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(11bS)-4-Hydroxy-2,6-bis[2,4,6-tris(1-methylethyl)phenyl]-4-oxide-dinaphtho[2,1-d:1',2'f][1,3,2]dioxaphosphepin, $98 \%$, ( $99 \%$ ee)


Technical Notes:

1. Pictet-Spengler Reaction: Catalyst for the asymmetric Pictet-Spengler reaction, where substituted tryptamines are treated with an aldehyde in the presence of a catalytic amount of a chiral phosphoric acid.
2. Spiroketalization: The chiral catalyst can override the inherent preference for the formation of thermodynamic spiroketals, and highly selective formation of nonthermodynamic spiroketals could be achieved under the reaction conditions.
3. oxa-Diels-Alder Cycloaddition: An asymmetric cascade annulation between 2-hydroxystyrenes and 2alkynylbenaldehyes or 1-(2-alkynylphenyl)ketones has been established with good to excellent enantioselectivities, on the basis of an enantioselective oxa-Diels-Alder cycloaddition of in situ generated metallo-isochromenylium intermediates, by cooperative binary catalysis of $\mathrm{Pd}(\mathrm{OAc}) 2$ and (S)-TRIP.
4. Hydrogenation: A $1 \mathrm{~mol} \%$ loading of the chiral phosphoric acid catalyst converts aromatic and aliphatic imines such as into the corresponding amines in high yields and enantioselectivities if treated with Hantzsch dihydropyridine .
5. Kinetic Resolution: An efficient and simple protocol for the kinetic resolution of secondary alcohols. The system is based on a combination of chiral Bronsted acid, DABCO, and acetyl chloride to gives various enantioenriched alcohols with selectivity factors up to 105.



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References:

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