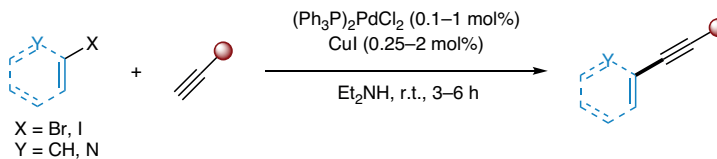


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A Convenient Synthesis of Acetylenes: Catalytic Substitutions of Acetylenic Hydrogen with Bromoalkenes, Iodoarenes, and Bromopyridines

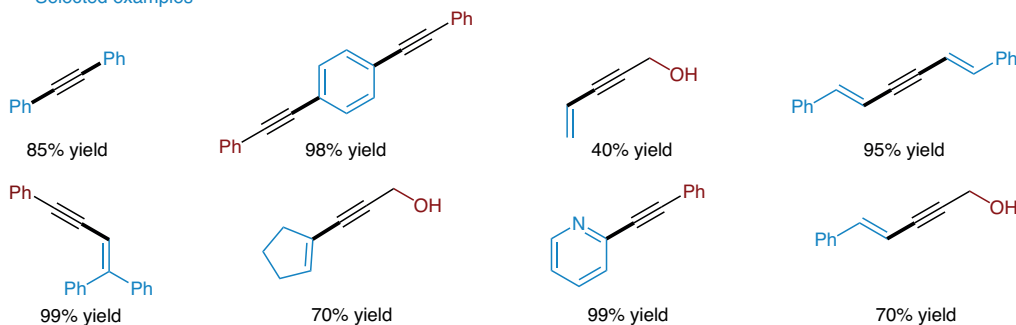
*Tetrahedron Lett.* **1975**, *16*, 4467–4470, DOI: 10.1016/S0040-4039(00)91094-3

## Copper-Accelerated Palladium-Catalyzed Cross-Coupling of Terminal Alkynes and $sp^2$ C–X Bonds

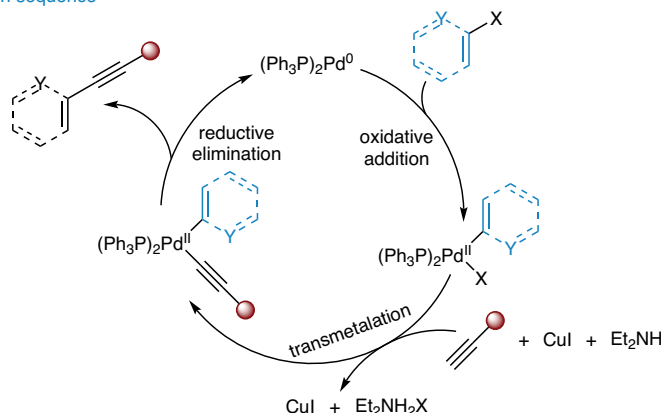


● 15 examples ● up to 99% yield ● C–C bond formation

### Selected examples



### Proposed reaction sequence



**Significance:** Three decades ago Sonogashira et al. reported the cross-coupling of terminal alkynes with  $sp^2$  C–X bonds. They reported the coupling of various vinylic bromides and (hetero)aryl iodides and bromides with acetylene, phenylacetylene, and propargyl alcohol.

**Comment:** The authors build upon previous work coupling copper acetylides with iodoarenes and iodoalkenes. They were able to generate a copper acetylide in situ from a terminal alkyne, copper iodide, and diethylamine. The reaction is very efficient for the synthesis of internal alkynes.