Supporting Information

NMR characterization data of allenes **2a-j**.

1-Bromo-3,4,4-trimethyl-1,2-pentadiene (2a): ^{1}H NMR (300 MHz, CD_3OD, 25 °C) δ 1.09 (9H), 1.82 (3H), 6.01 (1H); ^{13}C NMR (75 MHz, CD_3OD, 25 °C) δ 14.6, 20.5, 34.0, 71.5, 120.1, 198.8.

1-Phenyl-3,4,4-trimethyl-1,2-pentadiene (2b): ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C) δ 1.16 (9H), 1.84 (3H), 6.09 (1H), 7.15-7.36 (5H); ^{13}C NMR (75 MHz, $CDCl_3$, 25 °C) δ 14.7, 29.2, 34.2, 94.1, 112.6, 126.2, 126.3, 128.5, 136.3, 201.8.

1-(2-Methoxyphenyl)-3,4,4-trimethyl-1,2-pentadiene (2c): ^{1}H NMR (300 MHz, CD_3OD, 25 °C) δ 1.12 (9H), 1.79 (3H), 3.81 (3H), 6.39 (1H), 6.84 (1H), 6.90 (1H), 7.11 (1H), 7.26 (1H); ^{13}C NMR (75 MHz, CD_3OD, 25 °C) δ 14.5, 29.0, 34.0, 55.4, 87.8, 111.0, 112.5, 120.8, 127.3, 133.3, 156.1, 202.4.

1-(4-Methoxyphenyl)-3,4,4-trimethyl-1,2-pentadiene (2d): ^{1}H NMR (300 MHz, CD_3OD, 25 °C) δ 1.12 (9H), 1.79 (3H), 3.76 (3H), 6.00 (1H), 6.82 (2H), 7.14 (2H); ^{13}C NMR (75 MHz, CD_3OD, 25 °C) δ 14.7, 29.2, 34.2, 55.2, 93.5, 112.4, 114.1, 127.3, 128.7, 158.3, 201.1.

1-(4-Fluorophenyl)-3,4,4-trimethyl-1,2-pentadiene (2e): ^{1}H NMR (300 MHz, CD_3OD, 25 °C) δ 1.12 (9H), 1.80 (3H), 6.05 (1H), 6.98 (2H), 7.23 (2H); ^{13}C NMR (75 MHz, CD_3OD, 25 °C) δ 14.9, 29.7, 35.1, 94.1, 113.9, 116.2, 128.7, 133.6, 163.0, 202.8.

1-(1-Naphthyl)-3,4,4-trimethyl-1,2-pentadiene (2f): ^{1}H NMR (300 MHz, CD_3OD, 25 °C) δ 1.16 (9H), 1.88 (3H), 6.80 (1H), 7.30-7.60 (4H), 7.70 (1H), 7.84 (1H), 8.28 (1H); ^{13}C NMR (75 MHz, CD_3OD, 25 °C) δ 15.1, 29.5, 35.0, 91.7, 112.2, 124.5, 125.6, 126.6, 126.7, 126.8, 127.9, 129.6, 132.2, 133.3, 135.5, 204.6.

2,2,3,6,6-Pentamethyl-3,4-heptadiene (2g): ^{1}H NMR (300 MHz, CD_3OD, 25 °C) δ 1.00 (9H), 1.04 (9H), 1.67 (3H), 4.98 (1H); ^{13}C NMR (75 MHz, CD_3OD, 25 °C) δ 15.4, 29.2, 30.3, 32.0, 33.2, 102.3, 109.7, 197.3.

6,7,7-Trimethyl-4,5-octadien-1-ol (2h): ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C) δ 1.01 (9H), 1.45 (1H), 1.65 (5H), 2.02 (2H), 3.66 (2H), 5.01 (1H); ^{13}C NMR (75 MHz, $CDCl_3$, 25 °C) δ 15.1, 25.6, 29.0, 32.0, 33.2, 62.3, 89.7, 108.7, 200.3.

3,7-Dimethyl-3,4-octadiene (2i): ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C) δ 0.86 (6H), 0.97 (3H), 1.62 (1H), 1.65 (3H), 1.82 (2H), 1.90 (2H), 4.96 (1H); ^{13}C NMR (75 MHz, $CDCl_3$, 25 °C) δ 12.2, 19.1, 22.2, 27.0, 28.5, 39.0, 89.3, 100.2, 201.4.

1-Phenyl-3-methyl-1,2-pentadiene (2j): ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C) δ 1.07 (3H), 1.83 (3H), 2.10 (2H), 6.09 (1H), 7.12-7.33 (5H); ^{13}C NMR (75 MHz, $CDCl_3$, 25 °C) δ 12.3, 18.4, 27.2, 94.5, 105.4, 126.3, 126.5, 128.4, 136.1, 202.3.