

## Catalytic Asymmetric Cross-Coupling of Styrenyl Aziridines

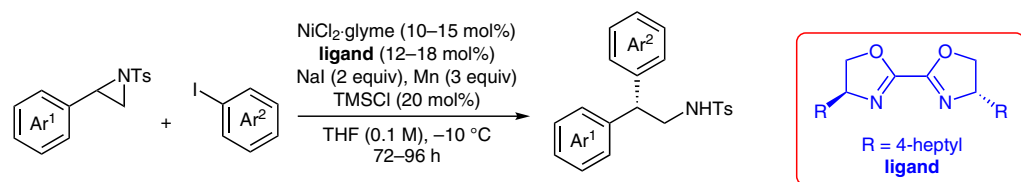
### Category

Metal-Catalyzed Asymmetric Synthesis and Stereoselective Reactions

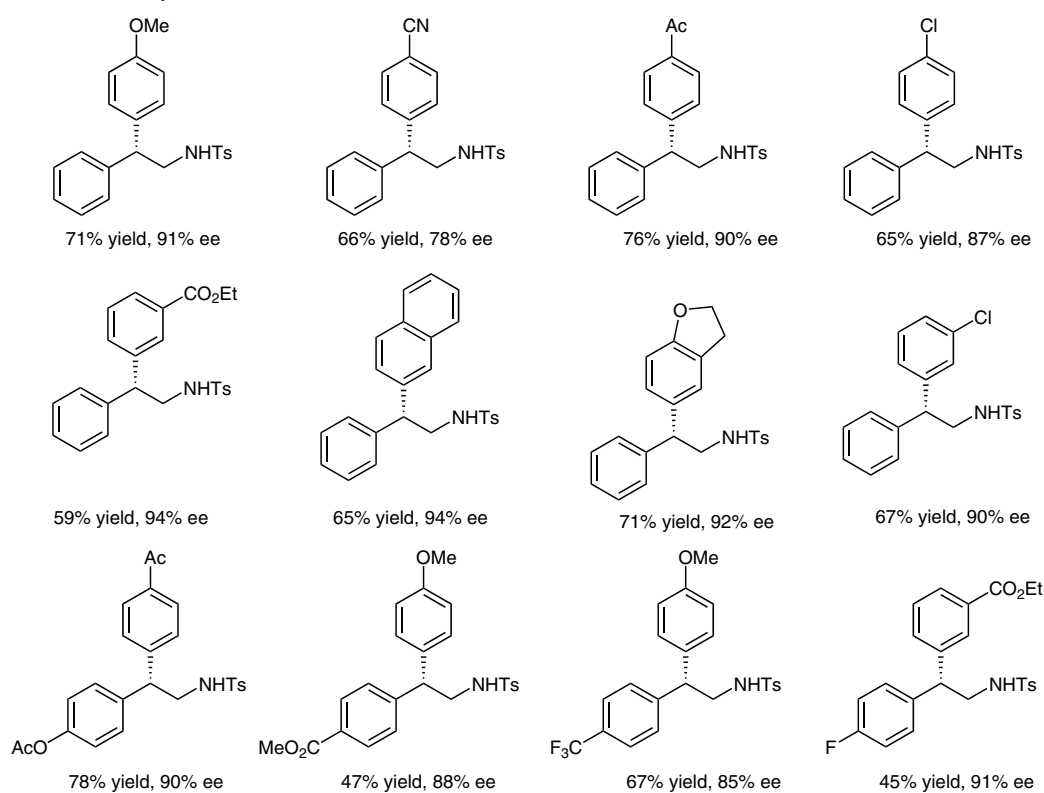
### Key words

nickel catalysis  
cross-coupling  
aziridines  
ring opening  
arylphenethylamines

Synfact  
of the month



### Selected examples:



**Significance:** The metal-catalyzed cross-coupling reaction is one of the most useful reactions for forming C–C bonds. A nickel-catalyzed reductive cross-coupling of racemic styrenyl aziridines with aryl halides in the presence of a new bisoxazoline ligand gave highly enantioenriched 2-arylphenethylamines in good yields and with excellent enantioselectivity.

**Comment:** The method has a broad substrate scope and tolerates various functional groups. Moreover, variation in the enantioselectivity depending on the ligand was well explained by means of multivariate analysis. A detailed ligand study was carried out to determine the origin of the observed selectivity. The present method can be useful in the synthesis of various chiral 2-arylphenethylamine moieties present in bioactive molecules and pharmaceutically important molecules.