Supporting Information to:

Highly Efficient Hydrosilylation of Alkenes by Organoyttrium Catalysts with Sterically Demanding Amidinate and Guanidinate Ligands

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Characterization data of organosilane products

1-(Phenylsilyl)hexane (**4a**).

^{1}H NMR (400 MHz, C_6D_6, δ): 7.50 (m, 2H), 7.16 (m, 3H), 4.48 (t, 2H, J_{HH} = 3.66 Hz, SiH_2), 1.38 (m, 2H), 1.32-1.11 (m, 6H), 0.86 (t, 3H, J_{HH} = 7.32 Hz, CH_3), 0.81 (m, 2H). GC-MS: m/z = 192 (M^+).

1-(Phenylsilyl)octane (**4b**).

^{1}H NMR (400 MHz, C_6D_6, δ): 7.49 (m, 2H), 7.16 (m, 3H), 4.47 (t, 2H, J_{HH} = 3.66 Hz, SiH_2), 1.40 (m, 2H), 1.27 (m, 4H), 1.21 (m, 6H), 0.89 (t, 3H, J_{HH} = 7.09 Hz, CH_3), 0.83 (m, 2H). GC-MS: m/z = 220 (M^+).

2-(Phenylsilyl)ethylcyclohexane (**4c**).

^{1}H NMR (400 MHz, C_6D_6, δ): 7.50 (m, 2H), 7.16 (m, 3H), 4.47 (t, 2H, J_{HH} = 3.67 Hz, SiH_2), 1.64 (m, 5H), 1.29 (m, 2H), 1.23-1.02 (m, 4H), 0.90-0.68 (m, 4H). GC-MS: m/z = 218 (M^+).

4-[2-(Phenyl)ethyl]cyclohex-1-ene (**4d**).

^{1}H NMR (400 MHz, C_6D_6, δ): 7.49 (m, 2H), 7.17 (m, 3H), 5.65 (m, 2H), 4.46 (t, 2H, J_{HH} = 3.56 Hz, SiH_2), 2.10-1.86 (m, 3H), 1.68-1.25 (m, 5H), 1.08 (m, 1H), 0.80 (m, 2H). GC-MS: m/z = 216 (M^+).

2,2-Dimethyl-4-(phenyl)butane (**4e**).

^{1}H NMR (400 MHz, C_6D_6, δ): 7.50 (m, 2H), 7.16 (m, 3H), 5.65 (m, 2H), 4.48 (t, 2H, J_{HH} = 3.62 Hz, SiH_2), 1.29 (m, 2H), 0.79 (s, 9H), 0.76 (m, 2H). GC-MS: m/z = 192 (M^+).

1-Phenyl-1-(phenylsilyl)ethane (**4i**).

^{1}H NMR (200MHz, C_6D_6, δ): 7.54-6.94 (m, 10H), 4.43 (d, 2H, J_{HH} = 3.15 Hz, SiH_2), 2.44 (m, 1H), 1.34 (d, 3H, J_{HH} = 7.51 Hz, CH_3). GC-MS: m/z = 212 (M^+). Retention time: 18.8 min.

1-Phenyl-2-(phenylsilyl)ethane (**5i**).

^{1}H NMR (200MHz, C_6D_6, δ): 7.54-6.94 (m, 10H), 4.40 (t, 2H, J_{HH} = 3.62 Hz, SiH_2), 2.63 (m, 2H), 1.13 (m, 2H). GC-MS: m/z = 212 (M^+). Retention time: 18.36 min.