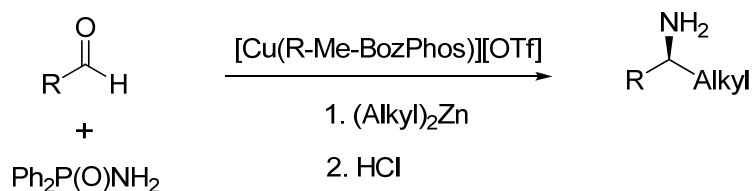


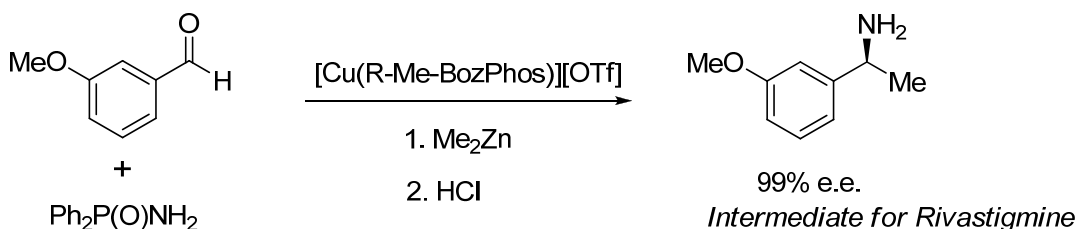
Amination

Chiral diphosphine monoxide ligands have found widespread applications in catalysis. The chiral DuPhos monoxide ligands (BozPhos) and their derived copper triflate complexes (shown below) are effective catalysts for preparing a variety of chiral products, including chiral amines.¹ These include a range of α -chiral amines derived from aldehydes, imines and nitroalkenes with exceptional enantioselectivities.¹⁻⁴ They have also been established as highly selective for the synthesis of β -amino alcohols and α -amino acids.⁴ Kamal Pharmachem is a supplier of all isomers of the methyl and ethyl BozPhos ligands and their copper catalysts.

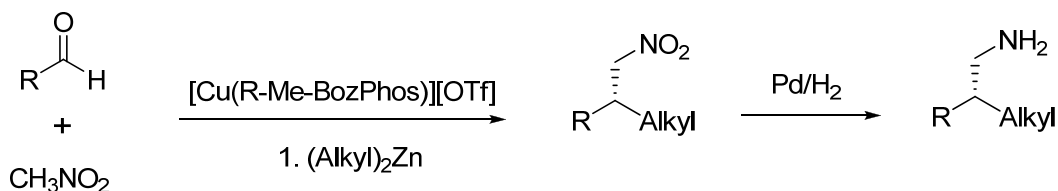
Enantioselective Amination:



Enantioselective Addition of Dimethylzinc to *N*-Phosphinoylimine:



Enantioselective Addition of Dialkylzinc to β -Nitroalkenes:



References:

1. Côté, A.; Charette, A. B. *J. Org. Chem.* 2005, 70, 10864.
2. Boezio, A. A.; Pytkowicz, J.; Côté, A.; Charette, A. B. *J. Am. Chem. Soc.* 2003, 125, 14260.
3. Lauzon, C.; Charette, A. B. *Org. Lett.* 2006, 8, 2743.
4. Desrosiers, J.-N.; Côté, A.; Charette, A. B. *Tetrahedron* 2005, 61, 6186.