

This article was downloaded by:

On: 30 January 2011

Access details: *Access Details: Free Access*

Publisher *Taylor & Francis*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Phosphorus, Sulfur, and Silicon and the Related Elements

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713618290>

Catalytic Asymmetric Hydrogenation of α -Acetamido Cinnamic Acids

Juan G. Andrade^a; Günter Prescher^a; Ulrich Nagel^b

^a Degussa AG, Abt. Forschung Chemie Organisch, Hanau, FRG ^b Institut für Anorganische Chemie der Universität, München, FRG

To cite this Article Andrade, Juan G. , Prescher, Günter and Nagel, Ulrich(1987) 'Catalytic Asymmetric Hydrogenation of α -Acetamido Cinnamic Acids', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 30: 3, 839

To link to this Article: DOI: 10.1080/03086648708079326

URL: <http://dx.doi.org/10.1080/03086648708079326>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Catalytic Asymmetric Hydrogenation of α -Acetamido Cinnamic Acids

Juan G. Andrade and Günter Prescher*

Degussa AG, Abt. Forschung Chemie Organisch

Rodenbacher Chaussee 4, D-6450 Hanau 1, FRG

Ulrich Nagel

Institut für Anorganische Chemie der Universität München

Meiserstr. 1, D-8000 München 2, FRG

Abstract

The homogeneous catalytic asymmetric hydrogenations of substituted cinnamic acids by (1-Benzyl-3,4-(R,R)-bis(diphenylphosphino)pyrrolidine(COD)Rh)BF₄ 6, easily prepared from L-tartaric acid has been studied. Contrary to other catalysts, this Rhodium (I) complex affords very high chemical and optical yields of N-acetylated amino acids under mild conditions even when using substrate to catalyst ratio as high as 16000. The method has been successfully applied for the preparation of L-Phenylalanine and L-Dopa.