

Title (en)
CATALYST FOR ASYMMETRIC TRANSFER HYDROGENATION

Title (de)
KATALYSATOR FÜR ASYMMETRISCHE TRANFERHYDRIERUNG

Title (fr)
CATALYSEUR POUR HYDROGENATION PAR TRANSFERT ASYMETRIQUE

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Abstract (en)
[origin: WO0123088A1] The invention relates to a catalyst for asymmetrical transfer hydrogenation on the basis of a transition metal compound and a nitrogen-containing enantiomerically enriched ligand. The invention also relates to various processes for the preparation of enantiomerically enriched compounds using the catalyst according to the invention. In the catalyst according to the invention the transition metal is iridium, ruthenium, rhodium or cobalt and the enantiomerically enriched ligand contains sulphur in the form of a thioether or a sulfoxide, the sulphur being bound to the nitrogen via two or more carbon atoms. Surprisingly, it has been found that with the catalyst according to the invention a high conversion in a good enantiomeric excess of the enantiomerically enriched compound can be obtained. It has been found, in addition, that the catalyst with iridium as metal is also very stable in formic acid, so that formic acid can be used as the hydrogen donor, making the reaction irreversible and thereby allowing it to run to completion so that higher substrate concentrations can be used.

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