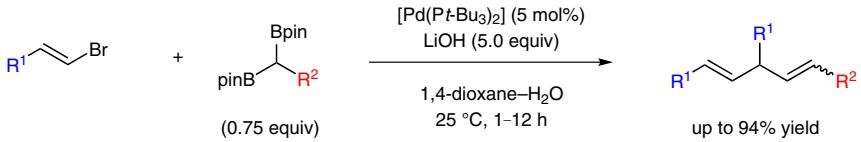
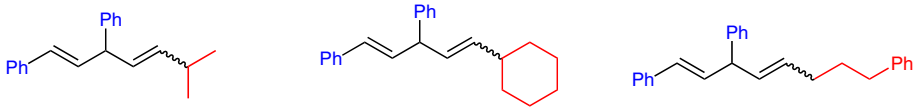
H. LI, Z. ZHANG, X. SHANGGUAN, S. HUANG, J. CHEN, Y. ZHANG, J. WANG* (BEIJING INSTITUTE OF MICROCHEMISTRY AND PEKING UNIVERSITY, BEIJING, P. R. OF CHINA)
Palladium(0)-Catalyzed Cross-Coupling of 1,1-Diboronates with Vinyl Bromides and 1,1-Dibromoalkenes
Angew. Chem. Int. Ed. **2014**, *53*, 11921–11925.

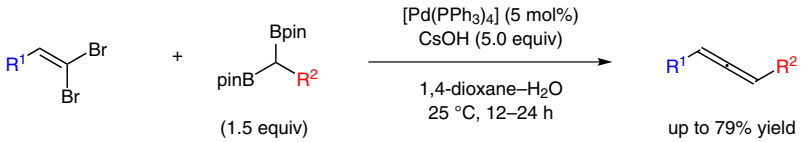
Palladium-Catalyzed Cross-Coupling of 1,1-Diboronates



R^1 = Ar, Alk
R^2 = CH_2Bn, *i*-Pr, Cy

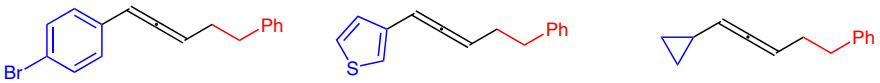
Selected examples:





R^1 = Ar, Alk
R^2 = CH_2Bn, Alk, Cy

Selected examples:



Significance: The authors demonstrate a palladium(0)-catalyzed reaction of 1,1-diboronates with substituted vinyl bromides or dibromoalkenes to give 1,4-dienes or allenes in good yields while showing good functional group tolerance.

Comment: When using 1,1-dibromoalkenes bearing a terminal alkynyl group as the substrate, the palladium(0)-catalyzed coupling described above can be followed by a CuI-catalyzed allenation with *N*-tosylhydrazones to give unsymmetrical dialkenes.

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Category
Metal-Mediated Synthesis

Key words
palladium
cross-coupling