Rhodium-Catalyzed Enantioselective Hydrogenation of Enamido Esters

**Significance:** Lv, Zhang and colleagues present a rhodium-catalyzed asymmetric hydrogenation of α-acetoxy β-enamido esters. A series of chiral α-hydroxy-β-amino acid derivatives were prepared in high yields (up to 98%) with excellent enantioselectivities (up to 97% ee).

**Comment:** [Rh(nbd)(S,Rp)-DuanPhos]BF$_4$ is found to be an effective catalyst for the enantioselective hydrogenation of tetrasubstituted enamides. The synthetic utility of this method is demonstrated by the synthesis of biologically important molecules.

**Synthesis of the taxol C13 side chain:**

![Image of the reaction scheme]

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Rhodium-Catalyzed Enantioselective Hydrogenation of Tetrasubstituted α-Acetoxy β-Enamido Esters: A New Approach to Chiral α-Hydroxy-β-amino Acid Derivatives


**Key words**

hydrogenation  
α-hydroxy-β-amino acids  
rhodium