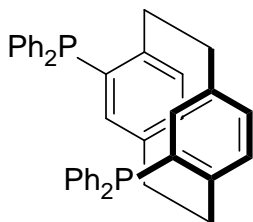
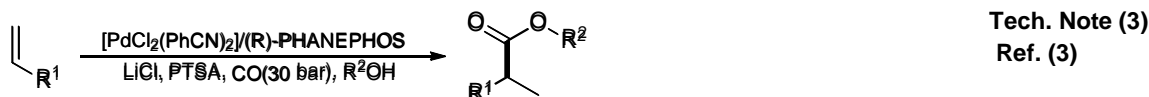
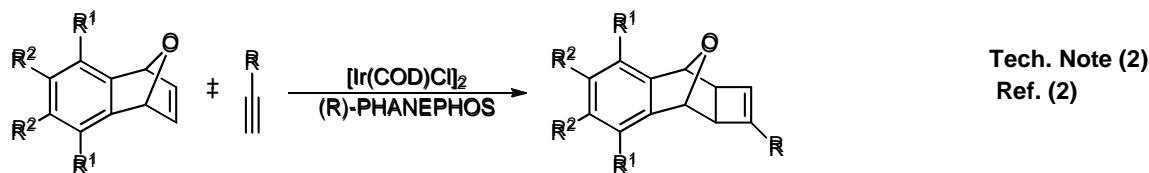
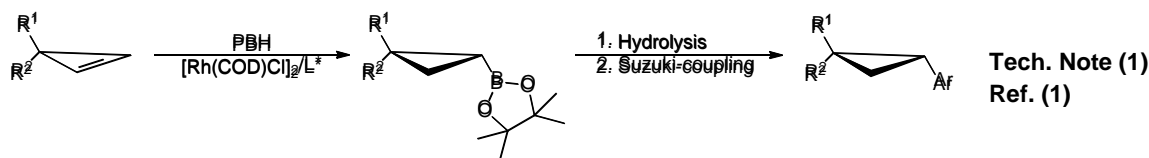


Catalog # 15-0425 (R)-(-)-4,12-Bis(diphenylphosphino)-[2.2]-paracyclophane, min. 95% (R)-PHANEPHOS



## Technical Notes:

1. Ligand for rhodium-catalyzed enantioselective hydroboration of cyclopropenes.
2. Ligand for iridium-catalyzed enantioselective [2+2] cycloaddition of oxabicyclic alkenes with terminal alkynes.
3. Ligand for the palladium-catalyzed enantioselective hydroxycarbonylation and alkoxy carbonylation of alkenes.
4. Ligand for the palladium-catalyzed amides synthesis via C(sp<sup>3</sup>)-H bond functionalization and CO insertion.
5. Ligand for iridium-catalyzed diene hydrohydroxymethylation.



## References:

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