

Title (en)

ASYMMETRIC HYDROFORMYLATIONS OF PROCHIRAL OLEFINS TO CHIRAL ALDEHYDES IN HIGH ENANTIOMERIC EXCESS.

Title (de)

ASYMMETRISCHE HYDROFORMYLIERUNGEN VON PROCHIRALEN OLEFINEN ZU CHIRALEN ALDEHYDEN MIT GROSSEM ENANTIOMEREM ÜBERSCHUSS.

Title (fr)

HYDROFORMYLATIONS ASYMETRIQUES D'OLEFINES PROCHIRALES EN ALDEHYDES CHIRAUX EN GRANDES QUANTITES EXCEDENTAIRES ENANTIOMERES.

Publication

EP 0314759 A4 19900129 (EN)

Application

EP 88904854 A 19880505

Priority

US 5051287 A 19870514

Abstract (en)

[origin: WO8808835A1] Asymmetric hydroformylations of chiral olefins can be achieved by contacting, under hydroformylation conditions, an olefin containing a prochiral center with hydrogen and carbon monoxide in the presence of a catalyst comprising a complex of platinum II and N-(t-butoxycarbonyl)-(2S, 4S)-4-(diphenylphosphino)-2-[(diphenylphosphino)methyl] pyrrolidine and stannous chloride, and removing the resulting chiral aldehyde as it is formed. A preferred method of removing the resulting chiral aldehyde is through the use of a trapping agent such as triethyl orthoformate, trimethyl orthoformate, triethyl orthoacetate, trimethyl orthoacetate, acetone diethyl ketal and acetone dimethyl acetal used in the presence of a solid catalyst support such as cross-linked polystyrene.

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IPC 8 full level

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Citation (search report)

- [X] DISSERTATION ABSTRACTS INTERNATIONAL, vol. 47, no. 11, May 1987, order no. DA8705475; G. PARRINELLO: "Asymmetric hydroformylation catalyzed by homogeneous and polymer-supported chiral platinum complexes"
- [X] POLYM. PREPRINT (AM. CHEM. SOC., DIV. POLYM. CHEM.), vol. 27, no. 2, 1986, pages 9-10; G. PARRINELLO et al.: "Asymmetric hydroformylation by polymer-supported chiral catalysis"
- [XP] J. AM. CHEM. SOC., vol. 109, no. 23, 1987, pages 7122-7127, American Chemical Society; G. PARRINELLO et al.: "Asymmetric hydroformylation catalyzed by homogeneous and polymer-supported platinum complexes containing chiral phosphine ligands"
- See references of WO 8808835A1

Designated contracting state (EPC)

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