Electronic Supplementary Information

Direct and Mild Palladium-Catalyzed Aerobic Oxidative Synthesis of Imines from Alcohols and Amines under Ambient Conditions

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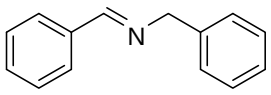
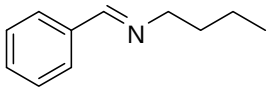
General. Substrates and catalysts were all purchased. Reactions at room temperature were run in 2 mmol scale and stirred in open air. Reactions at temperatures higher than 50 °C were run in 1 mmol scale in 100 mL sealed Schlenk tubes and heated under air. Conversions of the reactions were monitored by GC-MS. Products were purified by column chromatography on neutral alumina gel using petroleum ether and ethyl acetate as the eluent. ^{1}H and ^{13}C NMR spectra were recorded on a Bruker Avance-III 500 instrument (500 MHz for ^{1}H and 125.4 MHz for ^{13}C NMR spectroscopy). Unless otherwise noted, $CDCl_3$ was used as the solvent. Chemical shift values for ^{1}H and ^{13}C NMR were referred to internal Me_4Si (0 ppm). Mass spectra were measured on a Shimadzu GCMS-QP2010 Plus spectrometer (EI).

Typical Procedure for Pd-Catalyzed Aerobic Oxidative Imine Preparation from Alcohols and Amines. The mixture of benzyl alcohol **1a** (0.42 mL, 4.0 mmol, 2 equiv.), benzylamine **2a** (0.22 mL, 2 mmol), $Pd(OAc)_2$ (0.0045 g, 0.02 mmol, 1 mol%), *t*-BuOK (0.045 g, 0.4 mmol, 20 mol%), Et_3N (42 μL, 0.3 mmol, 15 mol%) and TEMPO (0.013 g, 0.08 mmol, 4 mol%) was stirred in open air at room temperature (ca. 30 °C) and monitored by GC-MS (3 days, >99% by GC). The reaction mixture was then, without any workup, purified directly by column chromatography on neutral alumina gel (petroleum ether/ethyl acetate/triethylamine 100:10:1) to afford **3aa** in 87% isolated yield. The alumina gel was preneutralized with 1% (v/v) triethylamine in petroleum ether before packing.

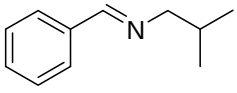
Characterization of Products:



***N*-Benzylidenebenzylamine (3aa).** Colorless oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.38 (s, 1H), 7.78-7.77 (m, 2H), 7.40 (m, 3H), 7.33 (m, 4H), 7.26-7.23 (m, 1H), 4.81 (s, 2H). MS (EI): *m/z* 195 (23), 194 (25), 117(11), 104 (4), 92 (33), 91 (100), 89 (10), 77 (5), 65 (20). This compound was known.[1]

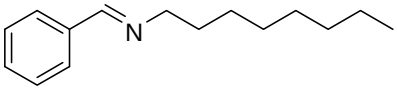


***N*-Benzylidenebutan-1-amine (3ab).** Colorless oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.26 (s, 1H), 7.72 (m, 2H), 7.39 (m, 3H), 3.61 (t, J = 6.8 Hz, 2H), 1.71-1.66 (m, 2H), 1.43-1.35 (m, 2H), 0.95 (t, J = 7.3 Hz, 3H). MS (EI): *m/z* 161 (9), 160 (20), 132 (33), 119 (30), 118 (100), 104 (27), 91 (94), 84 (32), 83 (27), 77 (13), 65 (8). This compound was known.[1]

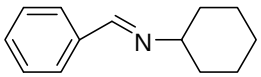


***N*-Benzylideneisobutan-1-amine (3ac).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.24 (s, 1H),

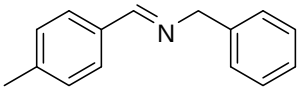
7.74-7.72 (m, 2H), 7.40 (m, 3H), 3.44-3.43 (d, J = 6.5 Hz, 2H), 2.04-1.99 (m, 1H), 0.96 (d, J = 6.5 Hz, 6H). MS (EI): *m/z* 161 (8), 160 (24), 146 (3), 118 (100), 104 (7), 91 (90), 84 (6), 77 (6), 65 (5). This compound was known.[2]



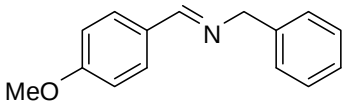
***N*-Benzylideneoctan-1-amine (3ad).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.26(s, 1H), 7.72 (m, 2H), 7.39 (m, 3H), 3.60 (t, J = 7.0 Hz, 2H), 1.72-1.67 (m, 2H), 1.33-1.27 (m, 10H), 0.88 (t, J = 6.8 Hz, 3H). MS (EI): *m/z* 216 (5), 188 (5), 174 (19), 160 (100), 146 (10), 132 (45), 118 (68), 104 (22), 91 (66), 77 (6), 65 (5). This compound was known.[2]



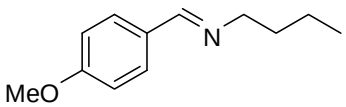
***N*-Benzylidenecyclohexanamine (3ae).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.31 (s, 1H), 7.72 (m, 2H), 7.39 (m, 3H), 3.22-3.16 (m, 1H), 1.84-1.58 (m, 7H), 1.38-1.25 (m, 3H). MS (EI): *m/z* 187 (68), 186 (46), 172 (11), 158(100), 144 (83), 132 (43), 130 (26), 117 (21), 104 (94), 91 (26), 89 (19), 77 (21), 55 (31). This compound was known.[3]



***N*-(4-Methylbenzylidene)benzylamine (3ba).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.35 (s, 1H), 7.67 (d, J = 8.0 Hz, 2H), 7.33-7.31 (m, 5H), 7.21 (d, J = 7.5 Hz, 2H), 4.80 (s, 2H), 2.37 (s, 3H). MS (EI): *m/z* 209 (29), 208 (26), 194 (9), 131 (10), 118 (11), 105 (8), 92 (35), 91 (100), 77 (7), 65 (22). This compound was known.[4]

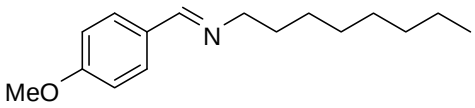


***N*-(4-Methoxybenzylidene)benzylamine (3ca).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.30 (s, 3H), 7.71 (d, J = 8.5 Hz, 2H), 7.32 (m, 4H), 7.25 (m, 1H), 6.91 (d, J = 9.0 Hz, 2H), 4.77 (s, 2H), 3.80 (s, 3H). MS (EI): *m/z* 225 (33), 224 (39), 210 (3), 194 (3), 134 (16), 117 (12), 104 (7), 91 (100), 77 (1), 65 (19). This compound was known.[4]

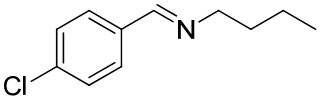


***N*-(4-Methoxybenzylidene)butan-1-amine (3cb).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.19 (s, 1H), 7.66 (d, J = 9.0 Hz, 2H), 6.91 (d, J = 8.5 Hz, 2H), 3.83 (s, 3H), 3.57 (t, J = 6.5 Hz, 2H), 1.70-1.64 (m, 2H), 1.42-1.34 (m, 2H), 0.94 (t, J = 7.0 Hz, 3H). MS (EI): *m/z* 191 (18), 190 (18), 162 (27), 160 (16), 148 (83), 134 (36), 121 (100), 105 (7), 91 (23), 77 (19), 65 (6). This compound was

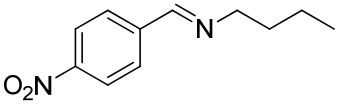
known.[5]



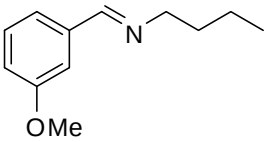
***N*-(4-Methoxybenzylidene)octan-1-amine (3cd).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.19 (s, 1H), 7.66 (d, J = 8.5 Hz, 2H), 6.92 (d, J = 8.5 Hz, 2H), 3.83 (s, 3H), 3.56 (t, J = 7.3 Hz, 2H), 1.70-1.65 (m, 2H), 1.32-1.27 (m, 10H), 0.87 (t, J = 6.8 Hz, 3H). MS (EI): *m/z* 247 (4), 218 (10), 176 (7), 162 (46), 148 (75), 135 (44), 121 (100), 118 (8), 105 (7), 91 (20), 77 (14). This compound was known.[6]



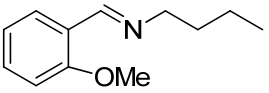
***N*-(4-Chlorobenzylidene)butan-1-amine (3db)**. Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.22 (s, 1H), 7.65 (d, J = 8.5 Hz, 2H), 7.36 (d, J = 8.5 Hz, 2H), 3.60 (t, J = 6.5 Hz, 2H), 1.70-1.65 (m, 2H), 1.42-1.35 (m, 2H), 0.95 (t, J = 7.0 Hz, 3H). MS (EI): *m/z* 195 (6), 194 (12), 166 (25), 152 (79), 138 (26), 127 (33), 125 (100), 118 (20), 111 (7), 75 (7). This compound was known.[7]



***N*-(4-Nitrobenzylidene)butan-1-amine (3eb).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.36 (s, 1H), 8.26 (d, J = 9.0 Hz, 2H), 7.89 (d, J = 9.0 Hz, 2H), 3.68 (t, J = 7.0 Hz, 2H), 1.74-1.68 (m, 2H), 1.44-1.37 (m, 2H), 0.96 (t, J = 7.5 Hz, 3H). MS (EI): *m/z* 205 (14), 191 (4), 177 (17), 163 (32), 149 (10), 147 (38), 136 (17), 131 (12), 117 (100), 104 (11), 90 (51), 89 (32), 77 (11), 63 (11), 51 (8). This compound was known.[8]

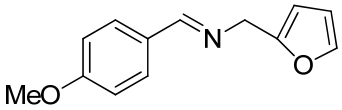


***N*-(3-Methoxybenzylidene)butan-1-amine (3fb).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.23 (s, 1H), 7.33-7.29 (m, 2H), 7.24-7.23 (m, 1H), 6.96 (m, 1H), 3.84 (s, 1H), 3.61 (t, J = 7.0 Hz, 2H), 1.71-1.65 (m, 2H), 1.43-1.35 (m, 2H), 0.95 (t, J = 7.5 Hz, 3H). MS (EI): *m/z* 191 (18), 162 (29), 160 (12), 148 (100), 134 (34), 121 (22), 117 (23), 105 (19), 91 (19), 84 (26), 77 (18), 65 (7). This compound was known.[8]

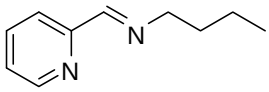


***N*-(2-Methoxybenzylidene)butan-1-amine (3gb).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.69 (s, 1H), 7.93 (d, J = 6.0 Hz, 1H), 7.36-7.34 (dd, J = 7.0 Hz, J = 7.0 Hz, 1H), 6.98-6.96 (dd, J = 7.5

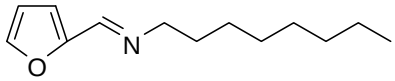
Hz, *J* = 7.5 Hz, 1H), 6.90 (d, *J* = 8.5 Hz, 1H), 3.86 (s, 3H), 3.63-3.60 (t, *J* = 7.0 Hz, 2H), 1.71-1.65 (m, 2H), 1.43-1.35 (m, 2H), 0.94 (t, *J* = 7.5 Hz, 3H). MS (EI): *m/z* 191 (24), 190 (18), 162 (45), 148 (83), 134 (62), 121 100), 119 (86), 107 (25), 91 (65), 77 (35), 65 (15), 51 (17). This compound was known.[9]



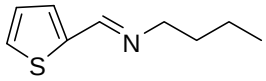
***N*-(4-Methoxybenzylidene)(furan-2-yl)methanamine (3cf).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.27 (s, 1H), 7.69 (d, *J* = 11.5 Hz, 2H), 7.37 (d, *J* = 1.5 Hz, 1H), 6.91 (d, *J* = 8.5 Hz, 2H), 6.33 (dd, *J* = 3.0 Hz, *J* = 1.5 Hz, 1H), 6.25 (d, *J* = 3.0 Hz, 1H), 4.73 (s, 2H), 3.82 (s, 3H). MS (EI): *m/z* 215 (25), 186 (3), 134 (5), 121 (2), 107 (6), 91 (4), 82 (8), 81 (100), 77 (6), 53 (19), 51 (5). This compound was known.[10]



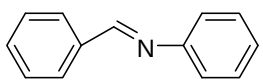
***N*-(Pyridin-2-ylmethylene)butan-1-amine (3hb).** ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.64 (d, *J* = 4 Hz, 1H), 8.38 (s, 1H), 7.99 (d, *J* = 7.5 Hz, 1H), 7.74 (dd, *J* = 7.5 Hz, *J* = 7.0 Hz, 1H), 7.30 (dd, *J* = 5.0 Hz, *J* = 6.0 Hz, 1H), 3.68 (t, *J* = 6.5 Hz, 2H), 1.74-1.69 (m, 2H), 1.43-1.39 (m, 2H), 0.96 (t, *J* = 7.0 Hz, 3H). MS (EI): *m/z* 162 (0.1), 161 (0.74), 119 (100), 106 (6), 92 (57), 78 (9), 65 (14), 52 (7). This compound was known.[11]



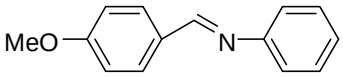
***N*-(Furan-2-ylmethylene)octan-1-amine (3id).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.08 (s, 1H), 7.5 (s, 1H), 6.71 (d, *J* = 3.0 Hz, 1H), 6.46 (dd, *J* = 3.5 Hz, *J* = 1.5 Hz, 1H), 3.57 (t, *J* = 7.0 Hz, 2H), 1.73-1.68 (m, 2H), 1.32-1.26 (m, 10H), 0.87 (t, *J* = 7.0 Hz, 3H). MS (EI): *m/z* 207 (3), 192 (1), 178 (8), 164 (22), 150 (100), 136 (9), 122 (52), 109 (67), 95 (28), 81 (74), 67 (8), 53 (17). This compound was known.[12]



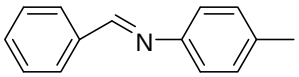
***N*-(Thiophen-2-ylmethylene)butan-1-amine (3jb).** Colorless oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.36 (s, 1H), 7.38-7.37 (d, *J* = 5.0 Hz, 1H), 7.28 (d, *J* = 3.5 Hz, 1H), 7.07-7.05 (dd, *J* = 5.0 Hz, *J* = 3.5 Hz, 1H), 3.57 (t, *J* = 6.8 Hz, 2H), 1.70-1.64 (m, 2H), 1.40-1.35 (m, 2H), 0.94 (t, *J* = 7.3 Hz, 3H). MS (EI): *m/z* 167 (23), 166 (19), 138 (29), 124 (67), 110 (29), 98 (8), 97 (100), 83 (30), 53 (8). This compound was known.[1]



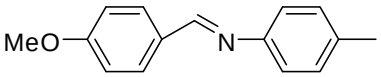
***N*-Benzylideneaniline (3ag).** Colorless oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.46 (s, 1H), 7.92-7.90 (m, 2H), 7.51-7.46 (m, 3H), 7.41-7.38 (m, 2H), 7.25-7.21 (m, 3H). MS (EI): *m/z* 181 (86), 180 (100), 104 (18), 89 (7), 78 (19), 77 (92), 51 (32). This compound was known. [13]



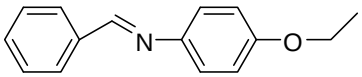
***N*-(4-Methoxybenzylidene)aniline (3cg).** Yellow solid. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.39 (s, 1H), 7.86-7.85 (d, J = 8.5 Hz, 2H), 7.40-7.37 (m, 2H), 7.23-7.7.19 (m, 3H), 7.00-6.98 (d, J = 9.0 Hz, 2H), 3.88 (s, 3H). MS (EI): *m/z* 211 (88), 210 (100), 195 (7), 180 (1), 167 (14), 104 (4), 91 (2), 77 (46), 65 (7). This compound was known. [14]



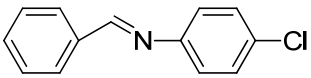
***N*-Benzylidene-4-methylaniline (3ah).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.46 (s, 1H), 7.90-7.88 (m, 2H), 7.47-7.45 (m, 3H), 7.19 (d, J = 8.5 Hz, 2H), 7.14 (d, J = 8.5 Hz, 2H), 2.37 (s, 3H). MS (EI): *m/z* 195 (98), 194 (100), 180 (5), 118 (15), 91 (45), 89 (12), 77 (7), 65 (25). This compound was known.[15]



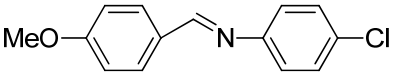
***N*-(4-Methoxybenzylidene)-4-methylaniline (3ch).** Yellow solid. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.40 (s, 1H), 7.84 (d, J = 9.0 Hz, 2H), 7.19 (d, J = 8.0 Hz, 2H), 7.12 (d, J = 8.5 Hz, 2H), 6.98 (d, J = 8.5 Hz, 2H), 3.88 (s, 3H), 2.37 (s, 3H). MS (EI): *m/z* 225 (100), 224 (98), 209 (4), 181 (8), 118 (3), 91 (26), 77 (6), 65 (20). This compound was known.[15]



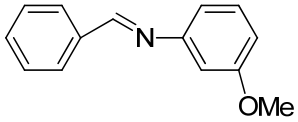
***N*-Benzylidene-4-ethoxyaniline (3ai).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.49 (s, 1H), 7.90-7.88 (m, 2H), 7.46 (m, 3H), 7.23 (d, J = 9.0 Hz, 2H), 6.93 (d, J = 8.5 Hz, 2H), 4.06 (q, J = 7.0 Hz, 2H), 1.43 (t, J = 7.0 Hz, 3H). MS (EI): *m/z* 225 (70), 197 (25), 196 (100), 167 (16), 141 (10), 120 (3), 115 (8), 91 (2), 77 (5), 65 (9). This compound was known.[16]



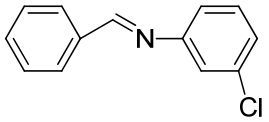
***N*-Benzylidene-4-chloroaniline (3aj).** Yellow solid. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.43 (s, 1H), 7.91-7.88 (m, 2H), 7.50-7.46 (m, 3H), 7.35 (d, J = 9.0 Hz, 2H), 7.15 (d, J = 9.0 Hz, 2H). MS (EI): *m/z* 215 (44), 214 (97), 180 (6), 151 (7), 138 (16), 111 (40), 89 (15), 77 (22), 75 (32), 51 (13). This compound was known.[15]



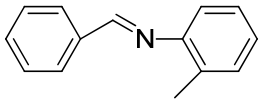
***N*-(4-Methoxybenzylidene)-4-chloroaniline (3cj).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.34 (s, 1H), 7.83 (d, J = 9.0 Hz, 2H), 7.32 (d, J = 9.0 Hz, 2H), 7.11 (d, J = 8.5 Hz, 2H), 6.97 (d, J = 9.0 Hz, 2H), 3.86 (s, 3H). MS (EI): *m/z* 245 (100), 244 (99), 229 (7), 201 (9), 138 (5), 111 (19), 77 (11), 75 (14), 65 (9). This compound was known.[15]



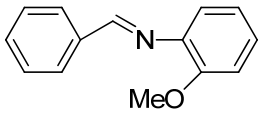
***N*-Benzylidene-3-methoxyaniline (3ak).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.45 (s, 1H), 7. 90-7.88 (m, 2H), 7.48-7.45 (m, 3H), 7.29 (d, J = 8.0 Hz, 1H), 6.80-6.77 (m, 3H), 3.83 (s, 3H). MS (EI): *m/z* 211 (100), 210 (69), 196 (7), 180 (5), 167 (9), 134 (7), 107 (22), 92 (10), 77 (31), 64 (14). This compound was known.[17]



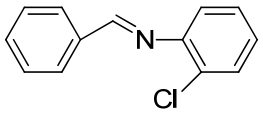
***N*-Benzylidene-3-chloroaniline (3al).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.42 (s, 1H), 7. 90-7.88 (m, 2H), 7.50-7.46 (m, 3H), 7.32-7.29 (m, 1H), 7.21-7.19 (m, 2H), 7.09-7.07 (m, 1H). MS (EI): *m/z* 215 (95), 214 (100), 180 (10), 138 (13), 111 (46), 90 (8), 89 (19), 77 (20), 75 (34). This compound was known.[18]



***N*-Benzylidene-2-methylaniline (3am).** Yellow oil. ^{1}HNMR (500MHz, CDCl3): 8.33 (s, 1H), 7.91-7.89 (m, 2H), 7.45-7.43 (m, 3H), 7.21-7.16 (m, 2H), 7.12-7.09 (m, 1H), 6.90 (d, J = 7.5 Hz, 1H) 2.36 (s, 3H). MS (EI): *m/z* 195 (80), 194 (66), 118 (100, 117 (21), 91 43), 89 (16), 77 (8), 65 (35). This compound was known.[19]

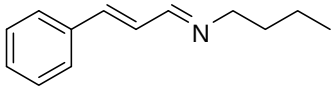


***N*-Benzylidene-2-methoxyaniline (3an).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): 8.46 (s, 1H), 7.93-7.91 (m, 2H), 7.46-7.43 (m, 3H), 7.20-7.16 (m, 1H), 7.01-6.94 (m, 3H), 3.87 (s, 3H). MS (EI): *m/z* 211 (100), 210 (18), 196 (15), 180 (24), 167 (24), 134 (21), 120 (64), 104 (55), 91 (21), 77 (34), 65 (33), 51 (18). This compound was known.[20]

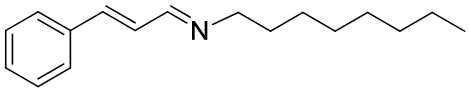


***N*-Benzylidene-2-chloroaniline (3ao).** Yellow oil. ^{1}HNMR (500MHz, $CDCl_3$): δ 8.37 (s, 1H), 7.95-7.93 (m, 2H), 7.52-7.46 (m, 3H), 7.44-7.42 (dd, J = 8.0 Hz, J = 1.0 Hz, 1H), 7.28-7.24 (m, 1H),

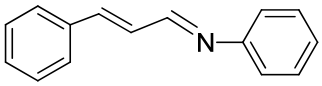
7.14-7.11 (m, 1H), 7.02-7.00 (dd, *J* = 7.5 Hz, *J* = 1.5 Hz, 1H). MS (EI): *m/z* 215 (95), 214 (100), 180 (20), 138 (16), 111 (37), 90 (6), 89 (17), 77 (32), 75 (37), 51 (18). This compound was known.[21]



***N*-(3-Phenylallylidene)butan-1-amine (3kb).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.02 (d, *J* = 6.0 Hz, 1H), 7.48-7.46 (m, 2H), 7.35-7.30 (m, 3H), 6.92-6.90 (m, 2H), 3.51 (t, *J* = 7.0 Hz, 2H), 1.68-1.62 (m, 2H), 1.41-1.34 (m, 2H), 0.94 (t, *J* = 7.5 Hz, 3H). MS (EI): *m/z* 187 (30), 186 (39), 172 (4), 158 (18), 144 (68), 130 (44), 117 (15), 115 (100), 103 (13), 91 (24), 77 (15), 68 (18), 65 (6). This compound was known.[22]



***N*-(3-Phenylallylidene)octan-1-amine (3kd).** Yellow oil. ^{1}H NMR (500 MHz, $CDCl_3$): δ 8.01 (d, *J* = 5.5 Hz, 1H), 7.49-7.46 (m, 2H), 7.37-7.26 (m, 3H), 6.91 (m, 2H), 3.50 (t, *J* = 7 Hz, 2H), 1.66 (t, *J* = 6.5 Hz, 2H), 1.32-1.28 (m, 10 H), 0.88 (t, *J* = 6 Hz, 3H). ^{13}C NMR (125.4 MHz, $CDCl_3$): δ 162.3, 141.0, 135.8, 129.0, 128.9, 128.7, 127.1, 61.6, 31.7, 30.9, 29.3, 29.1, 27.3, 22.5, 14.0. MS (EI): *m/z* 243 (11), 242 (18), 214 (10), 200 (33), 186 (70), 172 (10), 158 (32), 144 (97), 130 (54), 116 (24), 115 (100), 103 (11), 91 (34), 77 (11), 68 (22). HRMS Calcd for $C_{17}H_{26}N$ $(M+H)^+$: 244.2060; found: 244.2065.



***N*-(3-Phenylallylidene)aniline (3kg).** Brown oil. ^{1}HNMR (500 MHz, CDCl3): δ 8.17 (d, *J* = 10.0 Hz, 1H), 7.46 (m, 2H), 7.35-7.22 (m, 5H), 7.20-7.14 (m, 3H), 7.05-7.14 (m, 2H). MS (EI): *m/z* (%) 207 (33), 206 (100), 128 (15), 115 (8), 103 (6), 89 (2), 77 (21), 51 (8). This compound was known.[23]

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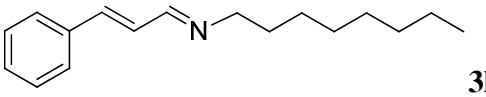
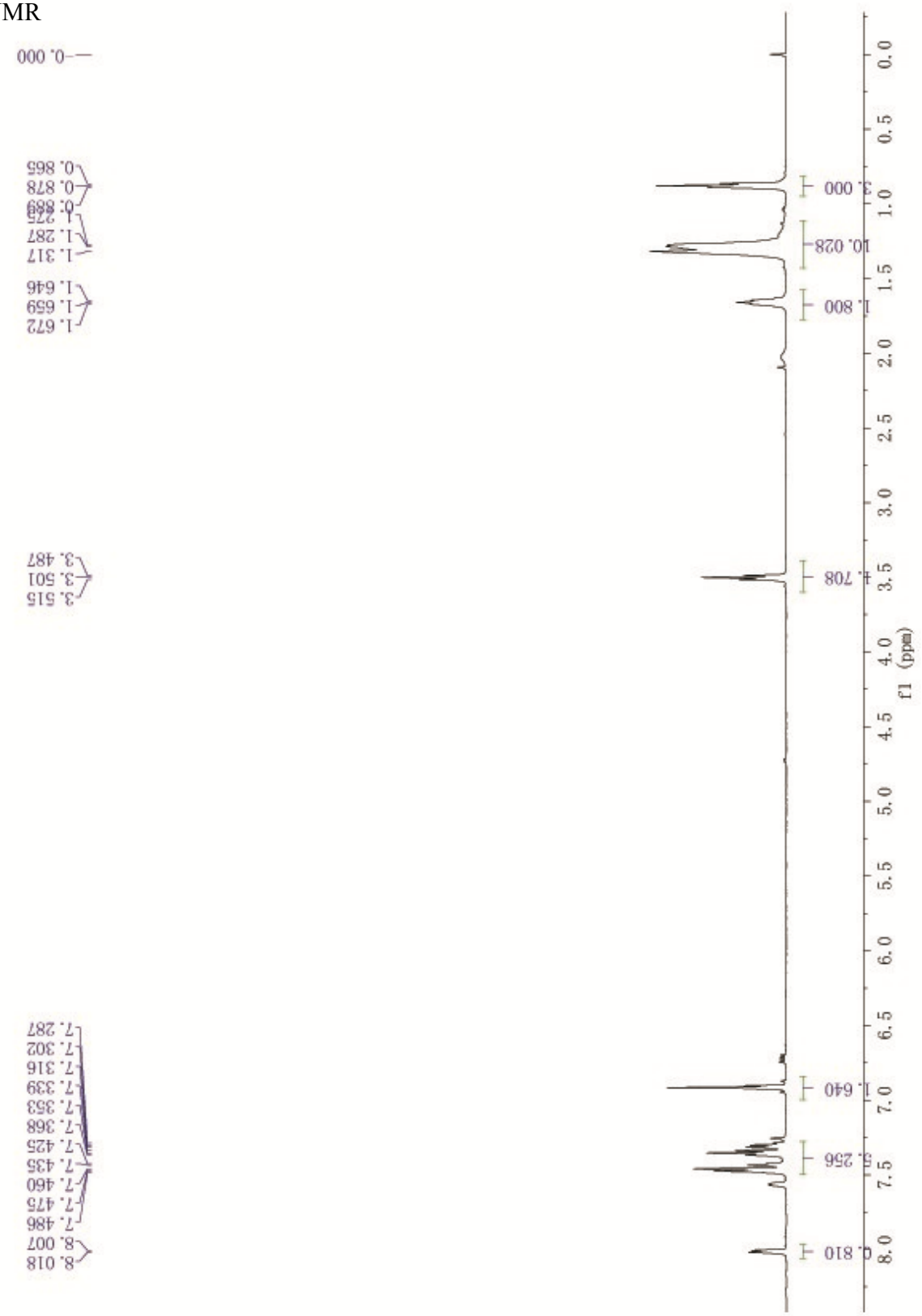
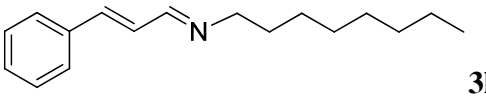
^{1}H NMR and ^{13}C NMR Spectra of New Compounds



3kd

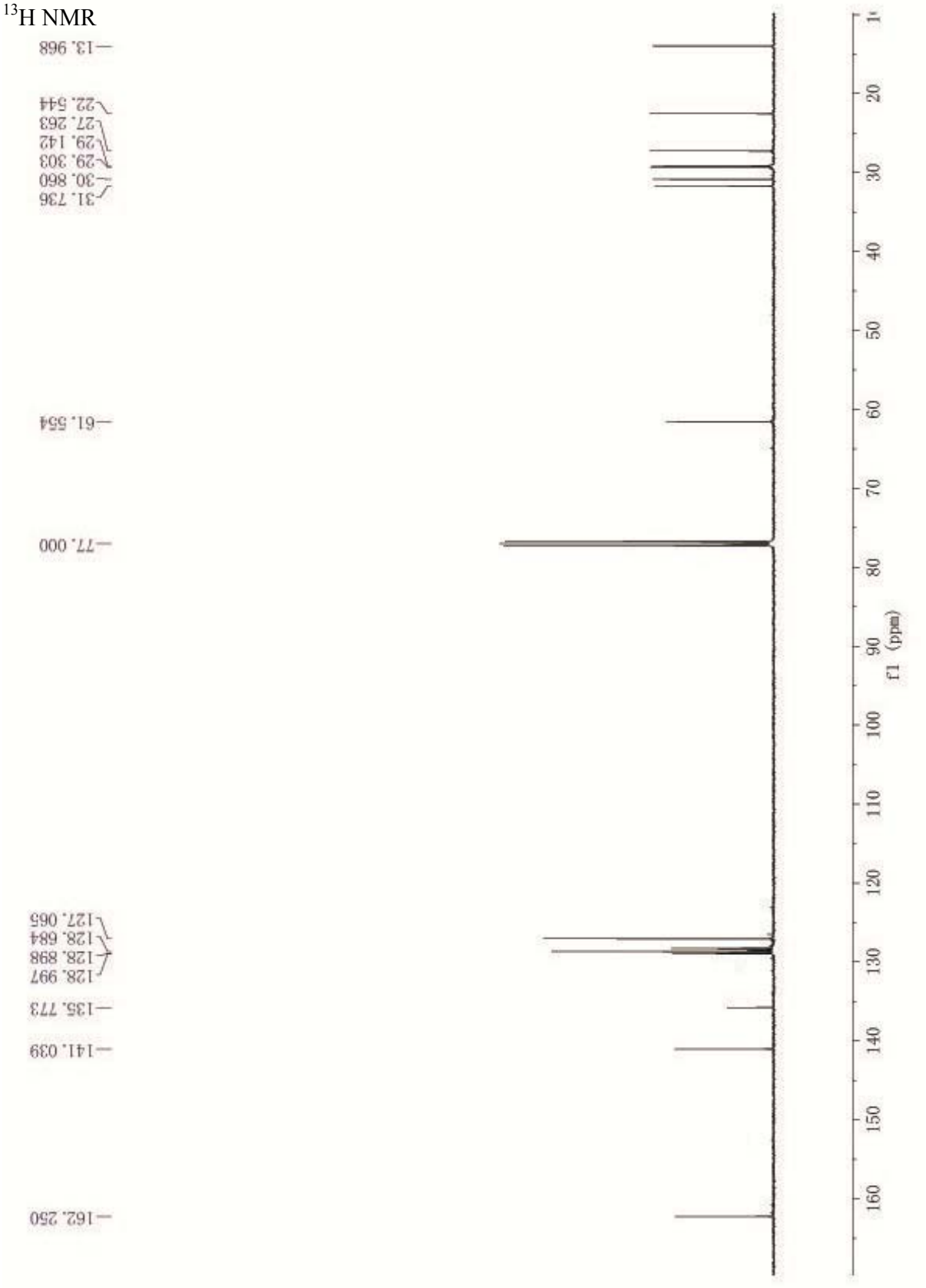
^{1}H NMR





3kd

^{13}H NMR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f1 (ppm)