

ABSTRACT

OPTICALLY ACTIVE DIPHOSPHINES, PREPARATION THEREOF ACCORDING TO A PROCESS FOR THE RESOLUTION OF THE RACEMIC MIXTURE AND USE THEREOF.

The present invention relates to optically active diphosphines. It is also targeted at their preparation according to a process for the resolution of the racemic mixture of the said phosphines to optically active isomers.

The subject of the invention is new optically active bis[1-phospha-2,3-diphenyl-4,5-dimethylnorbornadiene] diphosphines and a process for resolving the racemic bis[1-phospha-2,3-diphenyl-4,5-dimethylnorbornadiene] mixture which comprises reacting it with a palladium or platinum complex as chiral auxiliary in an organic solvent, thus forming diastereoisomer complexes, and then resolving the said optically pure complexes.

The invention also relates to new optically active metal complexes comprising the said phosphines and to their use in a process for the preparation of optically active carboxylic acids and/or derivatives according to a process for the hydrogenation of α,β -unsaturated carboxylic acids and/or derivatives.