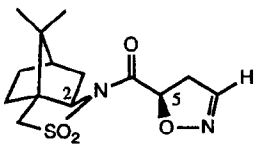
Tetrahedron: Asymmetry **1991**, *2*, 27

Byeang Hyean Kim, Ju Young Lee, Kimoon Kim, and Dongmok Whang

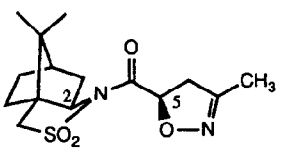


$[\alpha]_D^{16}$ = -26.3 (c=0.23, $CHCl_3$)
Source of chirality: natural and diastereoselective cycloaddition
Absolute configuration 2R, 5R

$C_{14}H_{20}N_2O_4S$
N-[(4,5-dihydro-5-isoxazolyl)carbonyl]bornane-10,2-sultam

Tetrahedron: Asymmetry **1991**, *2*, 27

Byeang Hyean Kim, Ju Young Lee, Kimoon Kim, and Dongmok Whang

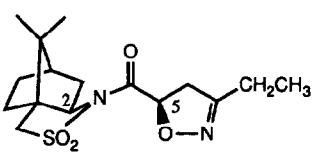


$[\alpha]_D^{16}$ = -27.4 (c=0.20, $CHCl_3$)
Source of chirality: natural and diastereoselective cycloaddition
Absolute configuration 2R, 5R

$C_{15}H_{22}N_2O_4S$
N-[(4,5-dihydro-3-methyl-5-isoxazolyl)carbonyl]bornane-10,2-sultam

Tetrahedron: Asymmetry **1991**, *2*, 27

Byeang Hyean Kim, Ju Young Lee, Kimoon Kim, and Dongmok Whang

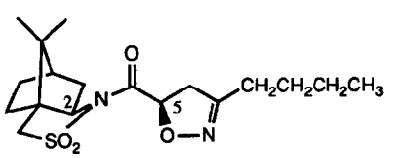


$[\alpha]_D^{16}$ = -24.3 (c=0.43, $CHCl_3$)
Source of chirality: natural and diastereoselective cycloaddition
Absolute configuration 2R, 5R

$C_{16}H_{24}N_2O_4S$
N-[(4,5-dihydro-3-ethyl-5-isoxazolyl)carbonyl]bornane-10,2-sultam

Tetrahedron: Asymmetry **1991**, *2*, 27

Byeang Hyean Kim, Ju Young Lee, Kimoon Kim, and Dongmok Whang

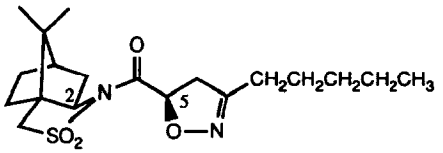


$[\alpha]_D^{16}$ = -21.6 (c=0.54, $CHCl_3$)
Source of chirality: natural and diastereoselective cycloaddition
Absolute configuration 2R, 5R

$C_{18}H_{28}N_2O_4S$
N-[(4,5-dihydro-3-butyl-5-isoxazolyl)carbonyl]bornane-10,2-sultam

Byeang Hyean Kim, Ju Young Lee, Kimoon Kim, and Dongmok Whang

Tetrahedron: Asymmetry **1991,** *2*, 27



$[\alpha]_D^{16}$ = -23.2 (c=0.43, $CHCl_3$)

Source of chirality: natural and diastereoselective cycloaddition

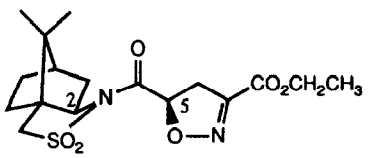
Absolute configuration 2R, 5R

$C_{19}H_{30}N_2O_4S$

N-[(4,5-dihydro-3-pentyl-5-isoxazolyl)carbonyl]bornane-10,2-sultam

Byeang Hyean Kim, Ju Young Lee, Kimoon Kim, and Dongmok Whang

Tetrahedron: Asymmetry **1991,** *2*, 27



$[\alpha]_D^{16}$ = -24.9 (c=0.49, $CHCl_3$)

Source of chirality: natural and diastereoselective cycloaddition

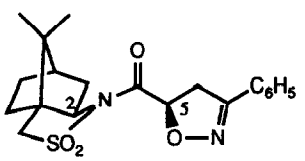
Absolute configuration 2R, 5R

$C_{17}H_{24}N_2O_6S$

N-[(4,5-dihydro-3-ethoxycarbonyl-5-isoxazolyl)carbonyl]bornane-10,2-sultam

Byeang Hyean Kim, Ju Young Lee, Kimoon Kim, and Dongmok Whang

Tetrahedron: Asymmetry **1991,** *2*, 27



$[\alpha]_D^{16}$ = -25.7 (c=0.35, $CHCl_3$)

Source of chirality: natural and diastereoselective cycloaddition

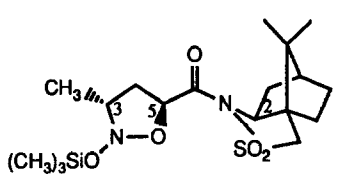
Absolute configuration 2R, 5R

$C_{20}H_{24}N_2O_4S$

N-[(4,5-dihydro-3-phenyl-5-isoxazolyl)carbonyl]bornane-10,2-sultam

Byeang Hyean Kim, Ju Young Lee, Kimoon Kim, and Dongmok Whang

Tetrahedron: Asymmetry **1991,** *2*, 27



$[\alpha]_D^{16}$ = -19.2 (c=0.56, $CHCl_3$)

Source of chirality: natural and diastereoselective cycloaddition

Absolute configuration 2S, 3R, 5S

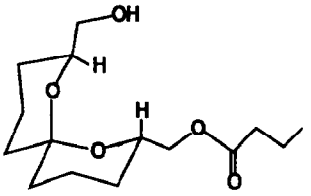
(assigned by X-ray crystallography)

$C_{18}H_{32}N_2O_5SSi$

N-[(3-methyl-2-[(trimethylsilyl)oxy]-5-isoxazolidinyl)carbonyl]bornane-10,2-sultam

J.-G. Gourcy, G. Dauphin and G. Jeminet *

Tetrahedron: Asymmetry **1991**, *2*, 31

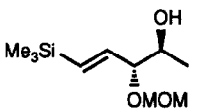


E.e. = 94 % [^{1}H NMR; shift reagent Eu(facam)$_3$]
$[\alpha]_{578}^{25} = 55$ (c 0.02, n-pentane)
Source of chirality : enzymatic hydrolysis of a precursor.
Absolute configuration : 2S,6S,8S.
(assigned by chem.correlation with a synth. ref.)

$C_{15}H_{26}O_5$
2-butyroxymethyl-8-hydroxymethyl-1,7-dioxa [5.5] undecane

S. Okamoto, T. Yoshino and F. Sato

Tetrahedron: Asymmetry **1991**, *2*, 35



$[\alpha]_D^{25} = -130.5$ (c 1.43, $CHCl_3$)
Source of chirality : asymm. synth.
Absolute configuration : 3R, 4S

$C_{10}H_{22}O_3Si$
(*E*)-1-(Trimethylsilyl)-3-(methoxymethyloxy)-4-hydroxy-1-pentene

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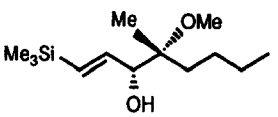
S. Okamoto, T. Yoshino and F. Sato

Tetrahedron: Asymmetry **1991**, *2*, 35



E. e. = > 99% [measured by Mosher's method]
$[\alpha]_D^{25} = +33.8$ (c 1.11, $CHCl_3$)
Source of chirality : asymm. synth.
Absolute configuration : 3R, 4R
(assigned by conversion to the known compound)

$C_{13}H_{28}O_2Si$
(*E*)-1-(Trimethylsilyl)-3-hydroxy-4-methoxy-4-methyl-1-octene

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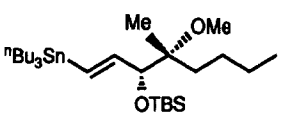
S. Okamoto, T. Yoshino and F. Sato

Tetrahedron: Asymmetry **1991**, *2*, 35

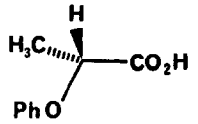


E. e. = > 99%
$[\alpha]_D^{25} = -13.9$ (c 1.52, $CHCl_3$)
Source of chirality : asymm. synth.
Absolute configuration : 3R, 4R
(assigned by synthesis)

$C_{28}H_{60}O_2SiSn$
(*E*)-1-(Tri-*n*-butylstannyl)-3-(*tert*-butyldimethylsiloxy)-4-methoxy-4-methyl-1-octene

A. Kamal, T. Ramalingam and N. Venugopal

Tetrahedron: Asymmetry **1991,** *2*, 39

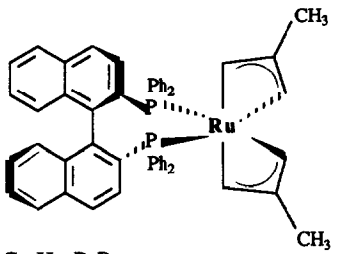


(α)-phenoxypropionic acid

E.e.= 78% (by HPLC)
$[\alpha]_D^{25}$ = +40.0 (c 10, EtOH) for pure isomer
Source of chirality : BSA hydrolysis of esters.
Absolute configuration : R
(ref. A. Fredga, E. Gamstedt and R. Hakansson, Chem. Sci., 1973, **4**.

J.P. Genêt, S.Mallart, C.Pinel, S.Jugé and J. A. Laffitte

Tetrahedron: Asymmetry **1991,** *2*, 43



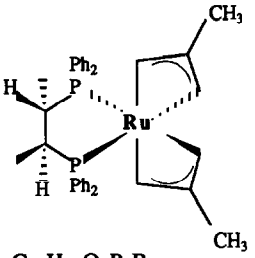
$C_{52}H_{46}P_2Ru$

[Bis-(diphenylphosphino)-1,1'-binaphtyl] [Bis-methyl-2-propenyl] Ruthenium (II)

$[\alpha]_D$ = 280 (c = 0.3 toluene)
Absolute configuration : S
Source of chirality : (-)-Binap

J.P. Genêt, S.Mallart, C.Pinel, S.Jugé and J. A. Laffitte

Tetrahedron: Asymmetry **1991,** *2*, 43



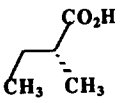
$C_{36}H_{40}O_2P_2Ru$

[(-)-2,2-Bis-(diphenylphosphino)butane] [Bis-methyl-2-propenyl] Ruthenium (II)

$[\alpha]_D$ = + 60 (c =0.2, toluene)
Absolute configuration : 2S,3S
Source of chirality : (-)-Chiraphos

J.P. Genêt, S.Mallart, C.Pinel, S.Jugé and J. A. Laffitte

Tetrahedron: Asymmetry **1991,** *2*, 43



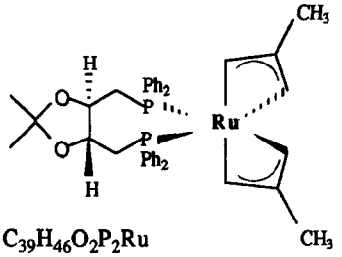
$C_5H_{10}O_2$

2-methyl-butanoic acid

E.e. = 90 % (by H.P.L.C. analysis)
Configuration : R
Source of chirality : asymmetric hydrogenation with ruthenium complexes

J.P. Genêt, S.Mallart, C.Pinel, S.Jugé and J. A. Laffitte

Tetrahedron: Asymmetry **1991**, *2*, 43



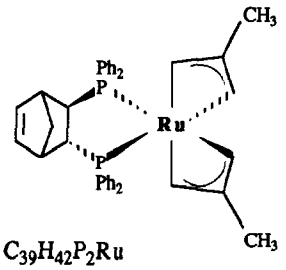
$[\alpha]_D = +202$ (c = 0.43,toluene)
Absolute configuration : 4R,5R
Source of chirality : (-)-*Diop*

$C_{39}H_{46}O_2P_2Ru$

[(-)-4,5-Bis-(diphenylphosphinomethyl)-2,2-dimethyl-1,3-dioxolane][Bis-methyl-2-propenyl] Ruthenium (II)

J.P. Genêt, S.Mallart, C.Pinel, S.Jugé and J. A. Laffitte

Tetrahedron: Asymmetry **1991**, *2*, 43



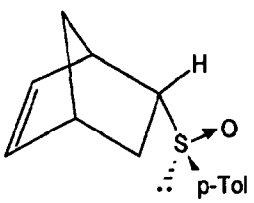
$[\alpha]_D = -47$ (c = 0.3, toluene)
Absolute configuration : 2R, 3R
Source of chirality : (-) Norphos

$C_{39}H_{42}P_2Ru$

[(-)-2,3-Bis-(diphenylphosphino)-bicyclo[2.2.1]-hept-5-en] [Bis-methyl-2-propenyl] Ruthenium (II)

B. Ronan and H. B. Kagan*.

Tetrahedron: Asymmetry **1991**, *2*, 75

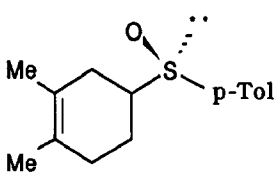


E.e = 100% (by comparison with reported value and by ^{1}H-NMR)
$[\alpha]_D^{25}$ + 207.6 (c = 1.18, acetone)
Source of chirality : asymm. synth. (Diels-Alder)
Absolute configuration : 1R, 2R, 4R, R_S
(lit. $[\alpha]_D^{25}$ +180.4 (acetone) : Maignan, C., and Raphael, R. A., *Tetrahedron Lett.*, 1983, **39**, 3245.)

$C_{14}H_{16}SO$ Bicyclo [2.2.1] hept-5-ene-2-p-tolyl sulfoxide

B. Ronan and H. B. Kagan*.

Tetrahedron: Asymmetry **1991**, *2*, 75

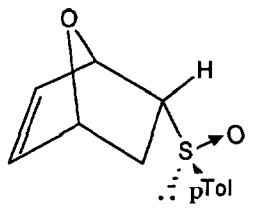


E.e = 100%, d.e =100% (by ^{1}H-NMR)
$[\alpha]_D^{25}$ +196 (c = 0.38, acetone)
Source of chirality : asymm. synth. (Diels-Alder)
Absolute configuration (R_S), relative stereochemistry is unknown

$C_{15}H_{20}SO$ 1,2-Dimethyl-4-p-tolyl sulfoxide-1-cyclohexene

B. Ronan and H. B. Kagan*.

Tetrahedron: Asymmetry **1991**, *2*, 75

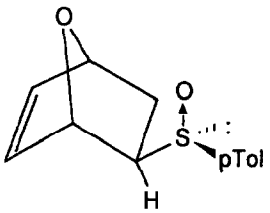


E.e = 100% (by ^{1}H-NMR)
$[\alpha]_D^{25}$ +186 (c = 0.97, acetone)
Source of chirality : asymm. synth. (Diels-Alder)
Absolute configuration : 1R, 2R, 4R, R_S (assigned by chemical transformation into (1R, 4R)-(+)-7-oxabicyclo [2.2.1] hept-5-ene-2-one

$C_{13}H_{14}SO_2$ 7-Oxabicyclo [2.2.1] hept-5-ene-2-p-tolyl sulfoxide

B. Ronan and H. B. Kagan*.

Tetrahedron: Asymmetry **1991**, *2*, 75

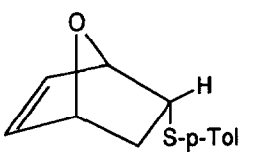


E.e. = 100% (by ^{1}H-NMR)
$[\alpha]_D^{25}$ +58 (c = 0.96, acetone)
Source of chirality : asymm. synth. (Diels-Alder)
Absolute configuration : 1S, 2R, 4S, R_S (assigned by chemical transformation into (1S, 2S)-(-)-7-oxabicyclo [2.2.1] hept-5-ene-2-one

$C_{13}H_{14}SO_2$ 7-Oxabicyclo [2.2.1] hept-5-ene-2-p-tolyl sulfoxide

B. Ronan and H. B. Kagan*.

Tetrahedron: Asymmetry **1991**, *2*, 75

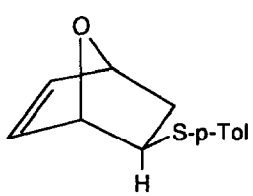


E.e. = 100% (by ^{1}H-NMR)
$[\alpha]_D^{25}$ +114.3 (c = 0.56, acetone)
Source of chirality : (1R, 2R, 4R, R_S)-(+)-7-oxabicyclo [2.2.1] hept-5-ene-2-p-tolyl sulfoxide
Absolute configuration : 1R, 2R, 4R (assigned by comparing with the corresponding sulfoxide)

$C_{13}H_{14}SO$ 7-Oxabicyclo [2.2.1] hept-5-ene-2-p-tolyl sulfide

B. Ronan and H. B. Kagan*.

Tetrahedron: Asymmetry **1991**, *2*, 75

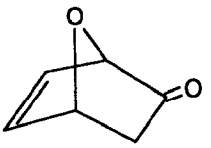


E.e. = 100% (by ^{1}H-NMR)
$[\alpha]_D^{25}$ +38 (c = 0.67, acetone)
Source of chirality : (1S, 2R, 4S, R_S)-(+)-7-oxabicyclo [2.2.1] hept-5-ene-2-p-tolyl sulfoxide
Absolute configuration : 1S, 2R, 4S (assigned by comparing with the corresponding sulfoxide)

$C_{13}H_{14}SO$ 7-Oxabicyclo [2.2.1] hept-5-ene-2-p-tolyl sulfide

B. Ronan and H. B. Kagan*.

Tetrahedron: Asymmetry **1991**, *2*, 75



E.e. = 100% (by comparison with reported value)
$[\alpha]_D^{25}$ +959 (c = 0.1, $CHCl_3$)
Source of chirality : (1R, 2R, 4R)-(+)-7-oxabicyclo [2.2.1] hept-5-ene-2-p-tolyl sulfide
Absolute configuration : 1R, 2R
(lit. $[\alpha]_D^{25}$ +959 ($CHCl_3$) : Vogel, P., and Black, K. A., *Helv. Chim. Acta*, 1984, **67**, 1612.)

$C_6H_6O_2$ 7-Oxabicyclo [2.2.1] hept-5-ene-2-one