Supporting information

Synthesis and spectral characterization of some new

4-(2,6-diarylpyridin-4-yl)-2*H*-chromen-2-ones

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Spectral and analytical data of compounds 3a-c:

7-Methoxy-4-(3-oxo-3-phenylprop-1-enyl)-2H-chromen-2-one (3a): Yield: 2.60 g (85%). M.p. 168-169°C. IR: 3060, 1713, 1663, 1613, 745, 693 cm^{-1} . $^1\text{H-NMR}$ (400 MHz, CDCl_3): δ 3.91 (s, 3H, OCH_3), 6.53 (s, 1H, $\text{C}_3\text{-H}$), 6.89-6.94 (m, 2H, $\text{C}_6\text{-H}$ and $\text{C}_8\text{-H}$), 7.54-7.69 (m, 5H, Ar-H, $\text{C}_5\text{-H}$ and $\alpha\text{-H}$ of $-\text{CO}-\underline{\text{CH}}=\text{CH}-$), 8.01-8.07 (m, 3H, Ar-H and $\beta\text{-H}$ of $-\text{CO}-\text{CH}=\underline{\text{CH}}-$). $^{13}\text{C-NMR}$ (100 MHz, CDCl_3): δ 55.9(OCH_3), 101.4(CH), 109.9(CH), 111.6(C), 112.7(CH), 125.7(CH), 128.7(CH), 129.0(CH), 129.7(CH), 133.8(CH), 136.5(CH), 137.0(C), 148.8(C), 155.7(C), 161.0(C), 163.2(C), 188.9(C). Anal. Calcd. for $\text{C}_{19}\text{H}_{14}\text{O}_4$: C 74.50, H 4.61 %. Found: C 74.41, H 4.69 %.

7-Methoxy-4-(3-oxo-3-p-tolylprop-1-enyl)-2H-chromen-2-one (3b): Yield: 2.69 g (84%). M.p. 165°C. IR: 3050, 1715, 1665, 1615, 830 cm^{-1} . $^1\text{H-NMR}$ (400 MHz, CDCl_3): δ 2.48 (s, 3H, CH_3), 3.92 (s, 3H, OCH_3), 6.53 (s, 1H, $\text{C}_3\text{-H}$), 6.90-6.94 (m, 2H, $\text{C}_6\text{-H}$ and $\text{C}_8\text{-H}$), 7.36 (d, $J = 8.0$, 2H, Ar-H), 7.65-7.69 (m, 2H, $\text{C}_5\text{-H}$ and $\alpha\text{-H}$ of $-\text{CO}-\underline{\text{CH}}=\text{CH}-$), 7.96-8.04 (m, 3H, Ar-H and $\beta\text{-H}$ of $-\text{CO}-\text{CH}=\underline{\text{CH}}-$). $^{13}\text{C-NMR}$ (100 MHz, CDCl_3): δ 21.8(CH_3), 55.9(OCH_3), 101.4(CH), 109.8(CH), 111.7(C), 112.7(CH), 125.7(CH), 128.9(CH), 129.7(CH), 129.8(CH), 134.5(C), 136.1(CH),

144.8(C), 149.0(C), 155.7(C), 163.2(C), 188.3(C), Anal. Calcd. for C₂₀H₁₆O₄: C 74.99, H 5.03 %. Found: C 74.81, H 5.17 %.

7-Methoxy-4-[3-(4-methoxyphenyl)-3-oxoprop-1-enyl]-2H-chromen-2-one (3c): Yield: 2.92 g (87%). M.p. 149-150°C. IR: 3045, 1710, 1665, 1610, 825 cm⁻¹. ¹H-NMR (400 MHz, CDCl₃): δ 3.91 (s, 3H, OCH₃), 3.92 (s, 3H, OCH₃), 6.52 (s, 1H, C₃-H), 6.88-6.93 (m, 2H, C₆-H and C₈-H), 7.03 (d, *J* = 7.2, 2H, Ar-H), 7.65-7.69 (m, 2H, C₅-H and α-H of –CO-CH=CH-), 7.98-8.07 (m, 3H, Ar-H and β-H of –CO-CH=CH-), ¹³C-NMR (100 MHz, CDCl₃): δ 55.6(OCH₃), 55.8(OCH₃), 101.4(CH), 109.7(CH), 109.9(C), 111.7(C), 112.6(CH), 114.2(CH), 125.7(CH), 129.7(CH), 130.0(C), 131.1(CH), 135.6(CH), 149.0(C), 155.7(C), 161.0(C), 163.2(C), 164.2(C), 187.0(C). Anal. Calcd. for C₂₀H₁₆O₅: C 71.42, H 4.79 %. Found: C 71.45, H 4.71 %.

Spectral and analytical data of compounds 5a-l:

4-(2,6-Diphenylpyridin-4-yl)-7-methoxy-2H-chromen-2-one (5a): Yield: 0.827 g (68%). M.p. 235°C. IR: 3003, 1718, 1613, 1544, 782, 703 cm⁻¹. ¹H-NMR (400 MHz, CDCl₃): δ 3.92 (s, 3H, OCH₃), 6.37 (s, 1H, C₃-H), 6.85 (dd, *J* = 8.8 and 2.4 Hz, 1H, C₆-H), 6.96 (d, *J* = 2.4 Hz, 1H, C₈-H), 7.40 (d, *J* = 8.8 Hz, 1H, C₅-H), 7.48-7.57 (m, 6H, Ar-H), 7.75 (s, 2H, C_{3'}-H and C_{5'}-H of pyridine ring), 8.20-8.22 (m, 4H, Ar-H). ¹³C-NMR (100 MHz, CDCl₃): δ 55.9(OCH₃), 101.5(CH), 111.8(C), 112.2(CH), 112.7(CH), 117.7(CH), 127.2(CH), 127.5(CH), 128.9(CH), 129.7(CH), 138.6(C), 145.1(C), 153.7(C), 156.2(C), 157.7(C), 160.6(C), 163.3(C). Anal. Calcd. for C₂₇H₁₉NO₃: C 79.98, H 4.72, N 3.45 %, Found: C 79.87, H 4.81, N 3.54 %. MS: *m/z* 405 (M⁺).

7-Methoxy-4-(2-phenyl-6-p-tolylpyridin-4-yl)-2H-chromen-2-one (5b): Yield: 0.842 g (67%). M.p. 200-201°C. IR: 3005, 1720, 1615, 1560, 830, 770, 695 cm⁻¹. ¹H-NMR (400 MHz, CDCl₃): δ 2.46 (s, 3H, CH₃), 3.92 (s, 3H, OCH₃), 6.36 (s, 1H, C₃-H), 6.85 (dd, *J* = 8.8 and 2.4 Hz, 1H, C₆-H), 6.96 (d, *J* = 2.4 Hz, 1H, C₈-H), 7.34-7.56 (m, 6H, Ar-H and C₅-H), 7.71 (s, 2H, C_{3'}-H and C_{5'}-H of pyridine ring), 8.10-8.21 (m, 4H, Ar-H), ¹³C-NMR (100 MHz, CDCl₃): δ 21.4(CH₃), 55.9(OCH₃),

101.4(CH), 111.8(C), 112.2(CH), 112.7(CH), 117.4(CH), 127.0(CH), 127.2(CH), 127.5(CH), 128.9(CH), 129.6(CH), 135.8(C), 138.7(C), 139.8(C), 145.0(C), 153.9(C), 156.2(C), 157.6(C), 157.7(C), 160.7(C), 163.3(C). Anal. Calcd. for C₂₈H₂₁NO₃: C 80.17, H 5.05, N 3.34 %. Found: C 80.11, H 5.17, N, 3.43 %.

7-Methoxy-4-(2-(4-methoxyphenyl)-6-phenylpyridin-4-yl)-2H-chromen-2-one (5c): Yield: 0.914 g (70%). M.p. 168-169°C. IR: 3010, 1720, 1610, 1550, 825, 775, 700 cm⁻¹, ¹H-NMR (400 MHz, CDCl₃): δ 3.91 (s, 3H, OCH₃), 3.92 (s, 3H, OCH₃), 6.36 (s, 1H, C₃-H), 6.85 (dd, *J* = 8.8 and 2.4 Hz, 1H, C₆-H), 6.96 (d, *J* = 2.4 Hz, 1H, C₈-H), 7.07 (d, *J* = 8.8 Hz, 2H, Ar-H), 7.40 (d, *J* = 9.2 Hz, 1H, C₅-H), 7.49-7.56 (m, 3H, Ar-H), 7.68 (s, 2H, C_{3'}-H and C_{5'}-H of pyridine ring), 8.16-8.20 (m, 4H, Ar-H). ¹³C-NMR (100 MHz, CDCl₃): δ 55.4(OCH₃), 55.9(OCH₃), 101.4(CH), 111.8(C), 112.1(CH), 112.7(CH), 114.3(CH), 117.0(CH), 117.1(CH), 127.2(CH), 127.5(CH), 128.5(CH), 128.8(CH), 129.6(CH), 131.1(C), 138.6(C), 145.0(C), 153.9(C), 156.2(C), 157.4(C), 157.5(C), 160.6(C), 161.1(C), 163.3(C). Anal. Calcd. for C₂₈H₂₁NO₄: C 77.23, H 4.86, N 3.22 %. Found: C 77.11, H 4.99, N 3.33 %.

7-Methoxy-4-(2-phenyl-6-p-tolylpyridin-4-yl)-2H-chromen-2-one (5d): Yield: 0.830 g (66%). M.p. 200-201°C. IR: 3005, 1720, 1615, 1560, 830, 770, 695 cm⁻¹. ¹H-NMR (400 MHz, CDCl₃): δ 2.46 (s, 3H, CH₃), 3.92 (s, 3H, OCH₃), 6.36 (s, 1H, C₃-H), 6.85 (dd, *J* = 8.8 and 2.4 Hz, 1H, C₆-H), 6.96 (d, *J* = 2.4 Hz, 1H, C₈-H), 7.34-7.56 (m, 6H, Ar-H and C₅-H), 7.71 (s, 2H, C_{3'}-H and C_{5'}-H of pyridine ring), 8.10-8.21 (m, 4H, Ar-H). ¹³C-NMR (100 MHz, CDCl₃): δ 21.4(CH₃), 55.9(OCH₃), 101.4(CH), 111.8(C), 112.2(CH), 112.7(CH), 117.4(CH), 127.0(CH), 127.2(CH), 127.5(CH), 128.8(CH), 129.6(CH), 135.8(C), 138.7(C), 139.8(C), 145.0(C), 153.9(C), 156.2(C), 157.6(C), 157.7(C), 160.7(C), 163.3(C). Anal. Calcd. for C₂₈H₂₁NO₃: C 80.17, H 5.05, N 3.34 %. Found: C 80.11, H 5.17, N, 3.43 %.

4-(2,6-Di-p-tolylpyridin-4-yl)-7-methoxy-2H-chromen-2-one (5e): Yield: 0.923 g (71%). M.p. 201-202°C. IR: 3010, 1725, 1615, 1545, 825 cm^{-1} . $^1\text{H-NMR}$ (400 MHz, CDCl_3): δ 2.46 (s, 6H, 2 x CH_3), 3.92 (s, 3H, OCH_3), 6.36 (s, 1H, $\text{C}_3\text{-H}$), 6.84 (dd, $J = 8.8$ and 2.4 Hz, 1H, $\text{C}_6\text{-H}$), 6.96 (d, $J = 2.4$ Hz, 1H, $\text{C}_8\text{-H}$), 7.35 (d, $J = 8.0$ Hz, 4H, Ar-H), 7.40 (d, $J = 8.8$ Hz, 1H, $\text{C}_5\text{-H}$), 7.68 (s, 2H, $\text{C}_3'\text{-H}$ and $\text{C}_5'\text{-H}$ of pyridine ring), 8.10 (d, $J = 8.0$ Hz, 4H, Ar-H). $^{13}\text{C-NMR}$ (100 MHz, CDCl_3): δ 21.3(CH_3), 55.9(OCH_3), 101.4(CH), 111.8(C), 112.1(CH), 112.7(CH), 117.1(CH), 127.0(CH), 127.6(CH), 129.6(CH), 135.9(C), 139.7(C), 144.9(C), 154.0(C), 156.2(C), 157.6(C), 160.7(C), 163.2(C). Anal. Calcd. for $\text{C}_{29}\text{H}_{23}\text{NO}_3$: C 80.35, H 5.35, N 3.23 %. Found: C 80.24, H 5.22, N 3.34 %.

7-Methoxy-4-(2-(4-methoxyphenyl)-6-p-tolylpyridin-4-yl)-2H-chromen-2-one (5f): Yield: 0.930 g (69%). M.p. 202°C. IR: 3000, 1720, 1610, 1550, 830 cm^{-1} . $^1\text{H-NMR}$ (400 MHz, CDCl_3): δ 2.46 (s, 3H, CH_3), 3.91 (s, 3H, OCH_3), 3.93 (s, 3H, OCH_3), 6.35 (s, 1H, $\text{C}_3\text{-H}$), 6.87 (dd, $J = 8.8$ and 2.4 Hz, 1H, $\text{C}_6\text{-H}$), 6.96 (d, $J = 2.4$ Hz, 1H, $\text{C}_8\text{-H}$), 7.08 (d, $J = 7.6$ Hz, 2H, Ar-H), 7.36-7.38 (m, 3H, Ar-H and $\text{C}_5\text{-H}$), 7.68 (s, 2H, $\text{C}_3'\text{-H}$ and $\text{C}_5'\text{-H}$ of pyridine ring), 8.05-8.16 (m, 4H, Ar-H). $^{13}\text{C-NMR}$ (100 MHz, CDCl_3): δ 21.4(CH_3), 55.5(OCH_3), 56.0(OCH_3), 101.5(CH), 111.4(C), 112.3(CH), 112.9(CH), 114.4(CH), 118.0(CH), 127.3(CH), 127.8(CH), 128.8(C), 129.4(CH), 129.7(CH), 133.6(C), 140.8(C), 146.6(C), 153.1(C), 156.2(C), 156.8(C), 157.1(C), 160.4(C), 161.7(C), 163.4(C). Anal. Calcd. for $\text{C}_{29}\text{H}_{23}\text{NO}_4$: C 77.49, H 5.16, N 3.12 %. Found: C 77.39, H 5.29, N, 3.01 %.

7-Methoxy-4-(2-(4-methoxyphenyl)-6-phenylpyridin-4-yl)-2H-chromen-2-one (5g): Yield: 0.940 g (72%). M.p. 168-169°C. IR: 3015, 1725, 1615, 1555, 825, 775, 700 cm^{-1} . $^1\text{H-NMR}$ (400 MHz, CDCl_3): δ 3.91 (s, 3H, OCH_3), 3.92 (s, 3H, OCH_3), 6.36 (s, 1H, $\text{C}_3\text{-H}$), 6.85 (dd, $J = 8.8$ and 2.4 Hz, 1H, $\text{C}_6\text{-H}$), 6.96 (d, $J = 2.4$ Hz, 1H, $\text{C}_8\text{-H}$), 7.07 (d, $J = 8.8$ Hz, 2H, Ar-H), 7.40 (d, $J = 9.2$ Hz, 1H, $\text{C}_5\text{-H}$), 7.49-7.56 (m, 3H, Ar-H), 7.68 (s, 2H, $\text{C}_3'\text{-H}$ and $\text{C}_5'\text{-H}$ of pyridine ring), 8.16-8.20 (m,

4H, Ar-H). ^{13}C -NMR (100 MHz, CDCl_3): δ 55.4(OCH_3), 55.9(OCH_3), 101.4(CH), 111.8(C), 112.1(CH), 112.7(CH), 114.3(CH), 117.0(CH), 117.1(CH), 127.2(CH), 127.5(CH), 128.5(CH), 128.8(CH), 129.6(CH), 131.1(C), 138.6(C), 145.0(C), 153.9(C), 156.2(C), 157.4(C), 157.5(C), 160.6(C), 161.1(C), 163.3(C). Anal. Calcd. for $\text{C}_{28}\text{H}_{21}\text{NO}_4$: C 77.23, H 4.86, N 3.22 %. Found: C 77.11, H 4.99, N, 3.33 %.

7-Methoxy-4-(2-(4-methoxyphenyl)-6-p-tolylpyridin-4-yl)-2H-chromen-2-one (5h): Yield: 0.943 g (70%). M.p. 202°C. IR: 3000, 1720, 1610, 1550, 830 cm^{-1} . ^1H -NMR (400 MHz, CDCl_3): δ 2.46 (s, 3H, CH_3), 3.91 (s, 3H, OCH_3), 3.93 (s, 3H, OCH_3), 6.35 (s, 1H, $\text{C}_3\text{-H}$), 6.87 (dd, $J = 8.8$ and 2.4 Hz, 1H, $\text{C}_6\text{-H}$), 6.96 (d, $J = 2.4$ Hz, 1H, $\text{C}_8\text{-H}$), 7.08 (d, $J = 7.6$ Hz, 2H, Ar-H), 7.36-7.38 (m, 3H, Ar-H and $\text{C}_5\text{-H}$), 7.68 (s, 2H, $\text{C}_3'\text{-H}$ and $\text{C}_5'\text{-H}$ of pyridine ring), 8.05-8.16 (m, 4H, Ar-H). ^{13}C -NMR (100 MHz, CDCl_3): δ 21.4(CH_3), 55.5(OCH_3), 56.0(OCH_3), 101.5(CH), 111.4(C), 112.3(CH), 112.9(CH), 114.4(CH), 118.0(CH), 127.3(CH), 127.8(CH), 128.8(C), 129.4(CH), 129.7(CH), 133.6(C), 140.8(C), 146.6(C), 153.1(C), 156.2(C), 156.8(C), 157.1(C), 160.4(C), 161.7(C), 163.4(C). Anal. Calcd. for $\text{C}_{29}\text{H}_{23}\text{NO}_4$: C 77.49, H 5.16, N 3.12 %. Found: C 77.39, H 5.29, N 3.01 %.

4-(2,6-Bis(4-methoxyphenyl)pyridin-4-yl)-7-methoxy-2H-chromen-2-one (5i): Yield: 0.990 g (71%). M.p. 166-167°C. IR: 3015, 1720, 1610, 1560, 825 cm^{-1} . ^1H -NMR (400 MHz, CDCl_3): δ 3.91 (s, 6H, 2 x OCH_3), 3.92 (s, 3H, OCH_3), 6.35 (s, 1H, $\text{C}_3\text{-H}$), 6.85 (dd, $J = 8.8$ and 2.0 Hz, 1H, $\text{C}_6\text{-H}$), 6.95 (d, $J = 2.0$ Hz, 1H, $\text{C}_8\text{-H}$), 7.06 (d, $J = 8.8$ Hz, 4H, Ar-H), 7.41 (d, $J = 8.8$ Hz, 1H, $\text{C}_5\text{-H}$), 7.61 (s, 2H, $\text{C}_3'\text{-H}$ and $\text{C}_5'\text{-H}$ of pyridine ring), 8.16 (d, $J = 8.8$ Hz, 4H, Ar-H). ^{13}C -NMR (100 MHz, CDCl_3): δ 55.4(OCH_3), 55.8(OCH_3), 101.5(CH), 111.8(C), 112.1(CH), 112.7(CH), 114.3(CH), 116.4(CH), 127.5(CH), 128.6(CH), 130.9(C), 145.2(C), 156.2(C), 157.1(C), 159.4(C), 160.7(C), 161.1(C), 163.3(C). Anal. Calcd. for $\text{C}_{29}\text{H}_{23}\text{NO}_5$: C 74.83, H 4.98, N 3.01 %. Found: C 74.73, H 4.91, N 3.17 %.

4-(2-(4-Bromophenyl)-6-phenylpyridin-4-yl)-7-methoxy-2H-chromen-2-one (5j): Yield: 0.988 g (68%). M.p. 197-198°C. IR: 3010, 1725, 1615, 1555, 830, 775, 695 cm^{-1} . $^1\text{H-NMR}$ (400 MHz, CDCl_3): δ 3.92 (s, 3H, OCH_3), 6.35 (s, 1H, $\text{C}_3\text{-H}$), 6.85 (dd, $J = 8.8$ and 2.4 Hz, 1H, $\text{C}_6\text{-H}$), 6.96 (d, $J = 2.4$ Hz, 1H, $\text{C}_8\text{-H}$), 7.37 (d, $J = 8.8$ Hz, 1H, $\text{C}_5\text{-H}$), 7.50-7.75 (m, 7H, Ar-H, $\text{C}_3'\text{-H}$ and $\text{C}_5'\text{-H}$ of pyridine ring), 8.07-8.19 (m, 4H, Ar-H). $^{13}\text{C-NMR}$ (100 MHz, CDCl_3): δ 55.9(OCH_3), 101.5(CH), 111.7(C), 112.3(CH), 112.8(CH), 117.4(CH), 118.0(CH), 124.2(C), 127.1(CH), 127.4(CH), 128.7(CH), 128.9(CH), 129.7(CH), 132.0(CH), 137.5(C), 138.5(C), 145.2(C), 153.6(C), 156.2(C), 156.6(C), 157.9(C), 160.5(C), 163.3(C). Anal. Calcd. for $\text{C}_{27}\text{H}_{18}\text{BrNO}_3$: C 66.96, H 3.75, N 2.89 %. Found: C 66.84, H 3.85, N 2.81 %.

4-(2-(4-Bromophenyl)-6-p-tolylpyridin-4-yl)-7-methoxy-2H-chromen-2-one (5k): Yield: 1.046 g (70%). M.p. 239-240°C. IR: 3000, 1725, 1610, 1555, 825 cm^{-1} . $^1\text{H-NMR}$ (400 MHz, CDCl_3): δ 2.46 (s, 3H, CH_3), 3.92 (s, 3H, OCH_3), 6.34 (s, 1H, $\text{C}_3\text{-H}$), 6.85 (dd, $J = 8.8$ and 2.0 Hz, $\text{C}_6\text{-H}$), 6.95 (d, 1H, $J = 2.0$ Hz, $\text{C}_8\text{-H}$), 7.34-7.38 (m, 3H, Ar-H and $\text{C}_5\text{-H}$), 7.65-7.72 (m, 4H, Ar-H and $\text{C}_3'\text{-H}$ and $\text{C}_5'\text{-H}$ of pyridine), 8.06-8.08 (m, 4H, Ar-H). $^{13}\text{C-NMR}$ (100 MHz, CDCl_3): δ 21.3(CH_3), 55.9(OCH_3), 101.5(CH), 111.7(C), 112.2(CH), 112.8(CH), 117.1(CH), 117.7(CH), 124.1(C), 127.0(CH), 127.4(CH), 128.7(CH), 129.6(CH), 132.0(CH), 135.7(C), 137.6(C), 140.0(C), 145.1(C), 153.7(C), 156.2(C), 156.5(C), 157.9(C), 160.5(C), 163.3(C). Anal. Calcd. for $\text{C}_{28}\text{H}_{20}\text{BrNO}_3$ (497.06): C 67.48, H 4.04, N 2.81 %. Found: C 67.56, H 4.17, N, 2.72 %.

4-(2-(4-Bromophenyl)-6-(4-methoxyphenyl)pyridin-4-yl)-7-methoxy-2H-chromen-2-one (5l): Yield: 1.049 g (68%). M.p. 196-198°C. IR: 3000, 1720, 1610, 1560, 830 cm^{-1} . $^1\text{H-NMR}$ (400 MHz, CDCl_3): δ 3.91 (s, 3H, OCH_3), 3.92 (s, 3H, OCH_3), 6.34 (s, 1H, $\text{C}_3\text{-H}$), 6.85 (dd, $J = 8.8$ and 2.4 Hz, 1H, $\text{C}_6\text{-H}$), 6.95 (d, 1H, $J = 2.4$ Hz, $\text{C}_8\text{-H}$), 7.06 (d, $J = 8.8$ Hz, 2H, Ar-H), 7.38 (d, $J = 8.8$ Hz, 1H, $\text{C}_5\text{-H}$), 7.64-7.68 (m, 4H, Ar-H, $\text{C}_3'\text{-H}$ and $\text{C}_5'\text{-H}$ of pyridine ring), 8.05-8.15 (m, 4H, Ar-H), $^{13}\text{C-NMR}$ (100 MHz, CDCl_3): δ 55.4(OCH_3), 55.9(OCH_3), 101.5(CH), 111.7(C),

112.2(CH), 112.7(CH), 113.4(C), 114.3(CH), 116.7(CH), 117.3(CH), 124.2(C), 126.3(C), 127.4(CH), 128.5(CH), 128.7(CH), 132.0(CH), 137.5(C), 153.7(C), 156.2(C), 156.3(C), 157.5(C), 160.5(C), 161.2(C), 163.3(C). Anal. Calcd. for $C_{28}H_{20}BrNO_4$: C 65.38, H 3.92, N 2.72 %. Found: C 65.48, H 3.84, N 2.87 %.

^1H and ^{13}C NMR spectra of compounds 3a-c and 5a-l.

^1H NMR of compound 3a

¹³C NMR of compound **3a**

Current Data Parameters
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EXPNO 347
PROCNO 1

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NS 959
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SWH 23980.814 Hz
FIDRES 0.365918 Hz
AQ 1.3664756 sec
RG 32768
DW 20.850 usec
DE 6.00 usec
TE 298.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

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PL1 -2.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -1.00 dB
PL12 15.00 dB
PL13 15.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127690 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

IR of compound 3a

¹H NMR of compound **3b**

¹³C NMR of compound **3b**

Current Data Parameters
NAME AKP
EXPNO 295
PROCNO 1

F2 - Acquisition Parameters
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Time 14.10
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DS 4
SWH 23980.814 Hz
FIDRES 0.365918 Hz
AQ 1.3664756 sec
RG 4597.6
DE 20.850 usec
TE 298.9 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TDO 1

===== CHANNEL f1 =====
NUC1 13C
P1 7.50 usec
PL1 -2.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -1.00 dB
PL12 15.00 dB
PL13 15.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127690 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
FC 1.40

¹H NMR of compound **3c**

¹³C NMR of compound **3c**

¹H NMR of compound **5a**

¹³C NMR of compound **5a**

Mass of compound 5a

DEPARTMENT OF CHEMISTRY
(DST-FIST Funded & UGC-SAP Sponsored)
SAURASHTRA UNIVERSITY
RAJKOT-360005

Sample Information

Analyzed by : VIJAY R. RAM
Analyzed : 5/26/2009 12:29:14 PM
Sample Name : A-162
Sample ID : A-162
Data File : C:\GCMSsolution\Data\Project1\A-162.QGD
Method Name : C:\GCMSsolution\Data\Project1\DI R1.qgm

Mass: 405.14

Line#:1 R.Time:0.3(Scan#:2)
MassPeaks:70 BasePeak:40(4953)
RawMode:Averaged 0.3-8.1(1-939)
BG Mode:None

¹H NMR of compound **5b**

¹³C NMR of compound **5b**

¹H NMR of compound **5c**

^{13}C NMR of compound **5c**

¹H NMR of compound **5d**

¹³C NMR of compound **5d**

¹H NMR of compound **5e**

¹³C NMR of compound **5e**

¹H NMR of compound **5f**

¹³C NMR of compound **5f**

¹H NMR of compound **5g**

^{13}C NMR of compound **5g**

¹H NMR of compound **5h**

¹³C NMR of compound **5h**

¹H NMR of compound **5i**

¹³C NMR of compound **5i**

¹H NMR of compound **5j**

¹³C NMR of compound **5j**

¹H NMR of compound **5k**

¹³C NMR of compound **5k**

¹H NMR of compound **51**

¹³C NMR of compound **51**