

SUPPORTING INFORMATION

Selected spectroscopic data for triarylethanones **1b-h** and **1j-m**:

1,2-Bis(3,4-dimethoxyphenyl)-2-(3-methoxyphenyl)ethanone (1b)

250 MHz ^1H NMR (CDCl_3) δ 3.72 (3H, s), 3.81 (6H, s), 3.86 (3H, s), 3.87 (3H, s), 5.93 (1H, s), 6.75-6.86 (7H, m), 7.20 (1H, d, J 9.5 Hz), 7.57 (1H, s), 7.64 (1H, d, J 8.3 Hz); 63 MHz ^{13}C NMR (CDCl_3) δ 54.9, 55.6, 55.8, 58.1, 109.7, 110.7, 110.9, 111.9, 114.7, 121.1, 123.4, 129.4, 129.6, 131.4, 141.0, 147.8, 148.7, 148.8, 152.9, 159.5, 196.6; EIMS (m/z , %) 422 (M^+ , 3), 257 (34), 165 (100).

1,2-Bis(3,4-dimethoxyphenyl)-2-(4-methoxyphenyl)ethanone (1c)

250 MHz ^1H NMR (CDCl_3) δ 3.73 (3H, s), 3.79 (3H, s), 3.81 (3H, s), 3.85 (3H, s), 3.86 (3H, s), 5.91 (1H, s), 6.78-6.85 (6H, m), 7.16 (2H, d, J 8.3 Hz), 7.57 (1H, s), 7.63 (1H, d, J 8.3 Hz); 63 MHz ^{13}C NMR (CDCl_3) δ 54.9, 55.6, 55.8, 57.4, 109.7, 110.7, 110.9, 111.8, 113.8, 120.9, 123.4, 129.7, 129.6, 131.5, 131.9, 147.8, 148.6, 148.8, 152.9, 158.3, 197.1; EIMS (m/z , %) 422 (M^+ , 1), 257 (100), 165 (34).

1,2,2-Tris(3,4-dimethoxyphenyl)ethanone (1d)

250 MHz ^1H NMR (CDCl_3) δ 3.78 (6H, s), 3.79 (6H, s), 3.84 (3H, s), 3.85 (3H, s), 5.89 (1H, s), 6.77 (6H, s), 6.79 (1H, d, J 8.3 Hz), 7.56 (1H, s), 7.63 (1H, dd, J 8.3, 1.6 Hz); 63 MHz ^{13}C NMR (CDCl_3) δ 55.6, 55.9, 57.8, 109.8, 110.8, 110.9, 111.8, 121.0, 123.5, 129.7, 131.8, 147.9, 148.7, 148.8, 153.0, 197.1. EIMS (m/z , %) 452 (M^+ , 1), 287 (100), 165 (27).

1,2-Bis(3,4-dimethoxyphenyl)-2-(3,4-methylenedioxyphenyl)ethanone (1e)

250 MHz ^1H NMR (CDCl_3) δ 3.82 (3H, s), 3.83 (3H, s), 3.87 (3H, s), 3.90 (3H, s), 5.86 (1H, s), 5.90 (2H, s), 6.70-6.83 (7H, m), 7.57 (1H, s), 7.62 (1H, d, J 8.3 Hz); 63 MHz ^{13}C NMR (CDCl_3) δ 55.7, 57.8, 100.9, 108.1, 109.4, 109.8, 110.8, 111.0, 111.8, 121.0, 121.9, 123.4, 129.6, 131.7, 133.3, 146.4, 147.7, 148.0, 148.8, 148.9, 153.0, 196.9; EIMS (m/z , %) 436 (M^+ , 3), 271 (100), 165 (59).

1,2-Bis(3,4-dimethoxyphenyl)-2-(2,3,4-trimethoxyphenyl)ethanone (1f)

250 MHz ^1H NMR (CDCl_3) δ 3.72 (3H, s), 3.80 (3H, s), 3.82 (3H, s), 3.85 (6H, s), 3.88 (3H, s), 3.89 (3H, s), 6.19 (1H, s), 6.55 (1H, d, J 8.7 Hz), 6.63 (1H, d, J 8.7 Hz), 6.82-6.84 (4H, m), 7.58 (1H, s), 7.69 (1H, d, J 7.5 Hz); 63 MHz ^{13}C NMR (CDCl_3) δ 51.9, 55.8, 55.9, 60.6, 106.6, 109.9, 110.8, 111.0, 112.3, 121.6, 123.2, 123.7, 126.5, 129.7, 130.5, 141.8, 147.9, 148.6, 148.9, 150.6, 152.8, 197.5; EIMS (m/z , %) 482 (M^+ , 2), 317 (100), 165 (12), 151 (45).

1,2-Bis(3,4-dimethoxyphenyl)-2-(4-nitrophenyl)ethanone (1g)

250 MHz ^1H NMR (CDCl_3) δ 3.77 (3H, s), 3.81 (3H, s), 3.84 (3H, s), 3.87 (3H, s), 6.04 (1H, s), 6.80-6.84 (4H, m), 7.34 (2H, d, J 8.3), 7.51 (1H, s), 7.59 (1H, d, J 8.3 Hz), 8.06 (2H, d, J 7.5 Hz); 63 MHz ^{13}C NMR (CDCl_3) δ 55.8, 55.9, 57.9, 109.9, 110.7, 111.3, 111.5, 121.0, 123.4, 126.7, 129.0, 129.8, 130.0, 146.6, 147.2, 148.4, 148.9, 149.3, 153.4, 195.5.

1-(3,4-dimethoxyphenyl)-2,2-diphenylethanone (1h)

250 MHz ^1H NMR (CDCl_3) δ 3.87 (3H, s), 3.90 (3H, s), 6.02 (1H, s), 6.82 (1H, d, J 8.3 Hz), 7.22-7.35 (10H, m), 7.58 (1H, s), 7.64 (1H, d, J 8.3 Hz); 63 MHz ^{13}C NMR (CDCl_3) δ 55.4, 55.6, 58.6, 109.7, 110.6, 123.3, 126.7, 128.3, 128.7, 129.4, 139.1, 148.5, 152.8, 196.4; EIMS (m/z , %) 165 (100), 137 (6), 122 (2), 77 (4).

2-(3-methoxyphenyl)-1,2-diphenylethanone (1j)

250 MHz ^1H NMR (CDCl_3) δ 3.76 (3H, s), 6.26 (1H, s), 6.92 (1H, d, J 8.3 Hz), 7.09 (1H, d, J 7.5 Hz), 7.11 (1H, s) 7.33-7.47 (9H, m), 8.21 (2H, d, J 7.1 Hz); 63 MHz ^{13}C NMR (CDCl_3) δ 54.5, 58.8, 111.8, 114.8, 121.1, 126.7, 127.9, 128.0, 128.2, 128.3, 128.4, 128.5, 128.7, 129.3, 132.6, 136.3, 138.6, 140.1, 159.4, 197.5 (CO); EIMS (m/z , %) 302 (M^+ , 15), 197 (57), 182 (15), 165 (20), 153 (12), 105 (100).

2-(4-methoxyphenyl)-1,2-diphenylethanone (1k)

250 MHz ^1H NMR (CDCl_3) δ 3.72 (3H, s), 6.28 (1H, s), 7.01 (2H, d, J 8.7 Hz), 7.40-7.52 (10H, m), 8.26 (2H, d, J 7.1 Hz); 63 MHz ^{13}C NMR (CDCl_3) δ 54.7, 58.2, 113.8, 126.7, 128.3, 128.6, 128.7, 129.9, 130.8, 132.7, 136.4, 139.2, 158.3, 198.1 (CO); EIMS (m/z , %) 302 (M^+ , 3), 197 (100), 165 (13), 153 (13), 105 (11), 77 (12).

2-(3,4-dimethoxyphenyl)-1,2-diphenylethanone (1l)

250 MHz ^1H NMR (CDCl_3) δ 3.76 (6H, s), 6.00 (1H, s), 6.78 (2H, s), 6.82 (1H, s), 7.26-7.44 (9H, m), 7.99 (2H, d, J 7.1 Hz); 63 MHz ^{13}C NMR (CDCl_3) δ 55.6, 58.7, 111.0, 112.0, 121.2, 126.9, 128.4, 128.5, 128.7, 131.2, 132.9, 136.6, 139.1, 147.9, 148.9, 198.2; EIMS (m/z , %) 332 (M^+ , 7), 227 (100), 196 (11), 105 (9), 77 (10).

2-(3,4-methylenedioxyphenyl)-1,2-diphenylethanone (1m)

250 MHz ^1H NMR (CDCl_3) δ 5.83 (2H, s), 5.94 (1H, s), 6.70 (2H, s), 6.77 (1H, s), 7.19 (1H, d, J 7.1 Hz), 7.23-7.28 (4H, m), 7.34 (2H, dd, J 7.1, 7.1 Hz) 7.43 (1H, d, J 7.5 Hz), 7.98 (2H, d, J 7.1); 63 MHz ^{13}C NMR (CDCl_3) δ 58.7, 100.9, 108.1, 109.5, 122.1, 127.0, 128.4, 128.6, 132.9, 136.5, 139.0, 146.5, 147.8, 198.0; EIMS (m/z , %) 316 (M^+ , 7), 211 (100), 181 (15), 152 (20), 105 (21), 77 (16).