D.-G. YU, B.-J. LI, S.-F. ZHENG, B.-T. GUAN, B.-Q. WANG, Z.-J. SHI* (PEKING UNIVERSITY, BEIJING, STATE KEY LABORATORY OF ORGANOMETALLIC CHEMISTRY, SHANGHAI AND SICHUAN NORMAL UNIVERSITY, CHENGDU, P. R. OF CHINA) Direct Application of Phenolic Salts to Nickel-Catalyzed Cross-Coupling Reactions with Aryl Grignard Reagents *Angew. Chem. Int. Ed.* **2010**, *49*, 4566-4570.

Nickel-Catalyzed Cross-Coupling of Aryl Grignard Reagents to Phenolate Salts

Selected examples:

Catalytic pathway:

Significance: The first successful cross-coupling of 2-naphthol metal salts with various aryl Grignard reagents has been demonstrated. The process is atom-economical and gives a convenient access to various naphthalene derivatives.

 SYNFACTS Contributors: Paul Knochel, Andreas J. Wagner

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Comment: It is important to note that the halide substituent on the Grignard reagent is critical to the reaction and a bromide was found to be the best. The most efficient solvent system is a mixture of toluene and diisopropyl ether (3:1), most likely because these solvents retain the metallic core framework due to their low coordinating ability.

Category

Metal-Mediated Synthesis

Key words

cross-coupling

aryl Grignard reagents

nickel

