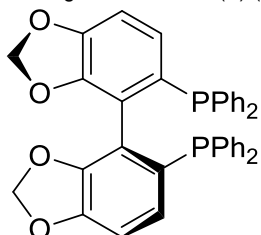


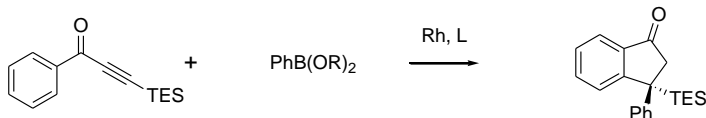
Catalog # 15-0137 (S)-(+)-5,5'-Bis(diphenylphosphino)-4,4'-bi-1,3-benzodioxole, min. 98% (S)-SEGPPOS



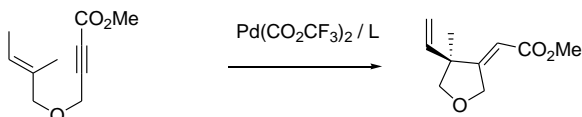
Note: Manufactured under license of Takasago patent. Takasago SEGPPOS Ligand Kit component.

Technical Notes:

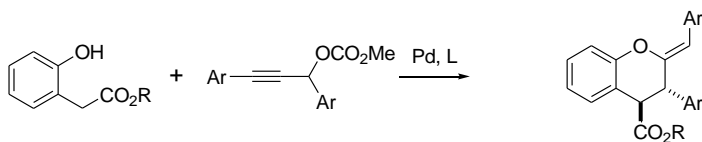
1. Biaryl bisphosphine ligand with narrow dihedral angle. The SEGPPOS® ligand has been applied to a variety of metal catalyzed reactions. In many cases, yields and enantioselectivities, exceed results obtained earlier using BINAP.^{1,2}
2. As ruthenium complex, SEGPPOS® generally gives higher levels of chiral induction in asymmetric hydrogenations of α,β , and γ -functionalized ketones. See ruthenium complexes [44-0096](#), [44-0518](#), [44-0168](#).
3. Used in Rh-catalyzed transformations such as: (a) 1,4-addition of boronic acids to coumarins,⁴ (b) addition of titanium reagents to imines,⁶ (c) cotrimerization of alkenes and acetylenes,¹⁰ (d) double [2+2+2] cycloaddition,¹¹ (e) indanone formation.^{12a,b}
4. Used in Pd-catalyzed transformations such as: (a) cycloaddition of 1,6-enyne,⁵ (b) arylytic cyclization of allenyl aldehydes with boronic acids,¹³ (c) synthesis of chromans.¹⁴
5. Used in Cu-catalyzed transformations such as: (a) nitroso Diels-Alder,⁷ (b) reductive aldol condensation,⁹ (c) conjugate reduction of unsaturated sulfones,¹⁵ and phosphonates.¹⁶
6. Iridium-catalyzed asymmetric hydrogenation of quinolines activated by chloroformates.
7. Iridium-catalyzed asymmetric transfer hydrogenation used in polyketide construction.¹⁷
8. Rhodium-catalyzed asymmetric hydroarylation of 3-pyrrolines.¹⁸
9. Palladium-catalyzed regio- and enantioselective dearomatization of pyrroles to 2H-pyrroles.¹⁹
10. Rhodium-catalyzed asymmetric synthesis of cyclopentanols.²⁰
11. Silver-catalyzed asymmetric Mannich-type reaction.²¹



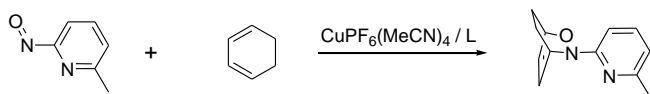
**Tech. Note (3)
Ref. (12a)**



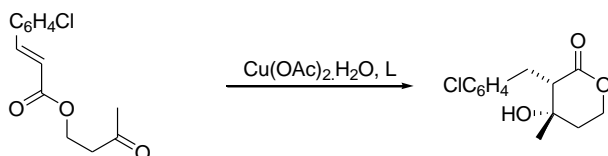
**Tech. Note (4)
Ref. (5)**



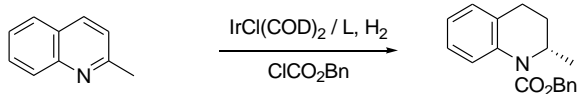
**Tech. Note (4)
Ref. (14)**



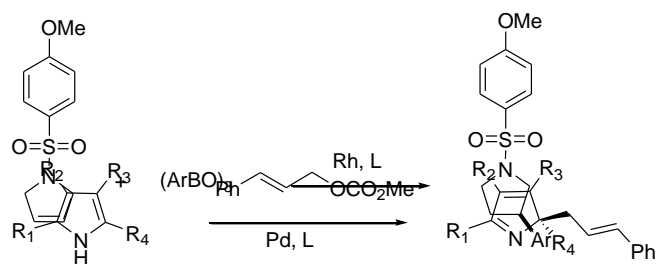
**Tech. Note (5)
Ref. (7)**



**Tech. Note (5)
Ref. (9)**

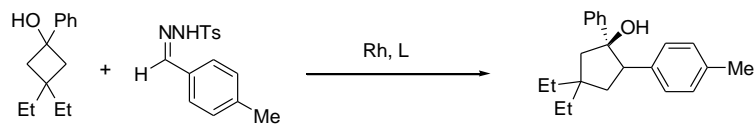


**Tech. Note (6)
Ref. (8)**

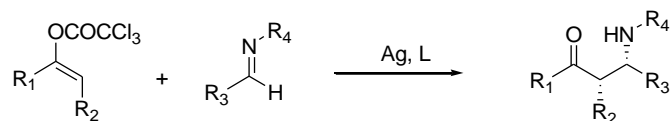


Tech. Note (8)
Ref. (18)

Tech. Note (9)
Ref. (19)



Tech. Note (10)
Ref. (20)



Tech. Note (11)
Ref. (21)

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