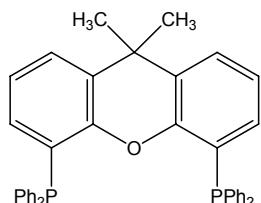
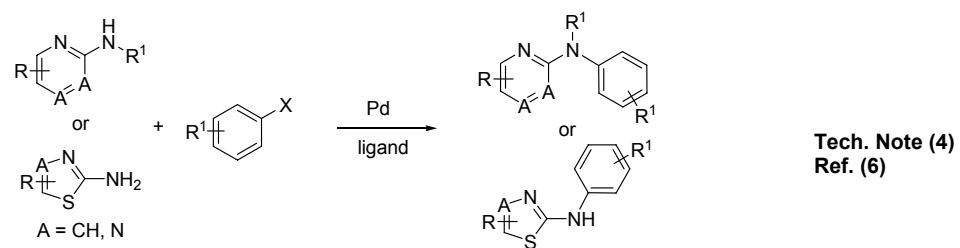
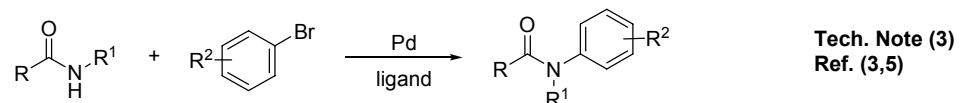
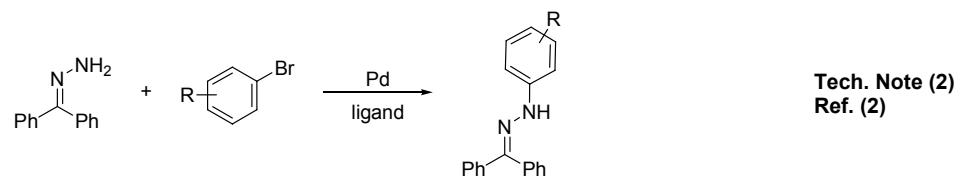


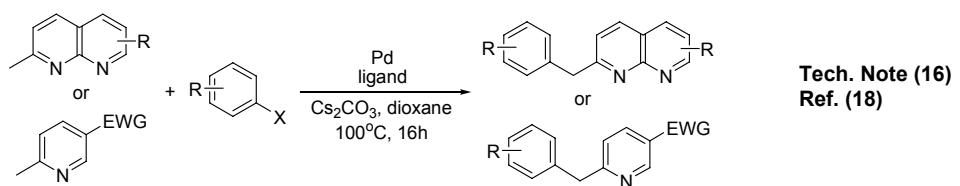
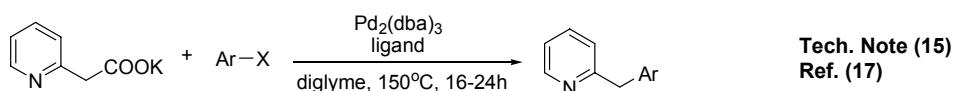
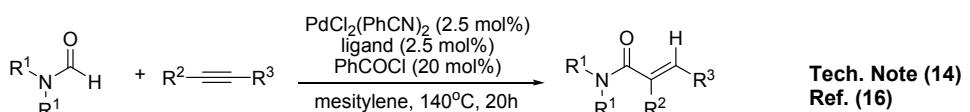
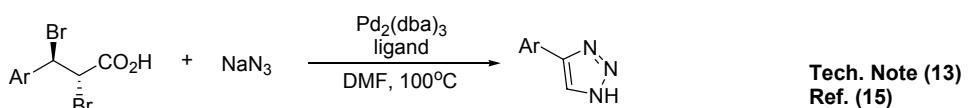
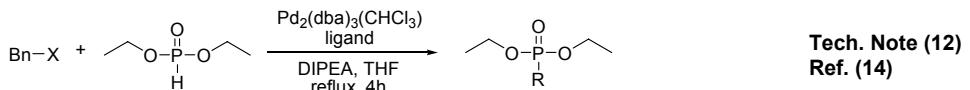
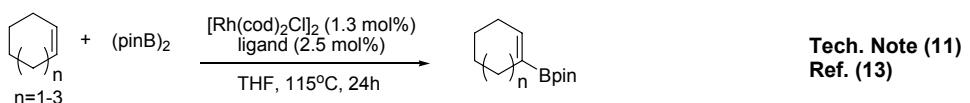
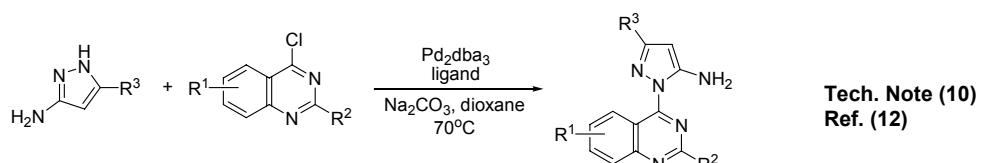
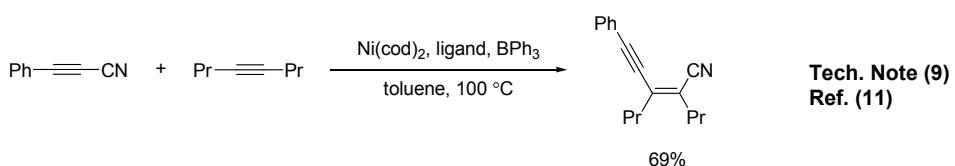
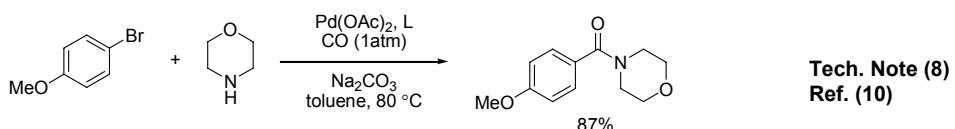
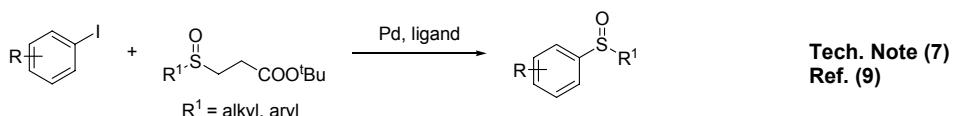
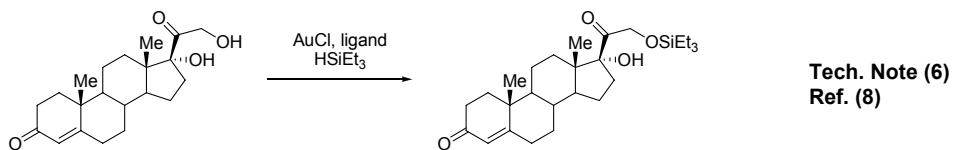
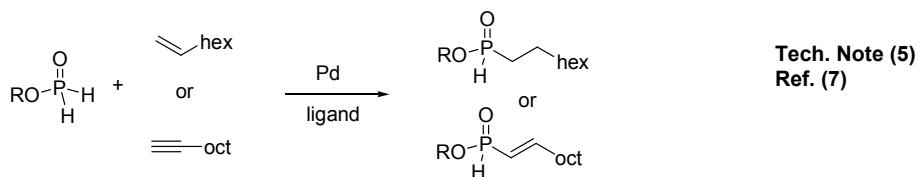
Catalog # 15-1242 9,9-Dimethyl-4,5-bis(diphenylphosphino)xanthene, min. 98% XANTPHOS

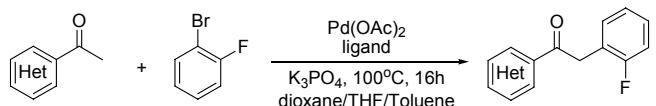


Technical Notes:

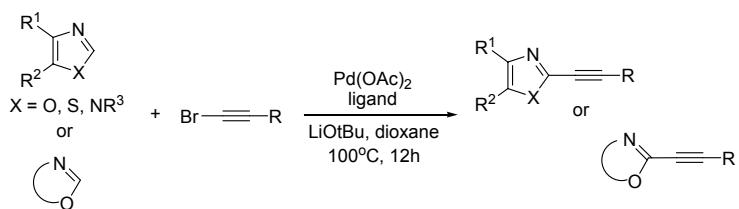
1. Ligand used for the hydroformylation of alkenes.
2. Ligand used in the intermolecular coupling of amides and hydrazones with aryl halides.
3. Ligand used in the intermolecular coupling of amides with aryl halides or triflates.
4. Ligand used in the coupling of heteroarylamines and aryl halides.
5. Ligand used in the hydrophosphinylation of alkenes and alkynes.
6. Ligand used for the Au(I)-catalyzed dehydrogenative silation of alcohols.
7. Ligand used for the sulfinylation of aryl iodides.
8. Ligand used for the Pd-catalyzed carbonylation reaction of aryl bromides and amines.
9. Ligand used for the Ni-catalyzed alkynylcyanation of alkynes.
10. Ligand used for the Pd-catalyzed N-arylation of 3-amino-1H-pyrazole.
11. Ligand used for the Rh-catalyzed dehydrogenation borylation of cyclic alkenes.
12. Ligand used for the Pd-catalyzed intermolecular coupling of H-Phosphonate diesters with benzyl halides.
13. Ligand used for the Pd-catalyzed one pot synthesis of 4-aryl-1H-1,2,3-triazoles.
14. Ligand used for the Pd-catalyzed intermolecular addition of formamides to alkynes.
15. Ligand used for the Pd-catalyzed decarboxylative couplings of 2-(2-azaaryl)acetates with aryl halides and triflates.
16. Ligand used for the Pd-catalyzed benzylic arylation of 2-methyl azaarenes
17. Ligand used for the Pd-catalyzed  $\alpha$ -arylation of heteroaromatic ketones.
18. Ligand used for the Pd-catalyzed direct alkynylation of both azoles and azolines.
19. Ligand used for the Cu-catalyzed intermolecular coupling of alkynes with aryl iodides.
20. Ligand used for the Pd-catalyzed ene-type reaction of aldehydes with 1,3-diene.
21. Ligand used for the Ru-catalyzed intermolecular addition of 2-phenylbenzoic acid onto unactivated olefins.
22. Ligand used for the Pd/Cu-catalyzed direct arylation of heteroarenes.
23. Ligand used for the Pd-catalyzed reaction of propargyl-substituted malonate esters with aryl halides.
24. Ligand used for the Pd-catalyzed decarboxylative coupling of tertiary cyanoacetate salts with aryl halides and triflates.
25. Ligand used for the Pd-catalyzed hydroesterification of alkynes.
26. Ligand used for the Cu-catalyzed arylation of arylboronic acids with aldehydes.
27. Ligand used for the Ru-catalyzed oxidative synthesis of heterocycles from alcohols.
28. Ligand used for the Rh-catalyzed borylation of nitriles.
29. Ligand used in the Pd-catalyzed  $\alpha$ -arylation of benzylic phosphine oxides.
30. Ligand used in the Pd-Catalyzed Oxidative Coupling of Enamides and Alkynes.
31. Ligand used in the Pd-catalyzed difunctionalization of enol ethers to amino acetals with aminals and alcohols.
32. Ligand used in the Pd-catalyzed alkoxy carbonylation of  $\alpha$ -chloroketones.



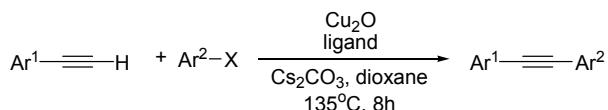




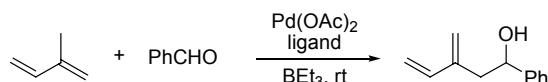
Tech. Note (17)  
Ref. (19)



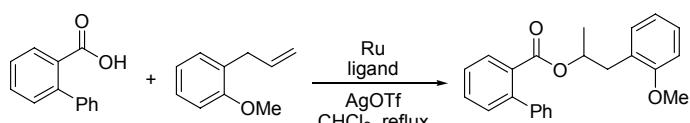
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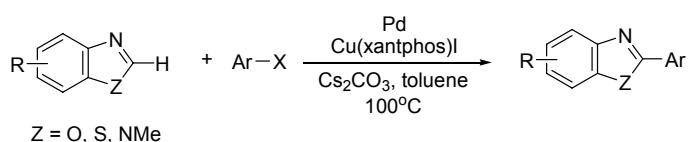
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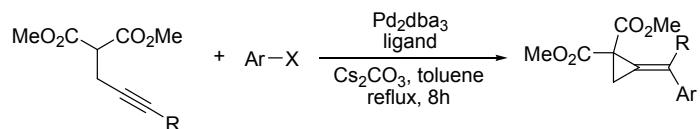
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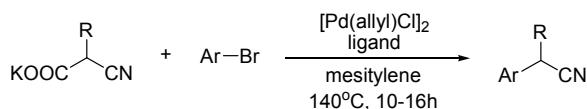
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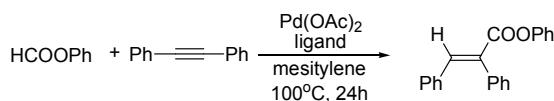
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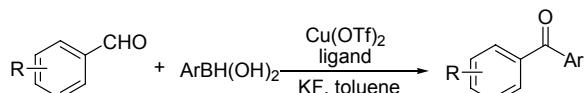
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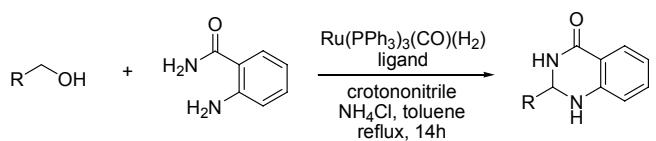
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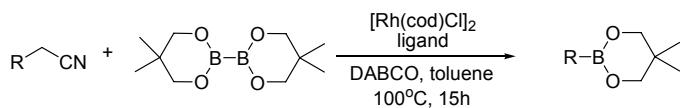
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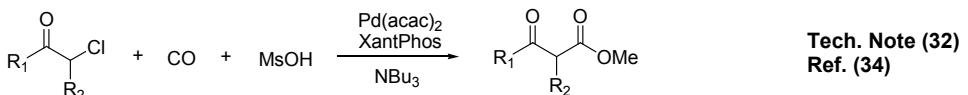
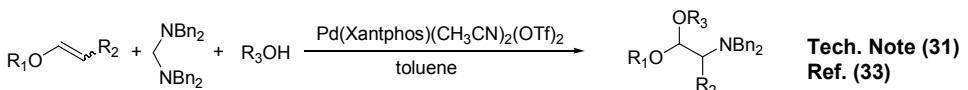
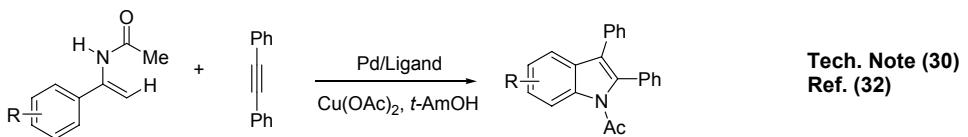
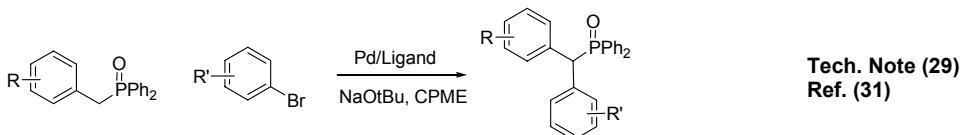
Tech. Note (26)  
Ref. (28)



Tech. Note (27)  
Ref. (29)



Tech. Note (28)  
Ref. (30)



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