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Nickel-Catalyzed Enantioselective Reductive Cross-Counling of Styrenyl Aziridines

Nickel-Catalyzed Enantioselective Reductive Cross-Coupling of Styrenyl Aziridines *J. Am. Chem. Soc.* **2017**, *139*, 5688–5691.

## **Catalytic Asymmetric Cross-Coupling of Styrenyl Aziridines**

47% yield, 88% ee

**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-aryl-phenethylamines in good yields and with excellent enantioselectivity.

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**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-aryl-phenethylamine moieties present in bioactive molecules and pharmaceutically important molecules.

45% yield, 91% ee

67% yield, 85% ee

## Category

Metal-Catalyzed Asymmetric Synthesis and Stereoselective Reactions

## Key words

nickel catalysis cross-coupling aziridines ring opening arylphenethylamines



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78% yield, 90% ee