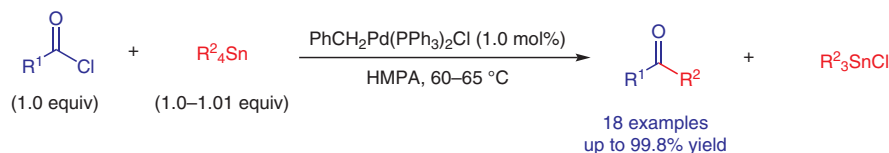
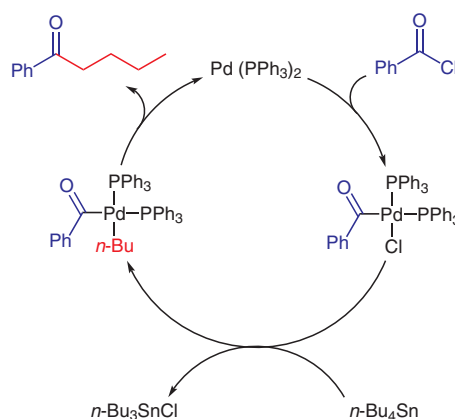


D. MILSTEIN, J. K. STILLE\* (COLORADO STATE UNIVERSITY, FORT COLLINS, USA)  
A General, Selective, and Facile Method for Ketone Synthesis from Acid Chlorides and Organotin Compounds Catalyzed by Palladium  
*J. Am. Chem. Soc.* **1978**, *100*, 3636–3638.

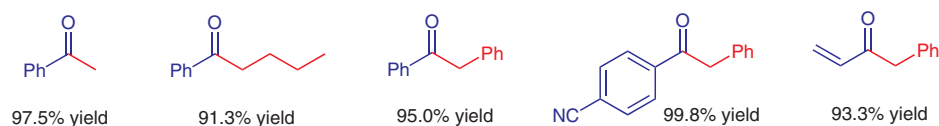
## The Stille Carbonylative Cross-Coupling Reaction



Proposed catalytic cycle:



Selected examples:



**Significance:** Milstein and Stille reported a high-yielding palladium-catalyzed carbonylative coupling reaction of acid chlorides and organotin reagents. The reaction is very mild, does not require inert atmosphere and shows tolerance to a wide scope of functional groups.

**Comment:** Notably, aryltin groups are transferred in preference to alkyltin groups. The authors also showed that a second organic group attached to the tin can be transferred, however at a notably slower rate.

**Review:** J. K. Stille *Angew. Chem., Int. Ed. Engl.* **1986**, *25*, 508–524.