

## Supporting Information

### Addition of Carbamoylsilanes to Electrophilically-Substituted Alkenes. Preparation of $\beta$ -Functionalized Tertiary Amides.

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**General.** Fused kugelrohr bulbs were pretreated with bis(trimethylsilyl)acetamide before distillation of sensitive adducts such as **4**. Unless otherwise indicated, boiling points are kugelrohr oven temperatures. IR spectra were taken on neat samples. NMR spectra were recorded at 4.7T and 11.7T in CDCl<sub>3</sub> unless otherwise indicated. **Typical Procedure.** A reaction ampoule with a Teflon screw valve with side arm and containing a micro stirbar was flame-heated under vacuum and refilled with argon. Toluene (2.5 mL) and alkene (0.5 mmol) were charged to the cooled ampoule under argon, followed by syringe addition of 1.2 eq. of **1**. The valve was closed, and the reaction held at 100 °C until the disappearance of **1** (monitored by NMR on periodic aliquots). The reaction mixture was then kugelrohr distilled or subjected to flash chromatography on Florisil.

**N, N-Dimethyl (t-butyldimethylsilyl)methanamide (1b).** A microdistillation apparatus was flame-dried under vacuum and refilled with Ar (3x) and then charged with 0.51 g (3.5 mmol) of N, N-dimethyl-1-(trimethylsilyl)methanamide (**1a**) and 0.75 g (5.0 mmol) of t-butyldimethylchlorosilane. The pot was immersed in a 140-150 °C bath and the contents stirred under Ar causing trimethylchlorosilane to slowly distill. After 3.5 h, the bath was removed and a 0.1 mm Hg vacuum was established in the cooled system. Distillation in the same apparatus gave (hot water in condenser) 0.58 g of **1b**, bp 85 °C, 0.1 mm Hg (88%), as a colorless oil which subsequently solidified, mp 36-38 °C: IR 1575 cm<sup>-1</sup>. <sup>1</sup>H NMR (C<sub>6</sub>D<sub>6</sub>) δ 2.76 (s, 3H), 2.57 (s, 3H), 1.14 (s, 9H), 0.31 (s, 6H); <sup>13</sup>C NMR (C<sub>6</sub>D<sub>6</sub>) δ 184.5, 36.4, 32.1, 26.5, -4.0. UV (hexane, 5.3 × 10<sup>-4</sup> M): 208 nm, ε = 2800; 277 nm, ε = 540. Anal. Calcd for C<sub>9</sub>H<sub>21</sub>NOSi: C, 57.70; H, 11.30; N, 7.48. Found: C, 57.52; H, 11.01; N, 7.38. This amide appeared to be more sensitive to air exposure than the TMS analogue (increasing absorption at 1680 cm<sup>-1</sup>), and was stored under Ar in a valve-sealed ampoule.

**Ethyl 4-(N, N-dimethylamino)-4-oxo-2-(trimethylsilyl)butanoate (2a).** Bp 65 °C (0.2 mm Hg). IR 1715, 1654 cm<sup>-1</sup>. <sup>1</sup>H NMR (C<sub>6</sub>D<sub>6</sub>) δ 4.16 (m, 2H), 3.08 (dd, J = 11 Hz, J = 3.5 Hz, 1H), 2.98 (dd, J = 16 Hz, J = 3.5 Hz, 1H), 2.75 (s, 3H), 2.35 (s, 3H), 2.12 (dd, J = 16 Hz, J = 3.5 Hz, 1H), 1.13 (t, 3H), 0.19 (s, 9H). <sup>13</sup>C NMR (C<sub>6</sub>D<sub>6</sub>) δ 174.8, 170.6, 59.6, 35.7, 35.0, 32.8, 30.4, 14.3, -2.6. Anal. Calcd for C<sub>11</sub>H<sub>23</sub>NO<sub>3</sub>Si: C, 53.84; H, 9.45; N, 5.71. Found: C, 53.84; H, 9.12; N, 5.90.

**Ethyl 2-(t-butyldimethylsilyl)-4-(N, N-dimethylamino)-4-oxobutanoate (2b).** Bp 115 °C (0.1 mm Hg), solidified, mp 48-50 °C. IR 1716, 1655 cm<sup>-1</sup>. <sup>1</sup>H NMR (C<sub>6</sub>D<sub>6</sub>) δ 4.18 (m, 2H), 3.22 (dd, J = 11.5 Hz, J = 2.5 Hz, 1H), 3.13 (dd, J = 16 Hz, J = 11.5 Hz, 1H), 2.74 (s, 3H), 2.38 (s, 3H), 2.23 (dd, J = 16 Hz, J = 2.5 Hz, 1H), 1.15 (t, J = 7 Hz, 3H), 1.06 (s, 9H), 0.17 (s, 6H; in CDCl<sub>3</sub>: 0.11 and 0.05). <sup>13</sup>C NMR δ 176.2, 172.2, 60.4, 37.4, 36.1, 31.7, 30.5, 27.1, 18.1, 14.6, -6.0, -6.1. Anal. Calcd for C<sub>14</sub>H<sub>29</sub>NO<sub>3</sub>Si: C, 58.49; H, 10.17; N, 4.87. Found: C, 58.33; H, 10.21; N, 5.10

**Dimethyl 2-(N,N-dimethylamido)-3-(trimethylsilyl)butanedioate (2c).** Distillation gave a mixture of **4c** and **6b**, bp 152-179 °C (0.1 mm Hg) which was chromatographed on Florisil (9:1 hexane/ EtOAc) to give **4c** (second to elute) in 15% yield. IR 1728, 1656 cm<sup>-1</sup>. <sup>1</sup>H NMR δ 4.40 (d, J = 10.6 Hz, 1H), 3.79 (d, J = 10.6 Hz, 1H), 3.53 (s, 3H), 3.37 (s, 3H), 2.73 (s, 3H), 2.68 (s, 3H), 0.24 (s, 9H). <sup>13</sup>C NMR (C<sub>6</sub>D<sub>6</sub>) δ 174.7, 169.8, 166.7, 51.8, 50.5, 47.5, 37.6, 37.0, 35.5, -0.2. Anal. Calcd for C<sub>12</sub>H<sub>23</sub>NO<sub>5</sub>Si: C, 48.80; H, 8.01; N, 4.84. Found: C, 49.50; H, 8.27; N, 4.89.

**N, N-Dimethyl-3-cyano-3-(trimethylsilyl)propanamide (2d).** Bp 143 °C (0.03 mm Hg). IR 2223(m), 1651(s) cm<sup>-1</sup>. <sup>1</sup>H NMR δ 2.97 (s, 3H), 2.91 (s, 3H), 2.61 (dd, J = 16 Hz, J = 9.5 Hz, 1H), 2.42 (dd, J = 9.5 Hz, J = 4.5 Hz, 1H), 2.35 (dd, J = 16 Hz, J = 4.5 Hz, 1H), 0.15 (s, 9H). <sup>13</sup>C NMR δ 169.4, 122.1, 37.0, 35.8, 30.6, 14.4, -3.2. Anal. Calcd for C<sub>9</sub>H<sub>18</sub>N<sub>2</sub>OSi: C, 54.50; H, 9.15; N, 14.12. Found: C, 54.33; H, 9.35; N, 14.25.

**N, N-Dimethyl-3-(t-butyldimethylsilyl)-3-cyanopropanamide (2e).** Bp 112-116 °C (0.05 mm Hg). IR 2224(m), 1650(s) cm<sup>-1</sup>. <sup>1</sup>H NMR δ 3.01 (s, 3H), 2.97 (s, 3H), 2.68 (dd, J = 16 Hz, J = 9.5 Hz, 1H), 2.60 (dd, J = 9.5 Hz, J = 3.7 Hz, 1H), 2.40 (dd, J = 16 Hz, J = 3.7 Hz, 1H), 0.99 (s, 9H), 0.20 (s, 3H), 0.08 (s, 3H). <sup>13</sup>C NMR δ 169.4, 122.6, 37.0, 35.8, 31.4, 26.7, 17.5, 11.3, -7.0, -7.2. Anal. Calcd for C<sub>12</sub>H<sub>24</sub>N<sub>2</sub>OSi: C, 59.95; H, 10.06; N, 11.65. Found: C, 59.90; H, 9.88; N, 11.91.

**N, N-Dimethyl-3-chloro-3-cyano-3-(trimethylsilyl)propanamide (2f).** Bp 116 °C (0.1 mm Hg); solidified to pale yellow solid, mp 68-71 °C. IR 2221(w), 1651(s) cm<sup>-1</sup>. <sup>1</sup>H NMR (C<sub>6</sub>D<sub>6</sub>) δ 2.65 (AB pattern, J = 15.5 Hz, 2H), 2.59 (s, 3H), 2.10 (s, 3H), 0.34 (s, 9H). <sup>13</sup>C NMR (C<sub>6</sub>D<sub>6</sub>) δ 165.7, 119.7, 45.8, 40.2, 36.3, 34.8, -3.6. Anal. Calcd for C<sub>9</sub>H<sub>17</sub>ClN<sub>2</sub>OSi: C, 46.44; H, 7.36; N, 12.03. Found: C, 46.28; H, 7.23; N, 12.11.

**N, N-Dimethyl-3-(trimethylsilyl)-3-ethylsulfonylpropanamide (2g).** Bp 135 °C (0.05 mm Hg). IR 1648(s), 1128(s), 851(s) cm<sup>-1</sup>. <sup>1</sup>H NMR (C<sub>6</sub>D<sub>6</sub>) δ 3.88 (dd, J = 7 Hz, J = 3.5 Hz, 1H), 3.01 (dd, J = 17 Hz, J = 7 Hz, 1H), 2.85 (m, 1H), 2.74 (m, 1H), 2.66 (s, 3H), 2.39 (dd, J = 17 Hz, J = 3.5 Hz, 1H), 2.26 (s, 3H), 1.25 (t, J = 7 Hz, 3H), 0.36 (s, 9H). <sup>13</sup>C NMR δ 169.8, 49.0, 47.6, 37.1, 36.1, 30.0, 6.6, -1.2. Anal. Calcd for C<sub>10</sub>H<sub>23</sub>NO<sub>3</sub>SSi: C, 45.25; H, 8.73; N, 5.28. Found: C, 45.08; H, 8.45; N, 5.50.

**N, N-Dimethyl-3-(*t*-butyldimethylsilyl)-3-ethylsulfonylpropanamide (2h).** Bp 162-165 °C (0.1 mm Hg). IR 1649(s), 1128(s) cm<sup>-1</sup>. <sup>1</sup>H NMR (C<sub>6</sub>D<sub>6</sub>) δ 4.12 (m, 1H), 3.02 (dd, J = 17 Hz, J = 18 Hz, 1H), 2.76 (m, 3H), 2.72 (s, 3H), 2.27 (s, 3H), 1.27 (t, J = 8 Hz, 3H), 1.15 (s, 9H), 0.47 (s, 3H), 0.33 (s, 3H). <sup>13</sup>C NMR δ 169.5, 48.0, 45.8, 36.9, 36.0, 30.8, 26.9, 17.8, 6.4, -4.5, -5.2. Anal. Calcd for C<sub>13</sub>H<sub>29</sub>NO<sub>3</sub>SSi: C, 50.77; H, 9.50; N, 4.55. Found: C, 50.65; H, 9.74; N, 4.83.

**N, N-dimethyl-3-(diethylphosphonato)-3-(trimethylsilyl)propanamide (2i).** Bp 153 °C (0.2 mm Hg). IR 1653(s), 1237(s), 1028(s), 848(s) cm<sup>-1</sup>. <sup>1</sup>H NMR δ 4.07 (m, 4H), 3.06 (s, 3H), 2.99 (s, 3H), 2.77 (ddd, J = 18 Hz, J = 16 Hz, J = 6.5 Hz, 1H), 2.36 (ddd, J = 20 Hz, J = 16.5 Hz, J = 5.5 Hz, 1H), 2.28 (ddd J = 24 Hz, J = 6.5 Hz, J = 5.4 Hz, 1H), 1.31 (t, J = 7Hz, 3H), 1.30 (t, J = 7Hz, 3H), 0.17 (s, 9H). <sup>13</sup>C NMR δ 171.2 (d, J = 8 Hz), 61.2 (d, J = 6 Hz), 61.1 (d, J = 6 Hz), 37.1, 36.0, 28.2 (d, J = 5 Hz), 20.0 (d, J = 126), 16.3 (t, J = 6 Hz), -1.49. Anal. Calcd for C<sub>12</sub>H<sub>28</sub>NO<sub>4</sub>PSi: C, 46.58; H, 9.12; N, 4.53. Found: C, 46.40; H, 9.12; N, 4.36.

**3, N, N-Trimethyl-4-[(*t*-butyldimethylsilyl)oxy]-4-methoxy-3-butenamide (3a).** Bp 89 °C (0.1 mm Hg). IR 1739(w), 1696(m), 1654(s), 1158(m) cm<sup>-1</sup>. <sup>1</sup>H NMR δ 3.57 (s, 3H), 3.06 (s, 2H), 3.01 (s, 3H), 2.95 (s, 3H), 1.62 (s, 3H), 0.97 (s, 9H), 0.18 (s, 6H). <sup>13</sup>C NMR δ 171.7, 151.2, 90.3, 57.6, 37.1, 35.8, 35.4, 25.7, 18.0, 13.4, -4.6. Anal. Calcd for C<sub>14</sub>H<sub>29</sub>NO<sub>3</sub>Si: C, 58.49; H, 10.17; N, 4.87. Found: C, 58.40; H, 10.25; N, 4.88.

**(E)- and (Z)-N, N-dimethyl-4-[*t*-butyldimethylsilyl)oxy]-4-ethoxy-2, 2-methylidene-3-butenamide (3b and 3c).** Bp 170 °C (0.2 mm Hg). IR 1737(w), 1688(s), 1643(s), 1554(s), 1131(s) cm<sup>-1</sup>. <sup>1</sup>H NMR (major isomer) δ 6.39 (d, J = 6.5 Hz, 1H), 5.75 (d, J = 6.5 Hz, 1H), 4.52 (s, 1H), 4.08 (q, J = 7 Hz, 2H), 2.93 (s, 6H), 1.26 (t, J = 7 Hz, 3H), 0.91 (s, 9H), 0.15 (s, 6H). <sup>13</sup>C NMR (major isomer) δ 168.2, 158.0, 141.8, 105.5, 84.1, 58.1, 41.1, 25.4, 18.0, 14.71, -5.28. <sup>1</sup>H NMR (minor isomer) δ 6.73 (d, J = 12.5 Hz, 1H), 6.11 (d, J = 12 Hz, 1H), 4.62 (s, 1H), 4.11 (q, J = 7 Hz, 2H), 2.88 (s, 6H), 1.26 (t, J = 7 Hz), 0.96 (s, 9H), 0.22 (s, 6H). <sup>13</sup>C NMR (minor isomer) δ 168.4, 160.7, 149.0, 106.5, 88.1, 58.5, 40.1, 25.6, 18.2, 14.66, -5.13. Anal. Calcd for C<sub>15</sub>H<sub>29</sub>NO<sub>3</sub>Si: C, 60.16; H, 9.76; N, 4.68. Found: C, 60.44; H, 10.17; N, 4.66

**Trimethylsilyl ester of N, N-dimethyl-3-*aci*-nitrobutanamide (3d).** <sup>1</sup>H NMR (C<sub>6</sub>D<sub>6</sub>) δ 3.21 (s, 2H), 2.67 (s, 3H), 2.47 (s, 3H), 2.05 (s, 3H), 0.42 (s, 9H). <sup>13</sup>C NMR (C<sub>6</sub>D<sub>6</sub>) δ 166.8, 119.0, 36.8, 36.2, 34.6, 17.3, 0.3. Desilylation (KF, MeOH, 25 °C, 2 h) gave **N, N-dimethyl-3-nitrobutanamide**, bp 146 °C (0.05 mm Hg); IR 1648(s), 1546(s) cm<sup>-1</sup>. <sup>1</sup>H NMR δ 5.11 (m, 1H), 3.25 (dd, J = 16.5 Hz, J = 7 Hz, 1H), 3.06 (s, 3H), 2.97 (s, 3H), 2.62 (dd, J = 16.5 Hz, J = 5 Hz), 1.65 (d, J = 7 Hz). <sup>13</sup>C NMR δ 168.1, 79.1, 37.5, 37.0, 35.4, 19.8. Anal. Calcd for C<sub>6</sub>H<sub>12</sub>N<sub>2</sub>O<sub>3</sub>: C, 44.99; H, 7.55; N, 17.49. Found: C, 44.98; H, 7.35; N, 17.38.

***t*-Butyldimethylsilyl ester of N, N-dimethyl-3-*aci*-nitrobutanamide (3e).** Bp 116 °C (0.05 mm Hg). This material slowly darkened at room temperature (stable neat at -78 °C), but could be stored at room temperature in solution (benzene) without deterioration. IR 1650(s), 1635(sh) cm<sup>-1</sup>. <sup>1</sup>H NMR δ 3.49 (s, 2H), 3.05 (s, 3H), 2.97 (s, 3H), 2.10 (s, 3H), 0.97 (s, 9H), 0.36 (6H). <sup>13</sup>C NMR δ 167.6, 120.6, 37.5, 37.4, 35.6, 26.0, 17.8, 17.4, -4.0. Anal. Calcd for C<sub>12</sub>H<sub>26</sub>N<sub>2</sub>O<sub>3</sub>Si: C, 52.52; H, 9.55; N, 10.21. Found: C, 52.28; H, 9.47; N, 10.00.

***t*-Butyldimethylsilyl ester of N, N-dimethyl-2-*aci*-nitrocyclohexanecarboxamide (3f).** Bp 165 °C (0.05 mm Hg). IR 1648(s), 1603(m) cm<sup>-1</sup>. <sup>1</sup>H NMR (C<sub>6</sub>D<sub>6</sub>) δ 4.24 (d, J = 6 Hz, 1H), 3.22 (d, J = 14.5 Hz), 2.7 (m, 2H), 2.68 (s, 3H), 2.55 (s, 3H), 1.89 (m, 1 H), 1.73 (d, J = 14.5 Hz, 1H), 1.66 (d, J = 10 Hz, 1H), 1.31 (m, 2H), 1.10 (s, 9H), 0.60 (s, 3H), 0.58 (s, 3H). <sup>13</sup>C NMR δ 171.4, 126.7, 38.9, 37.5, 25.7, 27.4, 26.2, 26.0, 24.1, 20.7, 17.9, -3.8, -3.9. Anal. Calcd for C<sub>15</sub>H<sub>30</sub>N<sub>2</sub>O<sub>3</sub>Si: C, 57.29; H, 9.61; N, 8.91. Found: C, 57.14; H, 9.87; N, 8.89.

**(E)-N, N-Dimethyl-2-butoxy-2-[*t*-butyldimethylsilyl)oxy]-4-phenyl-3-butenamide**

**(4a).** The fraction obtained at bp 137 °C (0.4 mm Hg) was further purified by chromatography on Florisil (9:1 hexane-EtOAc) to give a pale yellow oil which solidified on standing, mp 78-81 °C. IR 1657 cm<sup>-1</sup>. <sup>1</sup>H NMR δ 7.35 (m, 5H), 7.13 (d, J = 16 Hz, 1H), 6.32 (d, J = 16 Hz, 1H), 3.70 (dt, J = 9 Hz, 7 Hz, 1H), 3.56 (dt, J = 9 Hz, 7 Hz 1H), 3.15 (s, 3H), 3.01 (s, 3H), 1.62 (m, 2H), 1.43 (m, 2H), 0.96 (t, J = 7 Hz, 3H), 0.95 (s, 9H), 0.17 (s, 3H), 0.16 (s, 3H); <sup>13</sup>C NMR δ 169.5, 136.0, 131.4, 128.7, 128.2, 126.8, 98.8, 62.8, 38.1, 37.2, 32.0, 29.7, 26.1, 19.6, 18.7, 14.0, -2.7, -2.9. Anal. Calcd for C<sub>22</sub>H<sub>37</sub>NO<sub>3</sub>Si: C, 67.47; H, 9.52; N, 3.58. Found: C, 67.58; H, 9.57; N, 3.41.

**(E)-Methyl 4-methoxy-5-dimethylamino-5-oxo-4-[(trimethylsilyl)oxy]-2-pentenoate (4b).**

Distillation gave a mixture of **2c** and **4b**, bp 152-179 °C (0.1 mm Hg) which was chromatographed on Florisil (9:1 hexane/ EtOAc) to give **4b** (first to elute) in 12% yield. IR 1730, 1656 cm<sup>-1</sup>. <sup>1</sup>H NMR (C<sub>6</sub>D<sub>6</sub>) δ 7.38 (d, J = 15.6 Hz, 1H), 6.61 (d, J = 15.6 Hz, 1H), 3.46 (s, 3H), 3.17 (s, 3H), 2.68 (s, 3H), 2.63 (s, 3H), 0.51 (s, 9H). <sup>13</sup>C NMR (C<sub>6</sub>D<sub>6</sub>) δ 167.6, 165.9, 144.9, 123.7, 98.9, 51.1, 49.9, 37.0, 36.6, 2.2. Anal. Calcd for C<sub>12</sub>H<sub>23</sub>NO<sub>5</sub>Si: C, 48.80; H, 8.01; N, 4.84. Found: C, 49.74; H, 8.07; N, 4.89.

**2-[1-phenyl-2-(N,N-dimethylamino)-2-oxoethyl]propandioate (5a).** To the completed reaction of **1b** with 124 mg (0.5 mmol) of the benzylidenemalonate, 90 mg (0.6 mmol) of CsF in 2 mL of EtOH was added. After 16 h at 25 °C, the liquid was removed from the KF and distillation gave 64 mg (0.2 mmol) of **5a**, bp 190 °C (0.3 mm Hg). IR 1740, 1733, 1647 cm<sup>-1</sup>. <sup>1</sup>H NMR δ 7.56 (d, J = 7.5 Hz, 2H), 7.16 (t, J = 7.5 Hz, 2H), 7.07 (t, J = 7.5 Hz, 1H), 4.87 (d, J = 11 Hz, 1H), 4.90 (d, J = 11 Hz, 1H), 4.10 (m, 2H), 3.80 (m, 2H), 2.68 (s, 3H), 2.51 (s, 3H), 1.02 (t, J = 7 Hz, 3H), 0.71 (t, J = 7 Hz, 3H). <sup>13</sup>C NMR δ 171.0, 168.5, 168.2, 135.2, 128.70, 128.65, 127.8, 61.7, 61.2, 56.7, 48.6, 37.1, 36.1, 14.0, 13.7. Anal. Calcd for C<sub>17</sub>H<sub>23</sub>NO<sub>5</sub>: C, 63.54; H, 7.21; N, 4.36. Found: C, 63.35; H, 6.97; N, 4.07.

**N, N-Dimethyl 3,3-dicyano-2-phenylpropanamide (5b).** Mp 137-138 °C (heptane/EtOAc). IR 2257(w), 1639(s) cm<sup>-1</sup>. <sup>1</sup>H NMR δ 7.46 (m, 3H), 7.38 (m, 3H), 4.53 (d, J = 9 Hz, 1H), 4.33 (d, J = 9 Hz, 1H), 3.04 (s, 3H), 2.87 (s, 3H). <sup>13</sup>C NMR δ 168.8, 132.0, 129.9 (coincident), 128.3, 112.5, 111.7, 51.0, 37.0, 36.3, 27.9. Anal. Calcd for C<sub>13</sub>H<sub>13</sub>N<sub>3</sub>O: C, 68.70; H, 5.77; N, 18.49. Found: C, 68.59; H, 5.70; N, 18.49.

**Ethyl 2-ethoxy-3-(N,N-dimethylamino)-2-[(trimethylsilyl)oxy]-3oxopropanoate (6).**

Bp 105 °C (0.3 mm Hg). IR 1752, 1661 cm<sup>-1</sup>. <sup>1</sup>H NMR δ 4.26 (q, J = 8 Hz, 2H), 3.71 (dq, J = 7 Hz, J = 9 Hz, 1H), 3.50 (dq, J = 7 Hz, J = 9 Hz, 1H), 3.12 (s, 3H), 2.92 (s, 3H), 1.30 (t, J = 7.5 Hz, 3H), 1.23 (t, J = 7.5 Hz, 3H), 0.18 (s, 9H). <sup>13</sup>C NMR δ 169.0, 167.2, 99.1, 62.2, 60.4, 37.5, 36.9, 15.6, 14.5, 1.8. Anal. Calcd for C<sub>12</sub>H<sub>25</sub>NO<sub>5</sub>Si: C, 49.46; H, 8.65; N, 4.81. Found: C, 49.28; H, 8.60; N, 4.74.

**N, N-Dimethyl-4-[(*t*-butyldimethylsilyl)oxy]-3-hexenamide (7).** Bp 135 °C (0.3 mm Hg). IR 1655 cm<sup>-1</sup>. <sup>1</sup>H NMR δ 4.68 (t, J = 7 Hz, 1H), 3.09 (d, J = 7 Hz, 2H), 2.98 (s, 3H), 2.92 (s, 3H), 2.06 (q, J = 7 Hz, 2H), 1.04 (t, J = 7 Hz, 3H), 0.94 (s, 9H), 0.12 (s, 6H). <sup>13</sup>C NMR δ 172.2, 153.7, 99.5, 37.2, 35.4, 31.4, 29.2, 25.7, 18.2, 11.6, -3.9. Anal. Calcd for C<sub>11</sub>H<sub>29</sub>NO<sub>2</sub>Si: C, 61.94; H, 10.77; N, 5.16. Found: C, 61.79; H, 11.08; N, 5.44

**N, N-Dimethyl-4, 4-difluoro-3-phenyl-3-butenamide (8).** Bp 84 °C (0.2 mm Hg). IR 1753(s), 1655(s) cm<sup>-1</sup>. <sup>1</sup>H NMR δ 7.32 (m, 5H), 3.43 (s, 2H), 3.06 (s, 3H), 2.96 (s, 3H). <sup>13</sup>C NMR δ 168.9, 154.6 (t, J = 289 Hz), 133.6, 128.4, 128.1, 127.4, 88.0(br), 37.2, 36.3, 33.3. Anal. Calcd for C<sub>12</sub>H<sub>13</sub>F<sub>2</sub>NO: C, 63.99; H, 5.82; N, 6.22. Found: C, 63.76; H, 5.85; N, 5.96.