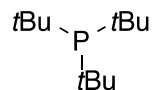


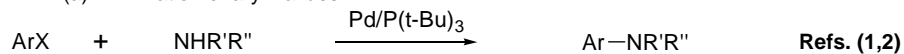
Catalog # 15-5810 Tri-t-butylphosphine, 99%



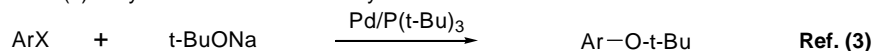
## Technical Note:

1. Useful as a ligand in a variety of palladium-catalyzed C-N, C-O and C-C bond-forming reactions under mild conditions.

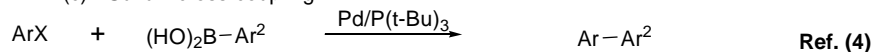
(a) Amination of aryl halides.



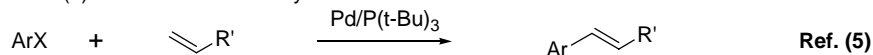
(b) Aryl ether formation from aryl halides.



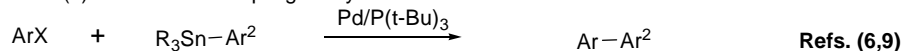
(c) Suzuki cross-coupling.



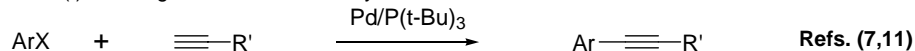
(d) Heck reaction for aryl chlorides.



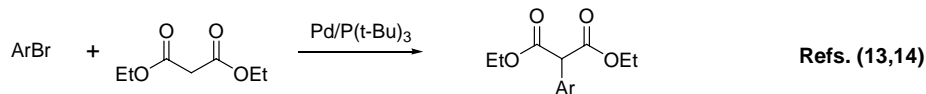
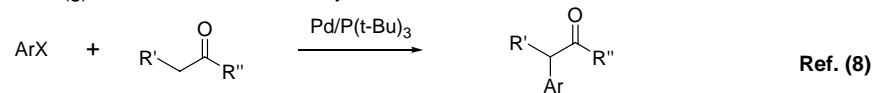
(e) Stille cross-coupling of aryl chlorides.



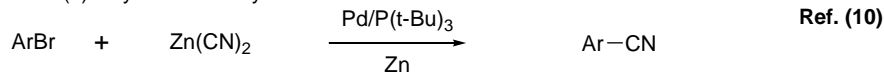
(f) Sonogashira reaction for aryl bromides.



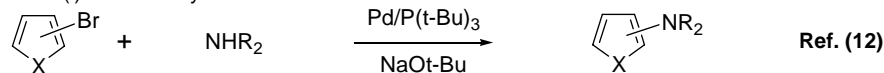
(g) Ketone and malonate arylation.



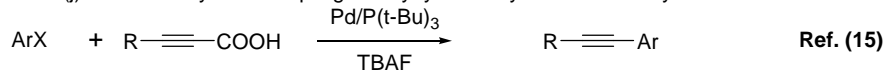
(h) Cyanation of aryl bromides.



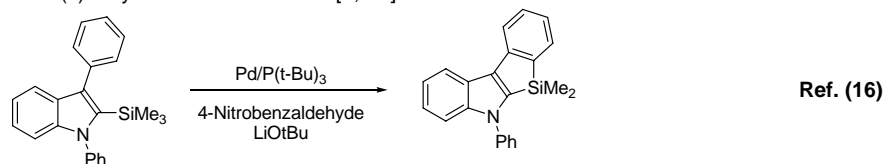
(i) Heteroaryl bromide amination.



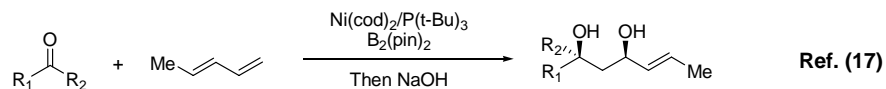
(j) Decarboxylative coupling of alkynyl carboxylic acids and aryl halides.



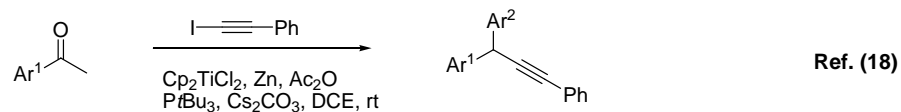
(k) Synthesis of benzosilolo[2,3-b]indoles



(l) Borylative Ketone-Diene Coupling



(m) Synthesis of diarylethynyl methanes  
Ar<sup>2</sup>-H



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