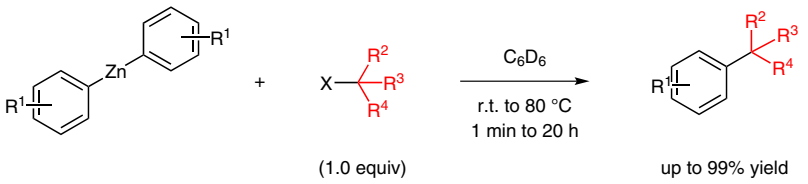
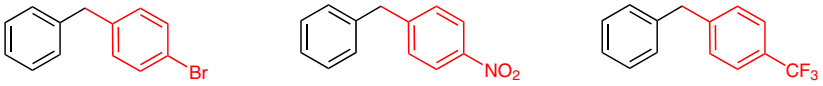
J. J. DUNSFORD, E. R. CLARK, M. J. INGELSON* (UNIVERSITY OF MANCHESTER, UK)
Direct C(sp^2)–C(sp^3) Cross-Coupling of Diaryl Zinc Reagents with Benzylic, Primary, Secondary, and Tertiary Alkyl Halides
Angew. Chem. Int. Ed. **2015**, *54*, 5688–5692.

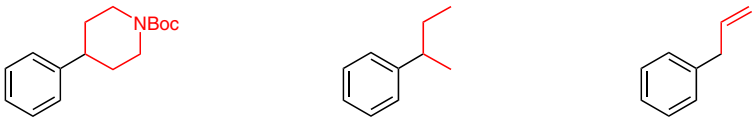
Direct Cross-Coupling of Diaryl Zinc Reagents



Selected examples:



99% yield (X = Br) 89% yield (X = Br) 91% yield (X = Br)



86% yield (X = Br) 87% yield (X = Br) 80% yield (X = Br)

Significance: Ingelson and co-workers developed an operationally simple method for the direct C(sp^2)–C(sp^3) cross-coupling of diarylzinc reagents with benzylic, primary, secondary, and tertiary alkyl halides, leading to the alkylated products in good yields.

Comment: The reactivity of this cross-coupling reaction was highly solvent dependent and showed excellent functional group tolerance. The products were generally obtained in good yields, and purification by column chromatography was not required.

SYNFACTS Contributors: Paul Knochel, Jeffrey M. Hammann
Synfacts 2015, 11(6), 0641 Published online: 18.05.2015
DOI: 10.1055/s-0034-1380733; **Reg-No.:** P05415SF

Category
Metal-Mediated Synthesis

Key words
zinc
alkyl halide
cross-coupling