Design and synthesis of chiral NHC/guanidium bifunctional catalysts for asymmetric and site selective transformation

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Site Selective Hydrogenation:

Assymetric Hydrogention of Ketone:

In my present project, we are focusing on the development of new series of chiral NHC/guanidine bifunctional catalysts. With these complexes, we are attempting to perform the site selective hydrogenation of one ester moiety to alcohol in presence of other ester groups which, after cyclization, would ultimately form lactone. In addition, we are also focusing on the asymmetric hydrogenation of other carbonyl systems to enantiopure alcohol.