

Supporting Information (1 page)

Highly Regioselective Friedländer Reaction

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4a: mp: 45.0-47.0 °C; ¹H-NMR (400 MHz, CDCl₃) δ 0.83 (t, *J* = 6.8 Hz, 3H), 1.25-1.38 (m, 4H), 1.83 (pen, *J* = 7.6 Hz, 2H), 2.97 (t, *J* = 7.6 Hz, 2H), 7.31 (d, *J* = 8.3 Hz, 1H), 7.35 (dd, *J* = 4.4, 8.1 Hz, 1H), 8.01 (d, *J* = 8.3 Hz, 1H), 8.08 (dd, *J* = 1.5, 8.1 Hz, 1H), 9.00 (dd, *J* = 1.5, 4.4 Hz, 1H); ¹³C-NMR (101 MHz, CDCl₃) δ 13.8, 22.3, 28.9, 31.5, 39.1, 120.8, 121.1, 122.4, 136.5, 136.7, 153.0, 155.8, 166.8; Anal. Calcd for C₁₃H₁₆N₂: C, 77.96; H, 8.05; N, 13.99. Found: C, 77.97; H, 7.97; N, 13.89.

4b: mp: 75.5-76.5 °C; ¹H-NMR (400 MHz, CDCl₃) δ 3.60 (s, 3H), 4.20 (s, 2H), 6.67-6.75 (m, 2H), 7.12-7.18 (m, 2H), 7.15 (d, *J* = 8.4 Hz), 7.24 (dd, *J* = 4.4, 8.0 Hz), 7.85 (d, *J* = 8.4 Hz), 7.92 (dd, *J* = 2.0, 8.0 Hz), 8.91 (dd, *J* = 2.0, 4.4 Hz); ¹³C-NMR (101 MHz, CDCl₃) δ 44.3, 54.7, 113.7, 120.6, 121.1, 122.0, 129.8, 130.4, 136.4, 136.9, 152.8, 155.2, 157.9, 164.9; Anal. Calcd for C₁₆H₁₄N₂O: C, 76.78; H, 5.64; N, 11.19. Found: C, 76.52; H, 5.61; N, 11.05.

4c: mp: 55.0-56.0 °C; ¹H-NMR (400 MHz, CDCl₃) δ 1.21 (t, *J* = 7.1 Hz, 3H), 3.03 (t, *J* = 7.3 Hz, 2H), 3.34 (t, *J* = 7.3 Hz, 2H), 4.10(q, *J* = 7.1 Hz, 2H), 7.40-7.44 (m, 2H), 8.08 (d, *J* = 8.3 Hz, 1H), 8.14 (dd, *J* = 1.8, 8.0 Hz, 1H), 9.05 (dd, *J* = 1.8, 4.2 Hz, 1H); ¹³C-NMR (101 MHz, CDCl₃) δ 14.1, 32.5, 33.5, 60.4, 121.1, 121.5, 122.8, 136.7, 137.0, 153.2, 155.8, 164.5, 173.1; Anal. Calcd for C₁₃H₁₄N₂O₂: C, 67.81; H, 6.13; N, 12.17. Found: C, 67.79; H, 6.08; N, 11.98.

5a: mp: 99.5-100.8 °C; ¹H-NMR (400 MHz, CDCl₃) δ 0.73 (t, *J* = 7.3 Hz, 3H), 1.21 (quin, *J* = 7.5 Hz, 2H), 1.35-1.45 (m, 2H), 2.48 (t, *J* = 7.5 Hz, 2H), 2.52 (s, 3H), 7.10 (dd, *J* = 4.2, 8.0 Hz, 1H), 7.55 (s, 1H), 7.81 (dd, *J* = 2.0, 8.0 Hz, 1H), 8.73 (dd, *J* = 2.0, 4.2 Hz, 1H); ¹³C-NMR (101 MHz, CDCl₃) δ 13.3, 21.9, 22.9, 31.0, 31.6, 120.7, 120.9, 134.2, 135.2, 135.5, 151.6, 154.0, 161.8; Anal. Calcd for C₁₃H₁₆N₂: C, 77.96; H, 8.05; N, 13.99. Found: C, 77.89; H, 8.04; N, 14.00.

5b: mp: 135.0-135.8 °C; ¹H-NMR (400 MHz, CDCl₃) δ 2.58 (s, 3H), 3.70 (s, 3H), 6.83-6.87 (m, 2H), 7.12-7.18 (m, 2H), 7.24 (dd, *J* = 4.4, 8.0 Hz, 1H), 7.74 (s, 1H), 7.95 (dd, *J* = 2.0, 8.0 Hz, 1H), 8.88 (dd, *J* = 2.0, 4.4 Hz, 1H); ¹³C-NMR (101 MHz, CDCl₃) δ 24.6, 54.9, 113.5, 120.7, 121.2, 129.9, 130.8, 136.0, 136.1, 152.5, 154.5, 158.9, 161.1; Anal. Calcd for C₁₆H₁₄N₂O: C, 76.78; H, 5.64; N, 11.19. Found: C, 76.58; H, 5.72; N, 11.04.

5c: mp: 101.4-102.5 °C; ¹H-NMR (400 MHz, CDCl₃) δ 1.24 (t, *J* = 7.1 Hz, 3H), 2.77 (s, 3H), 3.82 (s, 2H), 4.18 (q, *J* = 7.1 Hz, 2H), 7.40 (dd, *J* = 4.1, 8.0 Hz, 1H), 7.97 (s, 1H), 8.10 (dd, *J* = 1.8, 8.0 Hz, 1H), 9.03 (dd, *J* = 1.8, 4.1 Hz, 1H); ¹³C-NMR (101 MHz, CDCl₃) δ 14.1, 23.8, 38.6, 61.3, 121.3, 121.5, 128.0, 136.3, 137.3, 153.1, 155.1, 162.3, 170.3; Anal. Calcd for C₁₃H₁₄N₂O₂: C, 67.81; H, 6.13; N, 12.17. Found: C, 67.69; H, 5.97; N, 12.11.