Supporting Information

Activation of a C-H Bond in Indene by [(COD)Rh(µ₂-OH)]₂

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Kinetics data for reactions between [(COD)Rh(µ₂-OH)]₂ (1) and indene

The first order dependence in [Rh] was established by performing a reaction with 15 equivalents of indene as described in the main text. The graph of ln([Prod]₀-[Prod]) against time is linear up to approximately 3 half-lives, as shown in Figure S1, which is consistent with a first order dependence on [Rh].

![Graph](image)

**Figure S1**: Graph of ln([Prod]₀-[Prod]) against time for reaction between 1 and 15 equivalents of indene at 50 °C.
The order of the reaction in [indene] was determined by performing a series of reactions at different [indene] concentrations. $k_{\text{obs}}$ was determined for each trial and the plot of $k_{\text{obs}}$ vs. [indene] is shown in Figure S2. The linear nature of the plot indicates that the reaction is first order in [indene].

**Figure S2:** Graph of $k_{\text{obs}}$ against [indene]/[Rh] for reaction between 1 and indene at 50 °C.