Catalytic Asymmetric Cross-Coupling of Styrenyl Aziridines

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.

**Significance:** 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.

**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.

**Category**
Metal-Catalyzed Asymmetric Synthesis and Stereoselective Reactions

**Key words**
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