Supplementary Information for
Tandem deuteration/hydrosilylation reactions catalyzed by a rhodium carbene complex under solvent-free conditions
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Experimental Details
1
Spectra of starting materials and conversion 2-12

Experimental:

General:

NMR spectra were obtained in benzene-\(d_6\) on Bruker 400 or 300 MHz instruments. The Rhodium catalyst was prepared as previously described and handled under argon. All other reagents were purchased, and used as received. Spectra of the received substrates are presented with the resultant substrate/products mixture spectra.

The complexes made by this new method have been previously prepared and are reported in the following papers.


Typical procedure:

In an argon atmosphere glovebox [Rh(tBu)\(\text{Cl}\)] \(3.1\) mg, \(6.2\) mmol) were loaded into a screw cap Schlenk flask. Outside of the glovebox, 4-methylacetophenone \(87.1\) mg, \(650\) mmol) and a slight excess of triethylsilane \(100\) mg) were mixed. Under a flow of hydrogen the substrates were added to the catalyst. The vessel was sealed and heated to \(50^\circ\)C for 1 hour. Following this time, the vessel was placed under vacumm to remove triethylsilane, leaving behind a mixture of the ketone and resulting silyl-ether. The mixture was dissolved in benzene-\(d_6\). The ratio of the mixture was determined by \(^1\)H NMR spectroscopy: See Below.
Chemical Shift (ppm)

\[
\text{Br} \quad \text{O} \\
\text{H}_2, [\text{Rh}] + \text{EtSiH} \quad \xrightarrow{\text{H}_2 [\text{Rh}]} \\
\text{Br} \quad \text{O}
\]