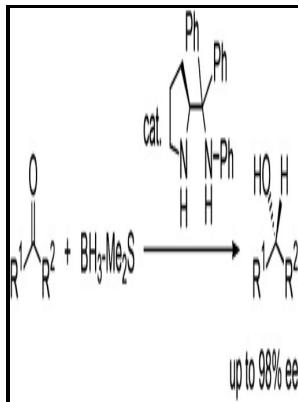


Preparation and use of chiral borane Lewis acids.

University of Salford - New Directions for Frustrated Lewis Pair Chemistry



Description: -

-Preparation and use of chiral borane Lewis acids.

-

Research paper NE -- 215.

Zhizn' zamechatel'nykh liudei (Molodaia gvardiia (Firm)) -- 1978,

vyp. 7

Zhizn' zamechatel'nykh liudei -- vyp. 7 (578)

D83054 Preparation and use of chiral borane Lewis acids.

Notes: PhD thesis, Chemistry and Applied Chemistry.

This edition was published in 1988



Filesize: 33.74 MB

Tags: #Catalytic #asymmetric #aldol #reactions. #Use #of #a #chiral #(acyloxy)borane #complex #as #a #versatile #Lewis

Lewis Base Complexes of Borane as Hydride Sources and C

Most preferably, the concentration of borane-tetrahydrofuran complex per liter of tetrahydrofuran is at least 2.

Evans Aldol Reaction

One of the phenyl groups blocks the access to the front face of the dienophile, and cyclopentadiene approaches from the back side in an endo transition state, consistent with the absolute configuration of the reaction product. Highly regioselective ring opening of epoxides with poor nucleophiles such as indole, borane, O-trimethylsilylhydroxylamine, p-nitroaniline and sterically hindered tert-butylamine is a fast and convenient reaction in the presence of 5. Organic Letters 2010, 12 22 , 5088-5091.

US6218585B1

The catalyst can be used under conventional heating conditions or microwave irradiation and is recyclable without loss of activity.

An Axially Chiral, Electron-Deficient Borane: Synthesis, Coordination Chemistry, Lewis Acidity, and Reactivity, Chemistry

Also, Pi stacking between the aryl group and aldehyde was suggested as an organizational feature which imparted high enantioselectivity to the cycloaddition. JACS 2003, 125, 24 Jan. Once again, the stabilized THFB can be stored at relatively low temperatures as described above to reduce the amount of borohydride stabilizer needed to prevent substantial decomposition.

Chiral borane complexes catalyse new synthesis opportunities

A similar trend has been suggested by Corey for catalyzed Diels-Alder reactions of 2-bromoacrolein 15b,64.

Evans Aldol Reaction

To prevent decomposition during transportation and storage, stabilizers are typically added to borane-tetrahydrofuran complex. Such frustrated Lewis pairs FLPs have garnered much attention and prompted many investigations into the activation of small molecules and catalysis.

Borane Reagents

Also in 1994, Kobayashi and co-workers reported other anthanide III triflates as catalysts 128. A similar counterion effect was observed by Davies and coworkers at Merck in 1996 117. For example, functional groups reduced by borane-tetrahydrofuran complex include aldehyde, ketone, acyl chloride, lactone, epoxide, ester, amide, oxime, imine, and nitrile.

seminars_history

Assignors: CALLERY, LLC 2019-09-24 Assigned to CALLERY, LLC reassignment CALLERY, LLC RELEASE BY SECURED PARTY SEE DOCUMENT FOR DETAILS. Using the Cu SbF₆ 2 catalyst 135b this adduct was obtained in 95% ee and 39:1 endo:exo diastereoselectivity 117.

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