Category

Key words

cross-coupling
Grignard reagents

iron

Metal-Mediated Synthesis

T. AGRAWAL, S. P. COOK* (INDIANA UNIVERSITY, BLOOMINGTON, USA) Iron-Catalyzed Coupling of Aryl Sulfamates and Aryl/Vinyl Tosylates with Aryl Grignards *Org. Lett.* **2014**, *16*, 5080–5083.

Aryl Sulfamate and Tosylate Cross-Coupling with Aryl Grignard Reagents

Selected examples:

Significance: The authors report the first iron-catalyzed direct coupling of aryl sulfamates and tosylates with aryl Grignard reagents. Interestingly, fluoride counterions were found to increase the yields of the desired products. FeF₃ does not need to be reduced before the reaction, and in fact, reactions performed without the pre-reduction proceed better in almost all cases.

Comment: The reaction was shown to tolerate a number of iron pre-catalysts with no significant homocoupling of the aryl Grignard. Studies to understand the reaction mechanism better are underway.

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