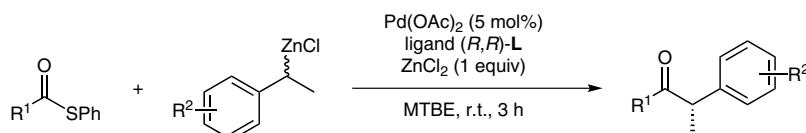
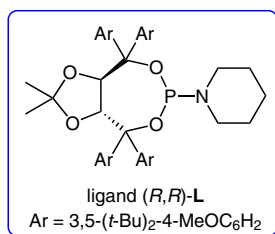


Asymmetric Fukuyama Cross-Coupling of Racemic Benzylic Zinc Reagents

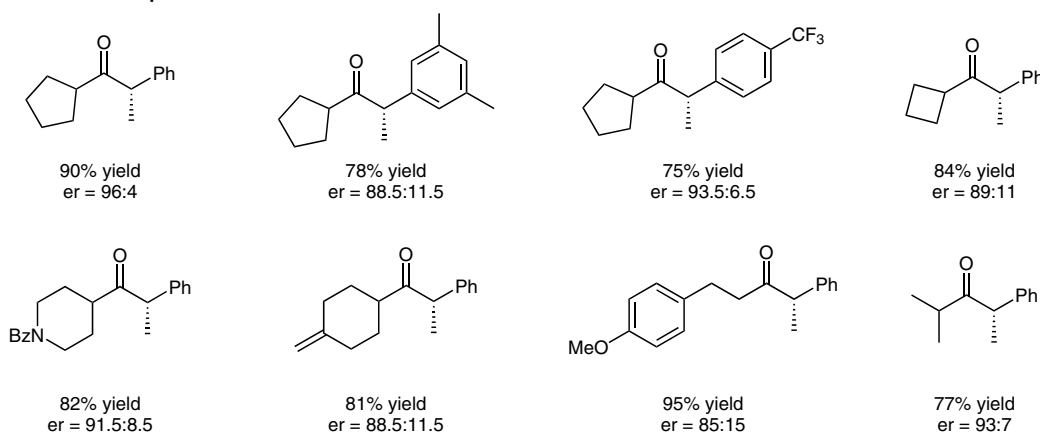


up to 95% yield
er up to 96:4

$R^1 = \text{Alk}$
 $R^2 = \text{H, Me, Cl, F, CF}_3$



Selected examples:



Significance: Maulide and co-workers report an enantioconvergent palladium-catalyzed Fukuyama cross-coupling of racemic benzylic zinc reagents with thioesters. A wide range of acyclic α -disubstituted carbonyl compounds are afforded in high yields under mild reaction conditions.

Comment: The addition of $ZnCl_2$ significantly improved both the yield and enantioselectivity of the reaction by influencing the Schlenk equilibrium, as well as by accelerating the racemization rate of the secondary organozinc reagents.