Abstract

Two N-heterocyclic carbene ligands with chirality in the backbone have been synthesized for asymmetric catalysis with a Buchwald-Hartwig N,N-diarylation in a sterically demanding environment from (R,R)-diphenylethene-1,2-diamine with Pd2(dba)3 as the crucial palladium source. The diarylation with (S,S) 1,2-cyclohexanediamine could not yield more than 10% of the desired product. The gold complexes might have been synthesized with the (R,R)-diphenyl ligands but the products could not be purified and therefore could not be properly characterized. On the resulting products an encapsulation study has been performed.