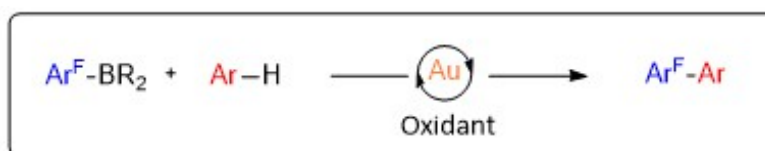


Gold-Catalyzed Oxidative C-H Arylation with Organoboron ReagentsA. Genoux¹, M. Hofer¹, R. Kumar¹, C. Nevado¹¹University of Zurich

Direct C(sp²)-H functionalization/arylation has attracted increasing interest since the substrates do not need to be functionalized in contrast to classical cross-coupling reactions.¹ Despite significant progress,² multiple challenges including low reactivity, lack of selectivity in the activation of an specific C(sp²)-H bonds and formation of homocoupling products (Ar¹Ar¹, Ar²Ar²) are still difficult to master.³ Herein, we report an efficient synthesis of biaryl compounds through a gold-catalyzed oxidative cross-coupling of arenes with strong electron-deprived aryl boronates. Non-symmetric biaryls can be synthesized with high levels of regio- and chemoselectivity under additives and directing groups-free conditions.⁴ This methodology shows orthogonal reactivity and complementary scope with respect to already existing methods.⁵



Ar^F: Highly electron deficient
Ar: Non-activated

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