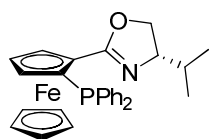
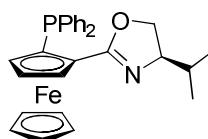




Phosphinooxazoline Ligands



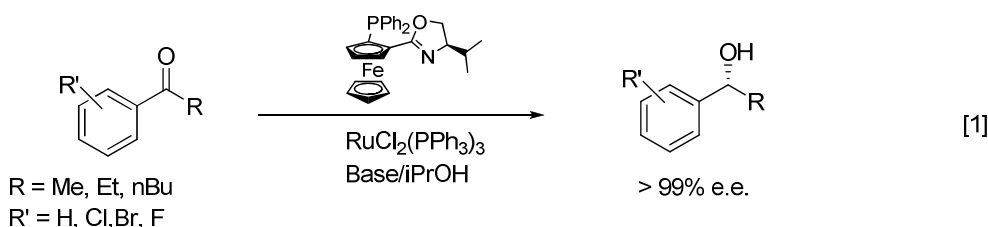
K26-0021
(S,S)-[2-(4'-Isopropoxyloxazolin-2'yl)-ferrocenyl]diphenylphosphine, ≥97.0%
 C₂₈H₂₈FeNOP; F.W: 481.35; [163169-29-7]



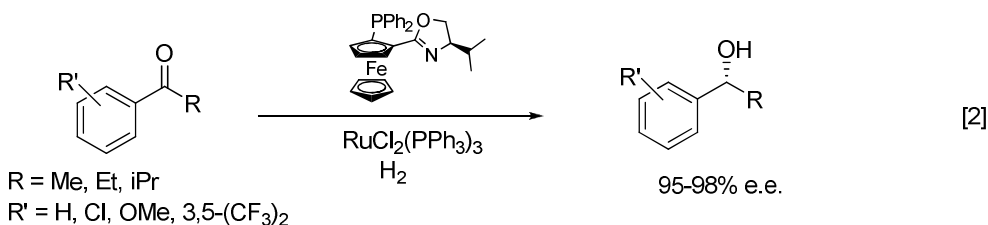
K26-0022
(R,R)-[2-(4'-Isopropoxyloxazolin-2'yl)-ferrocenyl]diphenylphosphine, ≥97.0%
 C₂₈H₂₈FeNOP; F.W: 481.35; [541540-70-9]

Chiral phosphinooxazolines (PHOX) ligands have attracted a great deal of attention in the past decade due to their ease of synthesis and modular nature. Very high enantioselectivities have been obtained for various catalytic reactions. Recently, it has been shown that Ru-PHOX complexes are not only highly selective transfer hydrogenation catalysts (reaction 1)² but they are also very effective for the hydrogenation of ketones using H₂ with excellent e.e. and TONs of up to 50000 (reaction 2).³ A system for efficient, asymmetric alkylative ring opening of [3.2.1] oxabicyclic alkenes was also developed using a Pd-PHOX catalyst, giving cycloheptenols in excellent yields and e.e. (reaction 3).⁴

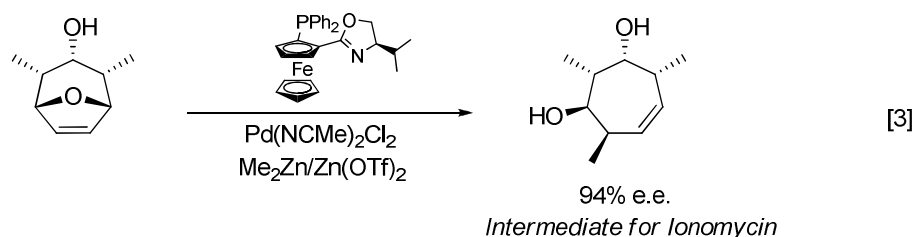
Enantioselective Transfer Hydrogenation of Aryl Ketones:



Enantioselective Hydrogenation of Aryl Ketones:



Enantioselective Ring Opening of Oxabicyclic Alkenes:



References

1. (a) McManus, H. A. *et al. Chem. Rev.* **2004**, *104*, 4151. (b) Helmchen, G. *et al. Acc. Chem. Res.* **2000**, *33*, 336.
2. Nishibayashi, Y. *et al. Organometallics* **1999**, *18*, 2291.
3. Naud, F. *et al. Int. Pat. Appl. WO2004/050585*.
4. Lautens, M. *et al. Org. Lett.* **2000**, *2*, 1971.