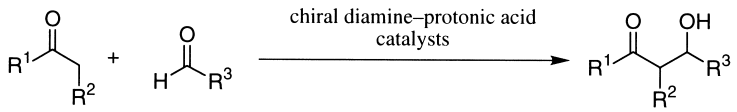
Graphical abstracts

Diversity-based strategy for discovery of environmentally benign organocatalyst: diamine–protonic acid catalysts for asymmetric direct aldol reaction

Tetrahedron 58 (2002) 8167

Masakazu Nakadai, Susumu Saito and Hisashi Yamamoto*

Graduate School of Engineering, Nagoya University, SORST, Japan Science and Technology Corporation (JST), Chikusa, Nagoya 464-8603, Japan

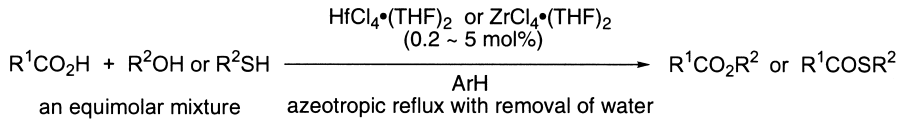


Direct ester condensation from a 1:1 mixture of carboxylic acids and alcohols catalyzed by hafnium(IV) or zirconium(IV) salts

Tetrahedron 58 (2002) 8179

Kazuaki Ishihara, Masaya Nakayama, Suguru Ohara and Hisashi Yamamoto*

Graduate School of Engineering, Nagoya University, SORST, Japan Science and Technology Corporation (JST), Chikusa, Nagoya 464-8603, Japan



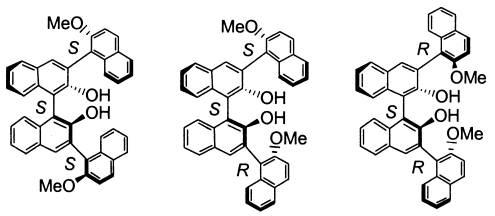
Asymmetric catalysis by 1,1′-binaphthyl compounds with conformation-defined 3,3′-aryl substituents

Tetrahedron 58 (2002) 8189

Duane L. Simonson,[a] Kevin Kingsbury,[b] Ming-Hua Xu,[a] Qiao-Sheng Hu,[a] Michal Sabat[a] and Lin Pu[a,*]

[a]*Department of Chemistry, University of Virginia, Charlottesville, VA 22904-4319, USA*
[b]*Department of Chemistry and Biochemistry, California Polytechnic State University, San Luis Obispo, CA 93407, USA*

Three 1,1′-binaphthyl-based diastereomeric chiral ligands containing conformation-defined 3,3′-aryl substituents are synthesized and characterized. Their use in the asymmetric diethylzinc addition to aldehydes reveals that the 3,3′-aryl conformations have strong influence on their catalytic properties.

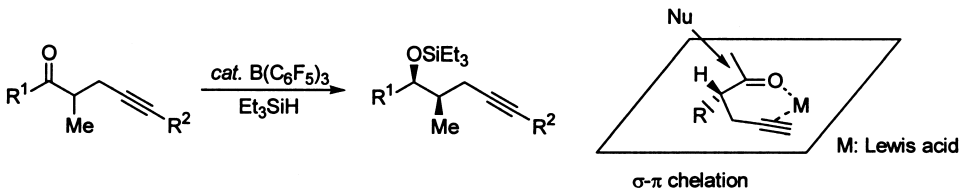


Lewis acid catalyzed stereoselective hydrosilylation of ketones under the control of σ–π chelation

Tetrahedron 58 (2002) 8195

Naoki Asao, Takeshi Ohishi, Kenichiro Sato and Yoshinori Yamamoto*

Department of Chemistry, Graduate School of Science, Tohoku University, 980-8578 Sendai, Japan

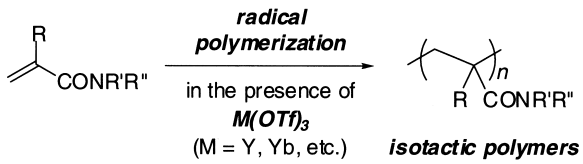


Stereocontrolled radical polymerization of acrylamides and methacrylamides using Lewis acids

Tetrahedron 58 (2002) 8205

Shigeki Habaue, Yutaka Isobe and Yoshio Okamoto*

Department of Applied Chemistry, Graduate School of Engineering, Nagoya University, Furo-cho, Chikusa-ku, Nagoya 464-8603, Japan

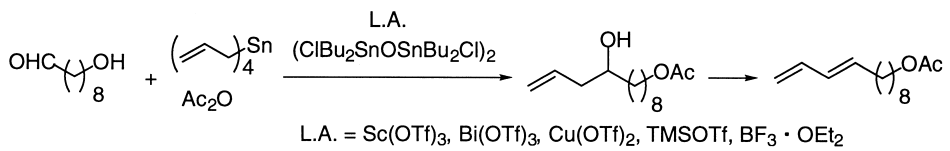


Combined Lewis acid catalysts in shotgun process: a convenient synthesis of the female sex pheromone of the red-bollworm moth

Tetrahedron 58 (2002) 8211

Yoshifumi Nagano, Akihiro Orita and Junzo Otera*

Department of Applied Chemistry, Okayama University of Science, Ridai-cho, Okayama 700-0005, Japan



Trimethylsilyl bis(trifluoromethanesulfonyl)imide as a tolerant and environmentally benign Lewis acid catalyst of the Diels–Alder reaction

Tetrahedron 58 (2002) 8219

Benoit Mathieu[a] and Léon Ghosez[a,b,*]

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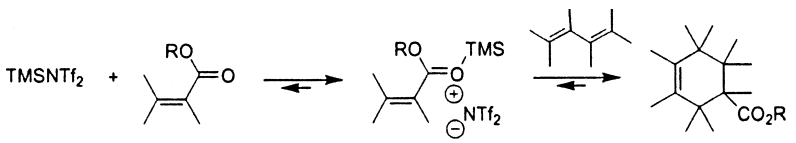
[b]*European Institute of Chemistry and Biology (IECB-ENSCPB), 16 Avenue Pey-Berland, F-330607 Pessac, France*

$TMSNTf_2$ is an excellent and tolerant catalyst for reaction of α,β-unsaturated esters in Diels–Alder reactions.

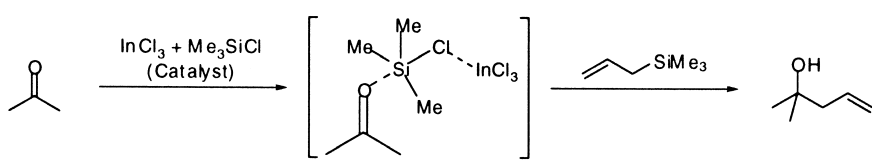


Remarkable enhancement of Lewis acidity of chlorosilane by the combined use of indium(III) chloride

Tetrahedron 58 (2002) 8227

Yoshiyuki Onishi, Takeshi Ito, Makoto Yasuda and Akio Baba*

Department of Molecular Chemistry and Handai Frontier Research Center, Graduate School of Engineering, Osaka University, 2-1 Yamadaoka, Suita, Osaka 565-0871, Japan

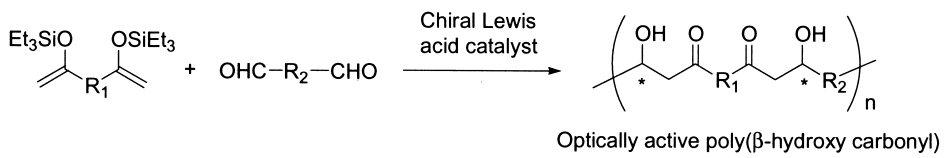


Highly stereoselective synthesis of chiral aldol polymers using repeated asymmetric Mukaiyama aldol reaction

Tetrahedron 58 (2002) 8237

Shinichi Itsuno* and Kenichi Komura

Department of Materials Science, Toyohashi University of Technology, Tempaku-cho, Toyohashi 441-8580, Japan

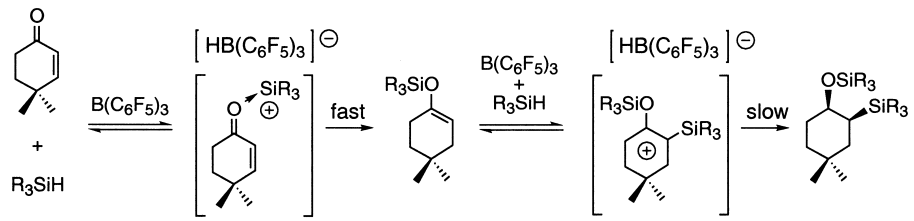


$B(C_6F_5)_3$ catalyzed hydrosilation of enones and silyl enol ethers

Tetrahedron 58 (2002) 8247

James M. Blackwell, Darryl J. Morrison and Warren E. Piers*

Department of Chemistry, University of Calgary, 2500 University Drive NW, Calgary, Alta., Canada T2N 1N4

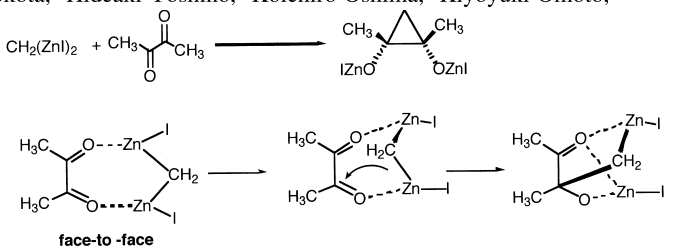


[2+1] Cycloaddition reaction of bis(iodozincio)methane with 1,2-diketones: face-to-face complex of bis(iodozincio)-methane and 1,2-diketones as a reaction intermediate

Tetrahedron 58 (2002) 8255

Seijiro Matsubara,[a,*] Katsumi Ukai,[a] Hideo Fushimi,[a] Yutaka Yokota,[a] Hideaki Yoshino,[a] Koichiro Oshima,[a] Kiyoyuki Omoto,[b,*] Atsushi Ogawa,[b] Yasunori Hioki[b] and Hiroshi Fujimoto[b]

[a]*Department of Material Chemistry, Graduate School of Engineering, Kyoto University, Yoshida, Sakyo, Kyoto 606-8501, Japan*
[b]*Department of Molecular Engineering, Graduate School of Engineering, Kyoto University, Yoshida, Sakyo, Kyoto 606-8501, Japan*

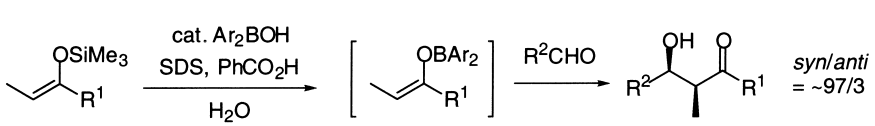


Use of boron enolates in water. The first boron enolate-mediated diastereoselective aldol reactions using catalytic boron sources

Tetrahedron 58 (2002) 8263

Yuichiro Mori, Juta Kobayashi, Kei Manabe and Shū Kobayashi*

Graduate School of Pharmaceutical Sciences, The University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113-0033, Japan

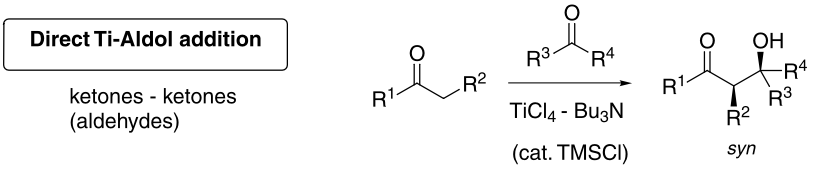


Direct, practical, and powerful crossed aldol additions between ketones and ketones or aldehydes utilizing environmentally benign $TiCl_4$–Bu_3N reagent

Tetrahedron 58 (2002) 8269

Yoo Tanabe,* Noriaki Matsumoto, Takahiro Higashi, Tomonori Misaki, Tomotaka Itoh, Misako Yamamoto, Kumi Mitarai and Yoshinori Nishii

Department of Chemistry, School of Science and Technology, Kwansei Gakuin University, 2-1 Gakuen Sanda, Hyogo 669-1337, Japan

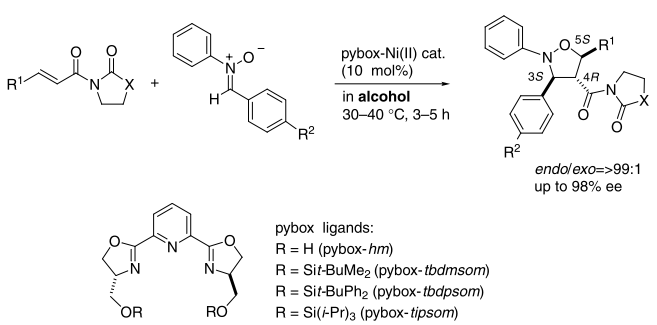


A highly enantioselective 1,3-dipolar cycloaddition reaction in alcoholic media: Ni(II)-pybox-*tipsom* catalyst

Tetrahedron 58 (2002) 8281

Seiji Iwasa,* Hiroyuki Maeda, Kohei Nishiyama, Shinji Tsushima, Yasuyuki Tsukamoto and Hisao Nishiyama

School of Materials Science, Toyohashi University of Technology, Tempaku-cho, Toyohashi, Aichi 441-8580, Japan

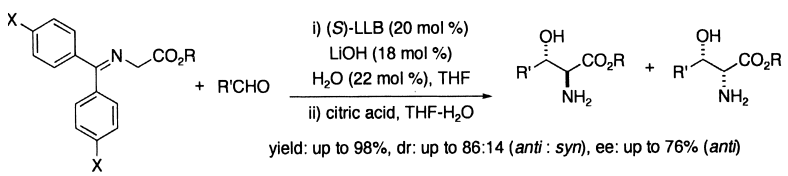


Catalytic asymmetric synthesis of β-hydroxy-α-amino acid esters by direct aldol reaction of glycinate Schiff bases

Tetrahedron 58 (2002) 8289

Naoki Yoshikawa and Masakatsu Shibasaki*

Graduate School of Pharmaceutical Sciences, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033, Japan



The first catalytic enantioselective Diels–Alder reactions of 1,2-dihydropyridine: efficient syntheses of optically active 2-azabicyclo[2.2.2]octanes with chiral BINAM derived Cr(III) salen complexes

Tetrahedron 58 (2002) 8299

Norito Takenaka, Yong Huang and Viresh H. Rawal*

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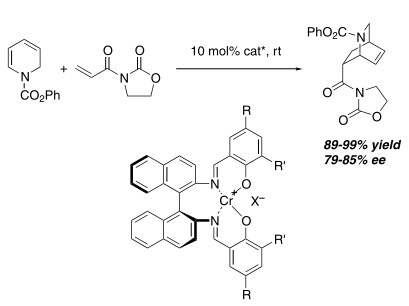
We have synthesized a new family of enantiomerically enriched BINAM-derived Schiff base Cr(III) complexes and evaluated them as catalysts for Diels–Alder reactions. These complexes effectively catalyze, for the first time, the enantioselective Diels–Alder reactions between 1,2-dihydropyridine and *N*-acryloyloxazolidinone to afford 2-azabicyclo[2.2.2]octanes in high yields (89–99%) and with moderate to good enantioselectivities (79–85%).

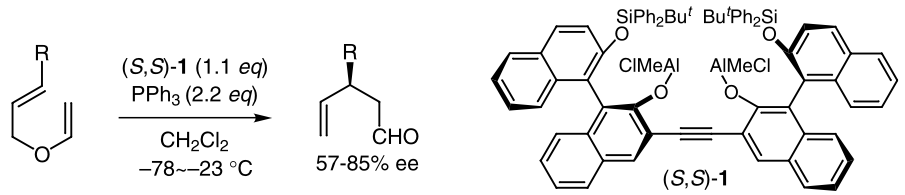


Tetrahedron 58 (2002) 8307

Activation of ether functionality of allyl vinyl ethers by chiral bis(organoaluminum) Lewis acids: application to asymmetric Claisen rearrangement

Eiji Tayama, Akira Saito, Takashi Ooi and Keiji Maruoka*

Department of Chemistry, Graduate School of Science, Kyoto University, Sakyo, 606-8502 Kyoto, Japan

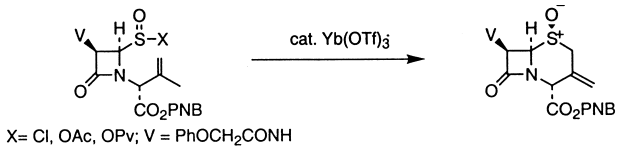


Tetrahedron 58 (2002) 8313

Application of lanthanide catalysis in the penicillin to cephalosporin conversion

Anthony G. M. Barrett,[a,*] D. Christopher Braddock,[a] Robin D. G. Cooper[b] and Julian P. Henschke[a]

[a]*Department of Chemistry, Imperial College of Science, Technology and Medicine, South Kensington, London SW7 2AY, UK*
[b]*Cooper Consulting Inc, 6740 Dover Road, Indianapolis, IN 46220, USA*

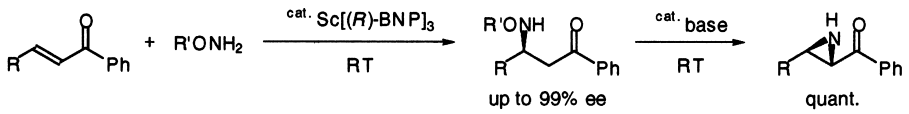


Tetrahedron 58 (2002) 8321

Chiral rare earth metal complex-catalyzed conjugate addition of *O*-alkylhydroxylamines. An efficient synthetic entry into optically active 2-acyl aziridines

Xiu Lan Jin, Hiroyasu Sugihara, Kazuhiro Daikai, Hiroki Tateishi, Yong Zhi Jin, Hiroshi Furuno and Junji Inanaga*

Institute for Fundamental Research of Organic Chemistry (IFOC), Kyushu University, Hakozaki, Higashi-ku, Fukuoka 812-8581, Japan

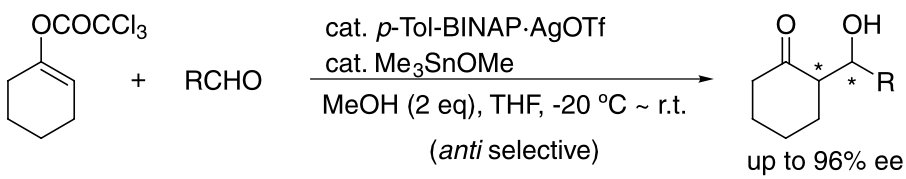


Tetrahedron 58 (2002) 8331

Asymmetric aldol reaction of enol trichloroacetate catalyzed by tin methoxide and BINAP·silver(I) complex

Akira Yanagisawa,[a] Yukari Matsumoto,[b] Kenichi Asakawa[b] and Hisashi Yamamoto[b,*]

[a]*Department of Chemistry, Faculty of Science, Chiba University, Inage, Chiba 263-8522, Japan*
[b]*Graduate School of Engineering, SORST, Japan Science and Technology Corporation (JST), Nagoya University, Furo-cho, Chikusa, Nagoya 464-8603, Japan*

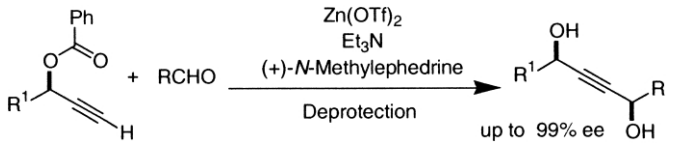


Efficient asymmetric synthesis of 1-alk-2-yne-1,4-diols

Tetrahedron 58 (2002) 8341

Roberto Sans Diez,[a,b] Brian Adger[c] and Erick M. Carreira[a,*]

[a]*Laboratorium für Organische Chemie, ETH-Hönggerberg HCI H337, CH-8093 Zurich, Switzerland*
[b]*Area de Quimica Organica, Facultad de Ciencias, Universidad de Burgos, Pza. Missael Bañuelos s/n, Burgos 09001, Spain*
[c]*Synetix, 5 Cambridge Road, Great Shelford, Cambridge CB2 5JE, UK*



Recyclable Lewis acid catalysts by tuning supercritical vs liquid carbon dioxide phases: lanthanide catalysts with tris(perfluorooctanesulfonyl)methide and bis(perfluorooctanesulfonyl)amide

Tetrahedron 58 (2002) 8345

Joji Nishikido,[a] Mayumi Kamishima,[a] Hiroshi Matsuzawa[b] and Koichi Mikami[b,*]

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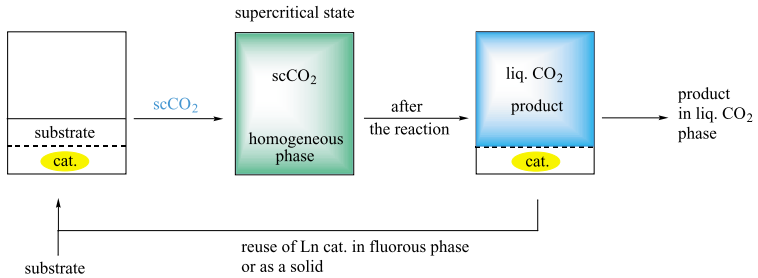
[b]*Department of Applied Chemistry, Tokyo Institute of Technology, Ookayama, Meguro-ku, Tokyo 152-8552, Japan*



Molecular mechanics calculations as predictors of enantioselectivity for chiral nucleophile catalyzed reactions

Tetrahedron 58 (2002) 8351

Andrew E. Taggi, Ahmed M. Hafez, Travis Dudding and Thomas Lectka*

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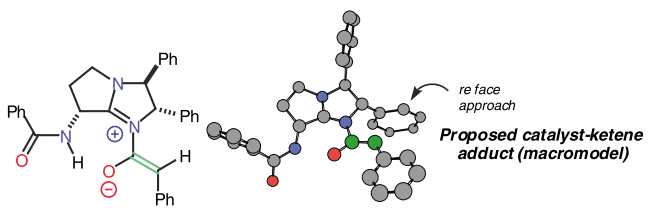

Temperature dependent reversal of stereochemistry in enantioselective conjugate amine additions

Tetrahedron 58 (2002) 8357

Mukund P. Sibi,* Uma Gorikunti and Mei Liu

Department of Chemistry, North Dakota State University, Fargo, ND 58105-5516, USA

A rare example of reversal of face selectivity with change in temperature is reported.