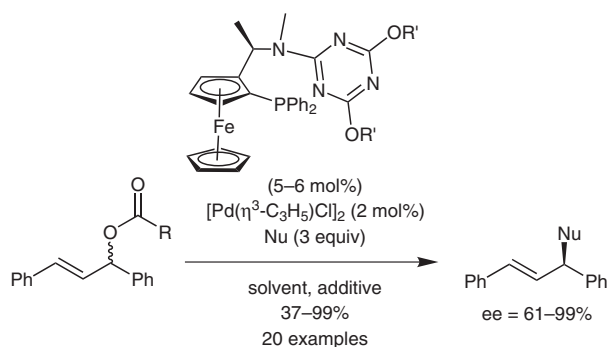


X.-P. HU, H.-L. CHEN, Z. ZHENG* (DALIAN INSTITUTE OF CHEMICAL PHYSICS, P. R. CHINA)
Ferrocene-Based Chiral Phosphine-Triazines: A New Family of highly Efficient P,N Ligands for Asymmetric Catalysis
Adv. Synth. Catal. **2005**, 347, 541-548.

Chiral Ferrocenyl Phosphine-Triazines as Ligands for Asymmetric Allylic Substitution



Significance: Asymmetric allylic alkylations have been exhaustively studied, and excellent enantioselectivities have been demonstrated in numerous cases. Ferrocenyl-based P,N-ligands have recently received attention, with the incorporation of N-heterocycles believed to influence selectivity. The pendant triazine was found to increase enantioselectivity, with better selectivity than cases with less N content. Allylic substitution with malonates (α -substituted and unsubstituted) and benzylamine were demonstrated, displaying excellent yield and selectivity with malonates, and good yield and selectivity with amination.

Comment: The triazine ligand where R' = Ph showed highest utility, providing the best combination of yield and enantioselectivity. For a similar approach employing N-heteroaryls towards Rh-catalyzed hydroboration, see: D. J. Connolly, P. M. Lacey, M. McCarthy, C. P. Saunders, A.-M. Carroll, R. Goddard, P. J. Guiry *J. Org. Chem.* **2004**, 69, 6572-6589.

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Key Words

palladium(II)
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triazines
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