Recent Developments in the Transition Metal Catalyzed Cross Couplings of Electrophilic Silanes

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Over the past several years, our group has been active in the development of cross-coupling reactions of silyl-halides with organic nucleophiles using transition metal catalysis. These reactions parallel the now well-developed cross-coupling reactions of carbon electrophiles (i.e., Heck, Negishi, Kumada, etc). We will outline our recent progress on the use of alkyl nucleophiles in the reaction, which result alkyl silanes bearing branched (secondary) carbons. We will also discuss the on-going development of related reactions.

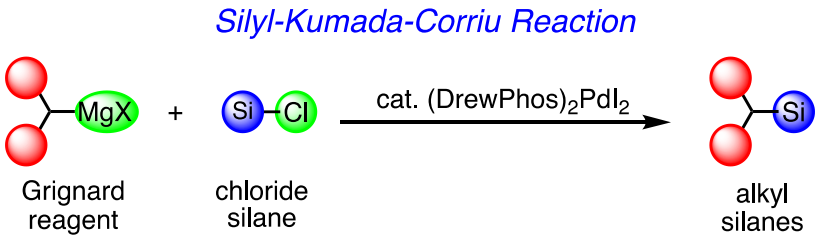

Figure 1. Silyl-Kumada-Corriu Reaction our laboratories.

[1] Cinderella, A. P.; Vulovic, B.; Watson, D. A. *J. Am. Chem. Soc.* **2017,** *139*, 7741-7744.
[2] Vulovic, B.; Cinderella, A. P.; Watson, D. A. *ACS Catalysis* **2017**, 8113-8117.