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Manganese-Catalyzed Cross-Coupling Reaction Between Aryl Grignard Reagents and Alkenyl Halides
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Category

Metal-Mediated Synthesis

Key words

manganese catalysis

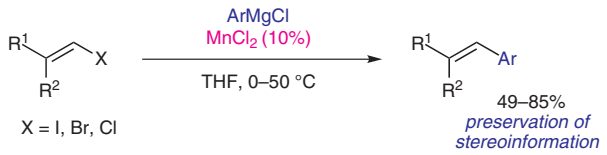
cross-coupling

stereoselectivity

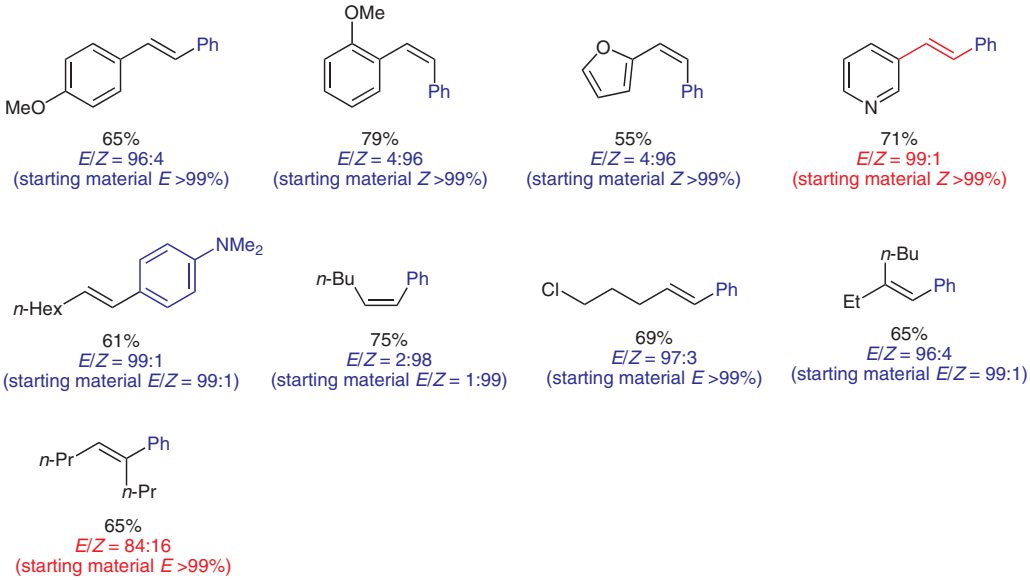
aryl Grignard reagents

alkenyl halides

Mn-Catalyzed Cross-Coupling of Aryl Grignard Reagents with Alkenyl Halides



Examples:



Significance: In this article a highly stereoselective Mn(II)-catalyzed cross-coupling reaction between (hetero)aryl Grignard reagents and non-activated alkenyl halides is reported. The stereoinformation of the alkenyl halide is usually preserved. An exception to that rule represents the case of (*Z*)-3-(2-bromoethenyl)pyridine, where the configuration of the double bond is completely reversed.

Comment: This new methodology shows that also Mn(II) salts can be successfully used as catalysts in cross-coupling reactions with non-activated electrophiles. Mn-catalyzed reactions represent a real alternative to Fe-catalyzed reactions, since Mn salts are generally readily available, cheap and environmentally benign.

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