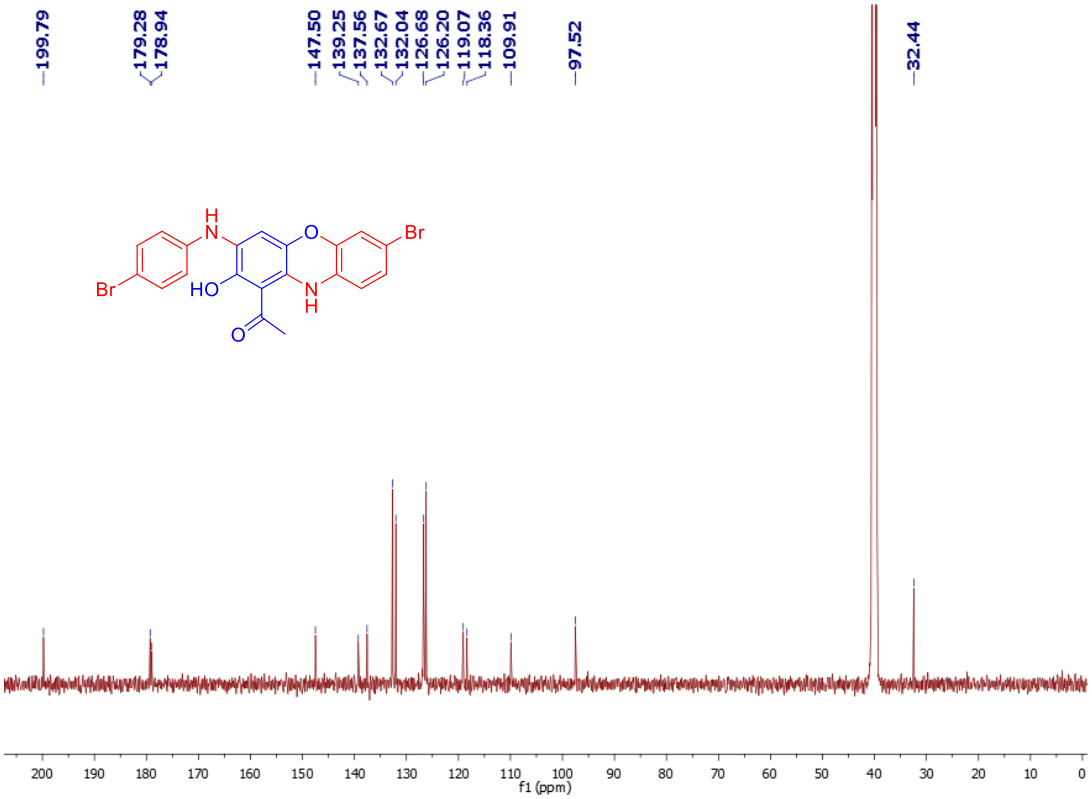


^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 10D

1-(7-bromo-3-((4-bromophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (11D):

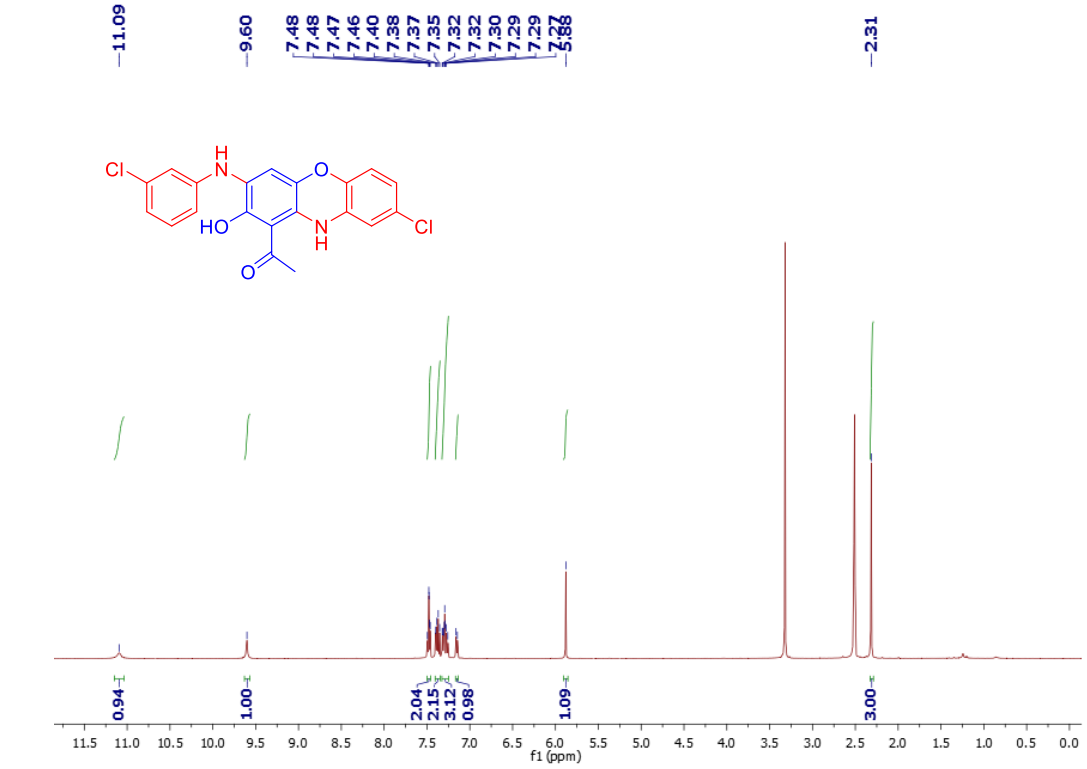


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 11D

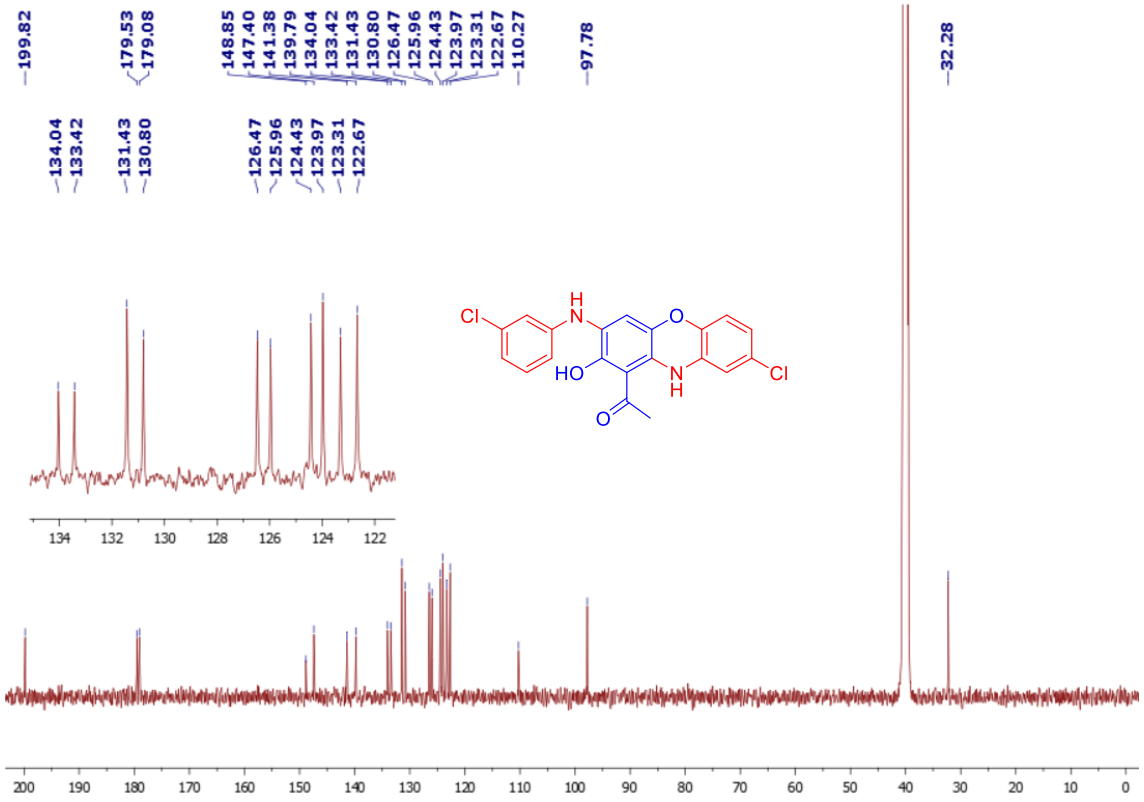


^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 11D

1-(8-chloro-3-((3-chlorophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (12D):

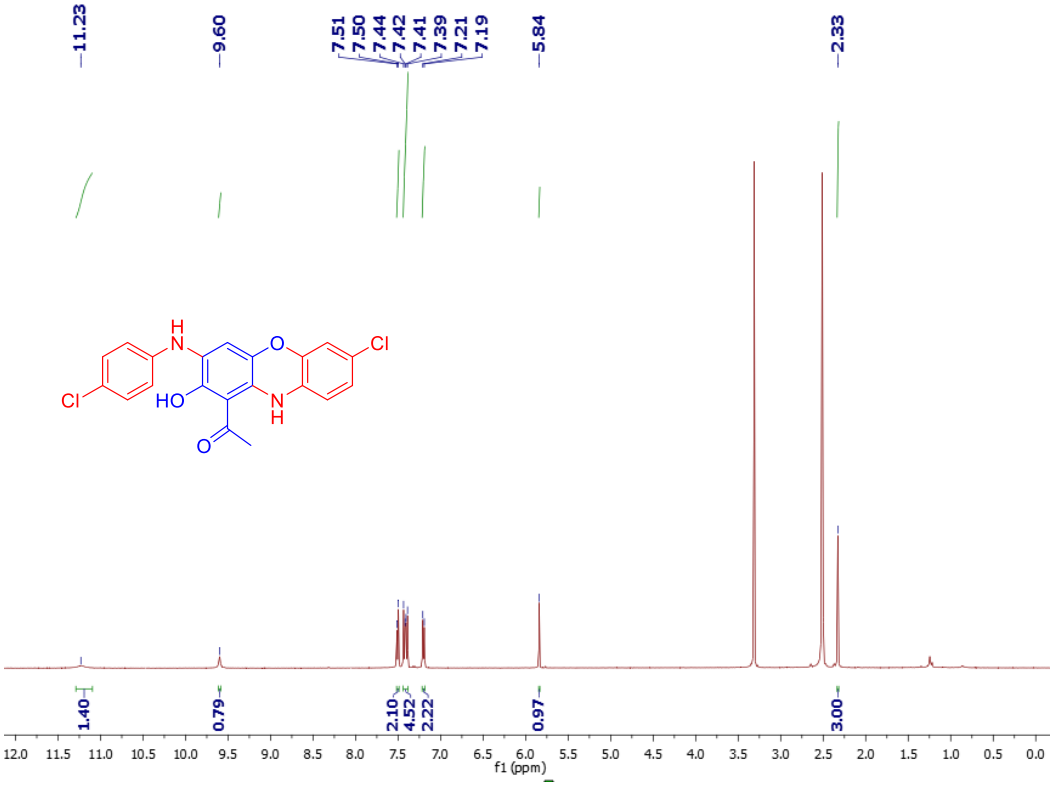


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 12D

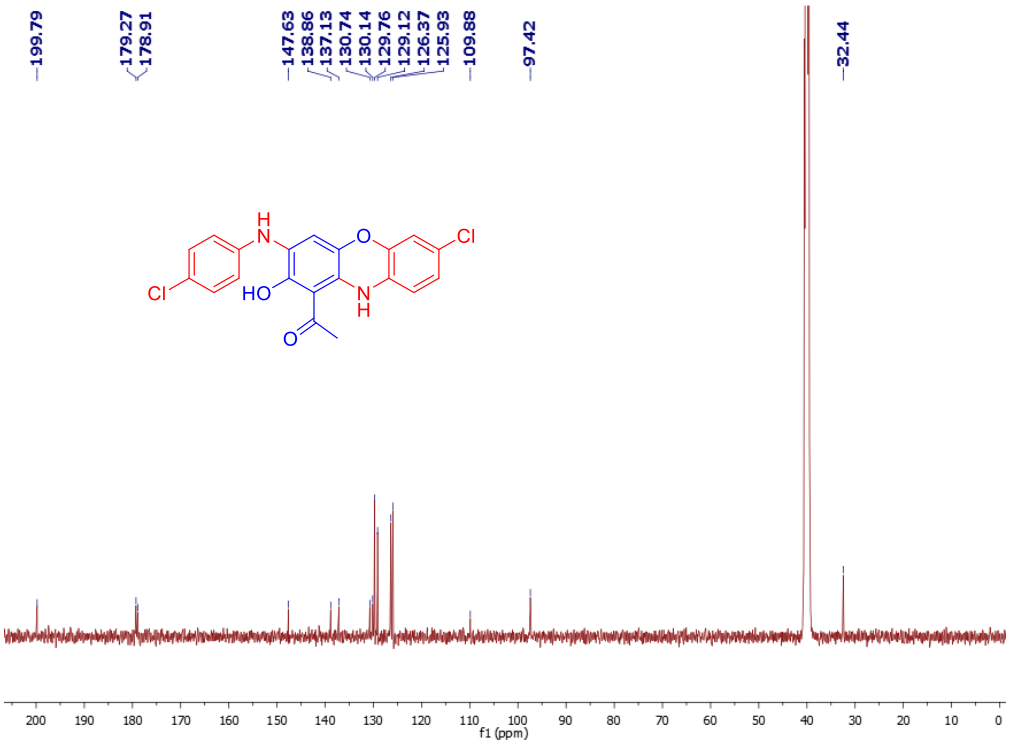


^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 12D

1-(7-chloro-3-((4-chlorophenyl)amino)-2-hydroxy-10*H*-phenoxazin-1-yl)ethan-1-one (13D):

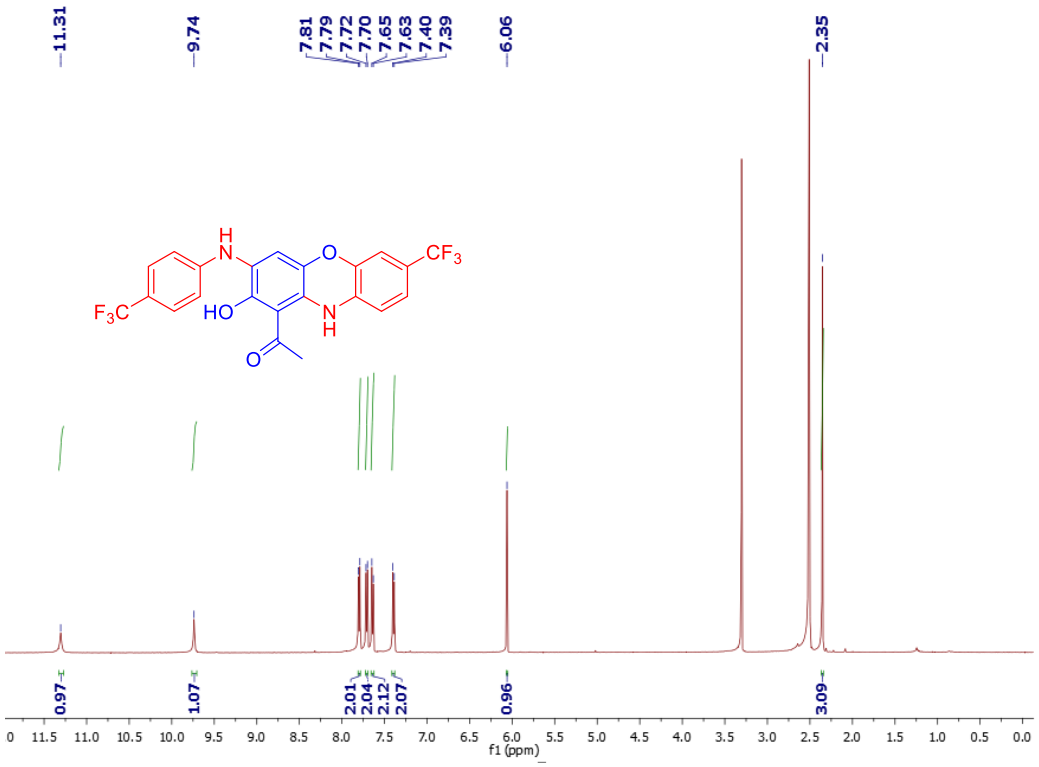


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 13D

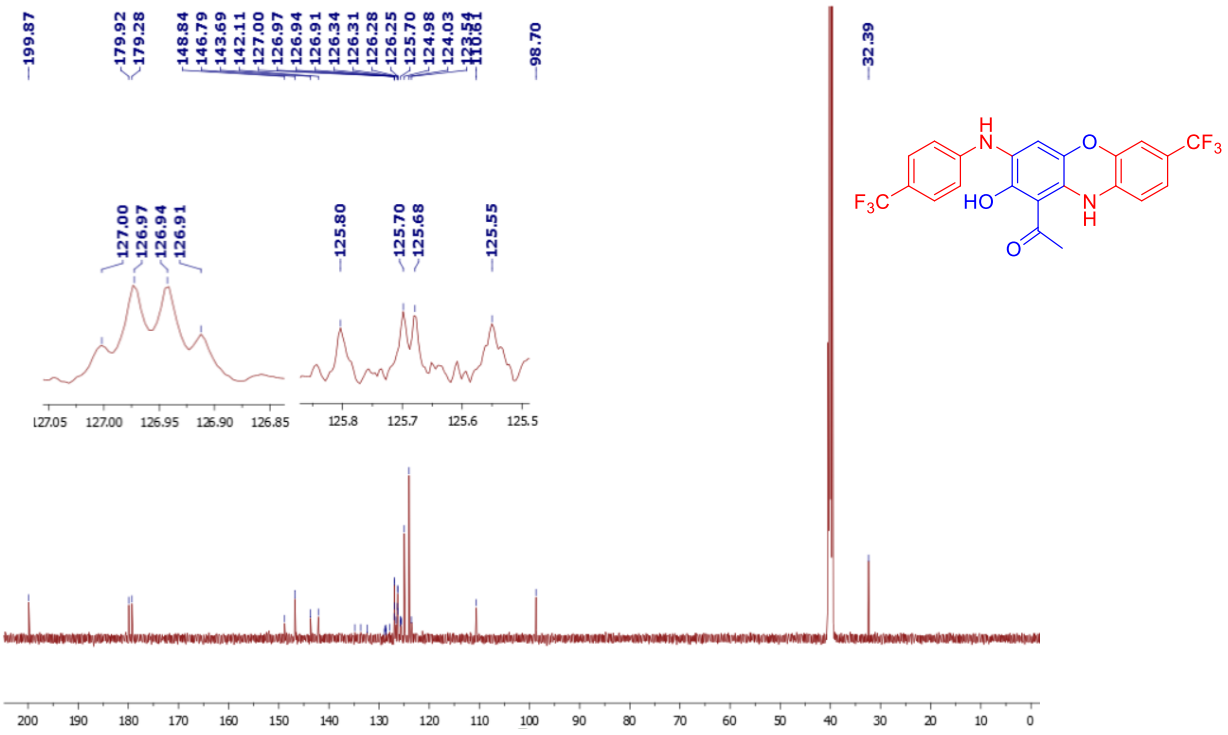


^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 13D

1-(2-hydroxy-7-(trifluoromethyl)-3-((4-(trifluoromethyl)phenyl)amino)-10*H*-phenoxazin-1-yl)ethan-1-one (14D):

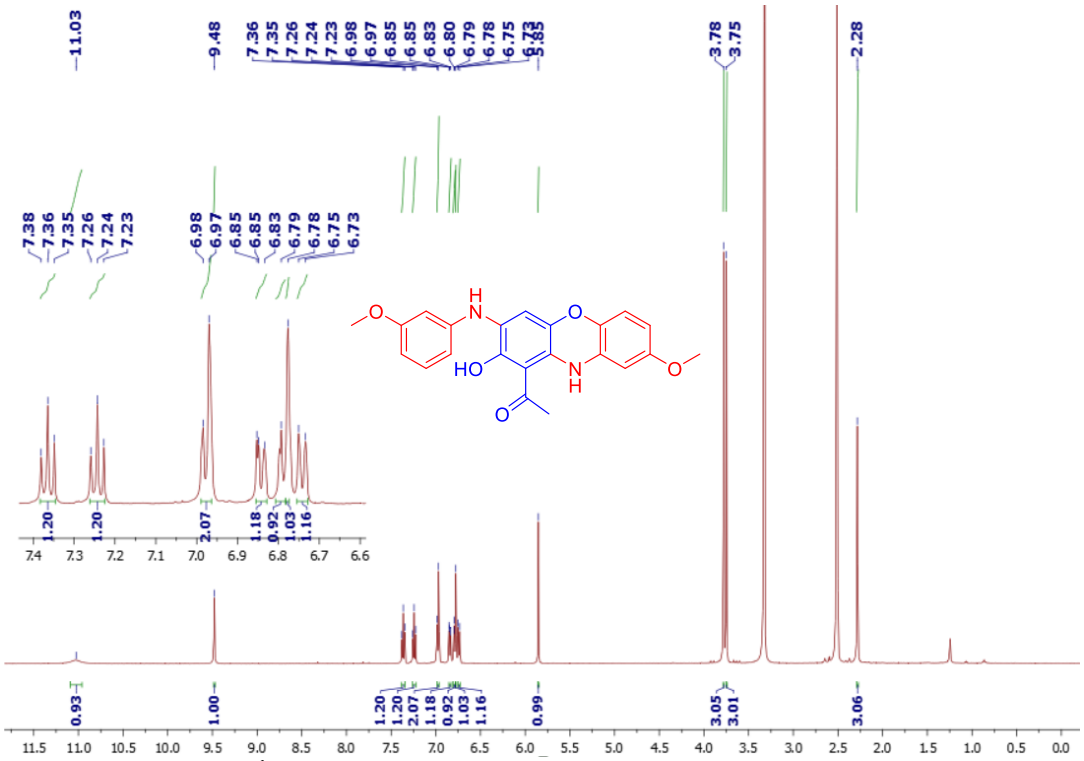


^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 14D

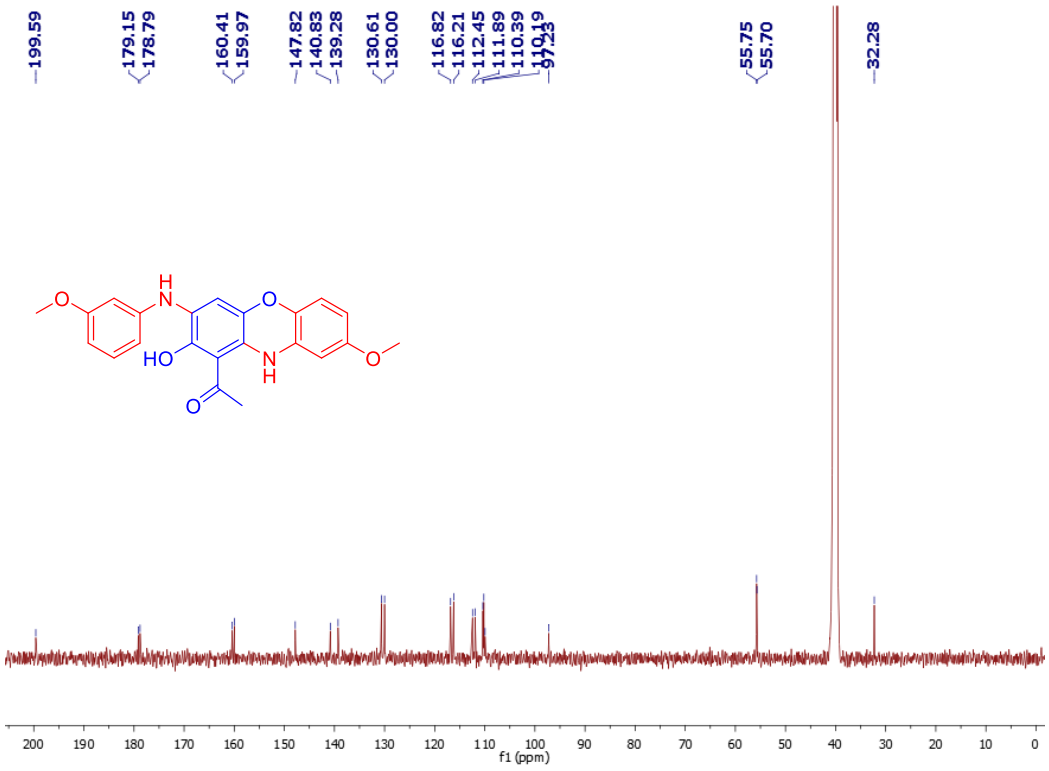


^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 14D

1-(2-hydroxy-8-methoxy-3-((3-methoxyphenyl)amino)-10*H*-phenoxazin-1-yl)ethan-1-one (15D):



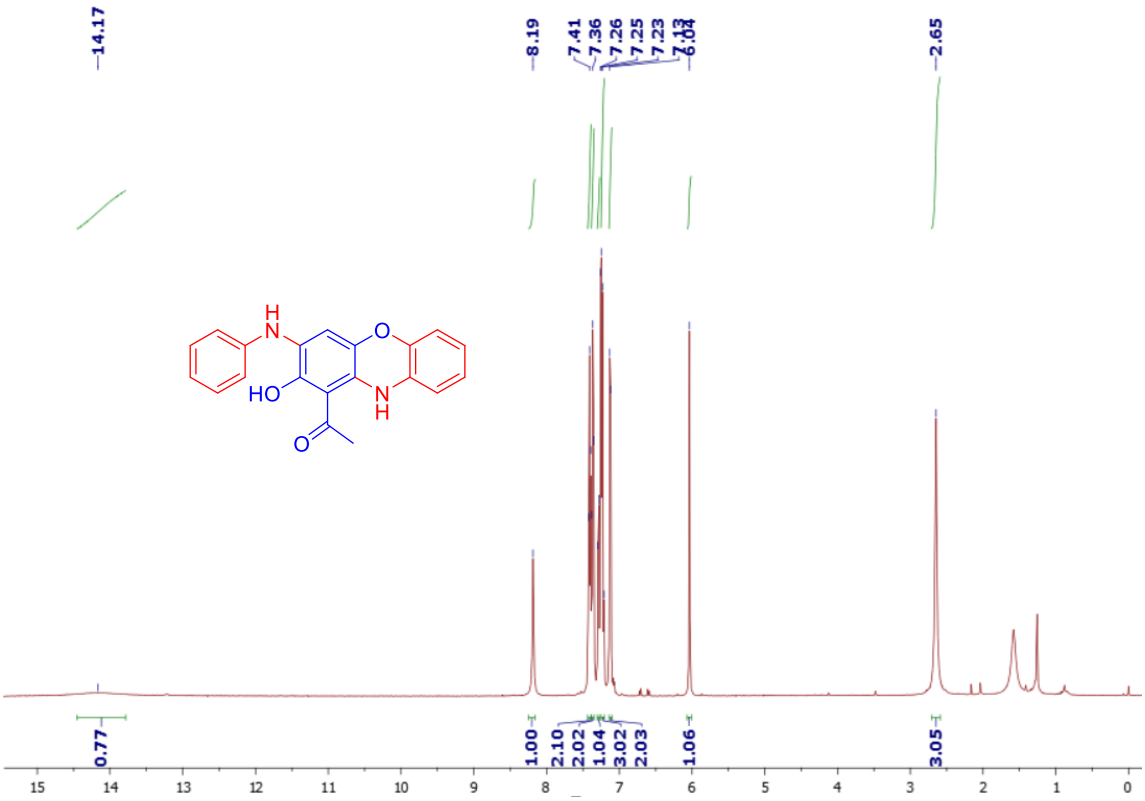
^{1}H NMR spectrum (500 MHz, DMSO- d_6) of 15D



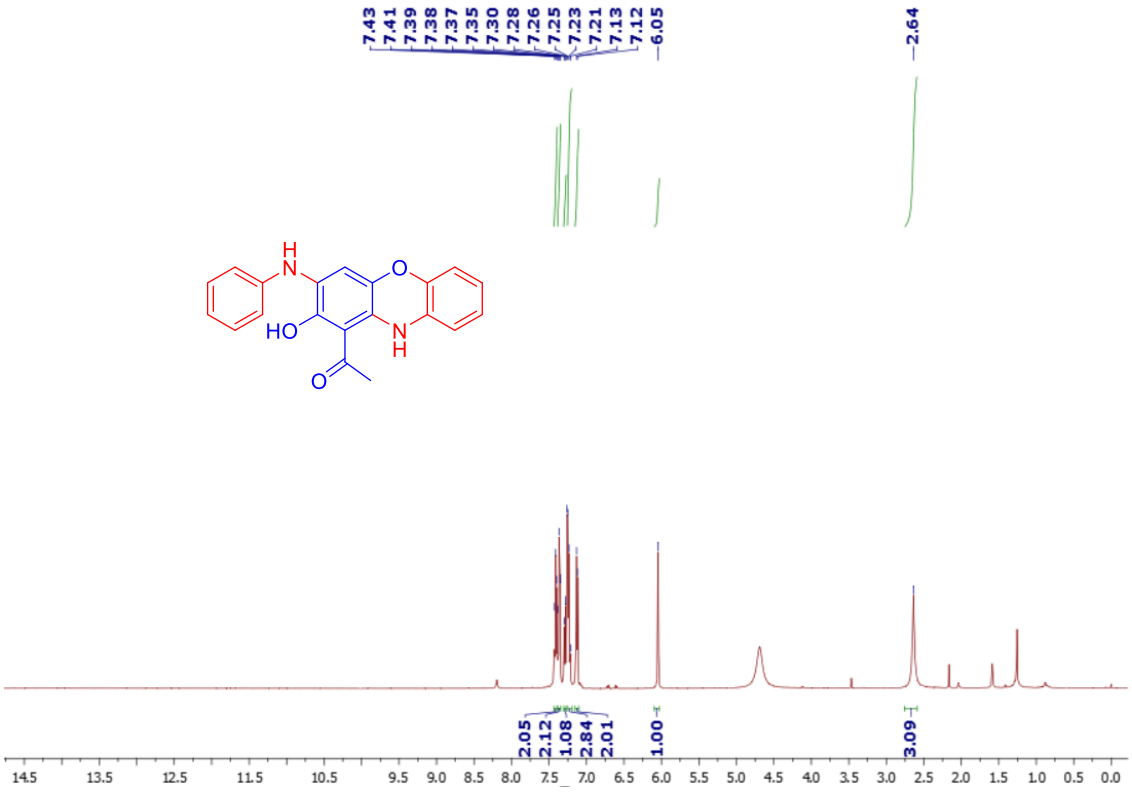
^{13}C NMR spectrum (125 MHz, DMSO- d_6) of 15D

D2O exchange experiment of compound 1D

1-(2-hydroxy-3-(phenylamino)-10*H*-phenoxazin-1-yl)ethan-1-one (1D):



^{1}H NMR spectrum (500 MHz, $CDCl_3$) of 1D



^{1}H NMR spectrum D2O exchange experiment (500 MHz, $CDCl_3$) of 1D