

Publication

Asymmetric Hydrogenation of α,β -Unsaturated Carboxylic Esters with Chiral Iridium N,P Ligand Complexes**JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 1541747**Author(s)** Woodmansee, David H.; Müller, Marc-André; Tröndlin, Lars; Hörmann, Esther; Pfaltz, Andreas**Author(s) at UniBasel** [Pfaltz, Andreas](#) ; [Hörmann, Esther](#) ;**Year** 2012**Title** Asymmetric Hydrogenation of α,β -Unsaturated Carboxylic Esters with Chiral Iridium N,P Ligand Complexes**Journal** Chemistry - A European Journal**Volume** 18**Number** 43**Pages / Article-Number** 13780-13786**Keywords** asymmetric catalysis, hydrogenation, iridium, N, P ligands, unsaturated esters

Enantioselective conjugate reduction of a wide range of α,β -unsaturated carboxylic esters was achieved using chiral Ir N,P complexes as hydrogenation catalysts. Depending on the substitution pattern of the substrate, different ligands perform best. α,β -Unsaturated carboxylic esters substituted at the α position are less problematic substrates than originally anticipated and in some cases α -substituted substrates actually reacted with higher enantioselectivity than their β -substituted analogues. The resulting saturated esters with a stereogenic center in the α or β position were obtained in high enantiomeric purity.

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