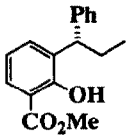
R. Irie, K. Noda, Y. Ito, N. Matsumoto, and T. Katsuki

Tetrahedron: Asymmetry **1991,** 2, 481

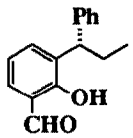


E.e= >99 % [by HPLC analysis]
$[\alpha]_D^{25}$ -180 (c 1.19, CH_3OH)
Source of chirality: resolution of a precursor
Absolute configuration: *S*

$C_{17}H_{18}O_3$
Methyl 3-[(*S*)-1-phenylpropyl]salicylate

R. Irie, K. Noda, Y. Ito, N. Matsumoto, and T. Katsuki

Tetrahedron: Asymmetry **1991,** 2, 481

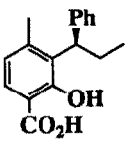


E.e= >99 % [by HPLC analysis of a precursor]
$[\alpha]_D^{21}$ -257 (c 1.12, C_2H_5OH)
Source of chirality:methyl 3-[(*S*)-1-Phenylpropyl]salicylate
Absolute configuration: *S*

$C_{16}H_{16}O_2$
3-[(*S*)-1-Phenylpropyl]salicylaldehyde

R. Irie, K. Noda, Y. Ito, N. Matsumoto, and T. Katsuki

Tetrahedron: Asymmetry **1991,** 2, 481

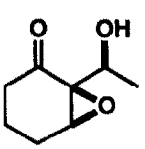


E.e= >99 % [by HPLC analysis of the corresponding methyl ester]
$[\alpha]_D^{24}$ +33.6 (c 1.01, C_2H_5OH)
Source of chirality: resolution with (-)brucine
Absolute configuration: *R*

$C_{17}H_{18}O_3$
4-Methyl-3-[(*R*)-1-phenylpropyl]salicylic acid

M. Bailey, I. Staton, P. R. Ashton, I. E. Markó and W. D. Ollis

Tetrahedron: Asymmetry **1991,** 2, 495

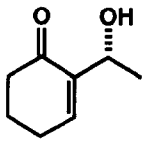


E.e. = 78% [by nmr using $Eu(hfc)_3$]
$[\alpha]_D^{22}$ = +37.5 (c 0.10, $CHCl_3$)
Source of chirality: kinetic resolution [$Ti(OPr^i)_4$ / (-) - DET]

$C_8H_{12}O_3$ *Syn*-2-(1-hydroxyethyl)-2,3-epoxy-2-cyclohexan-1-one

M. Bailey, I. Staton, P. R. Ashton, I. E. Markó and W. D. Ollis

Tetrahedron: Asymmetry **1991,** *2*, 495

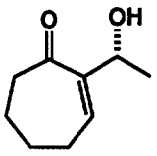


E.e. = 88% [by HPLC using a Pirkle 1A]
$[\alpha]_D^{22}$ = -5.6 (c 5.17, $CHCl_3$)
Source of chirality: kinetic resolution [$Ti(OPr^i)_4$ / (-) - DET]

$C_8H_{12}O_2$ 2-(1-hydroxyethyl)-2-cyclohexen-1-one

M. Bailey, I. Staton, P. R. Ashton, I. E. Markó and W. D. Ollis

Tetrahedron: Asymmetry **1991,** *2*, 495

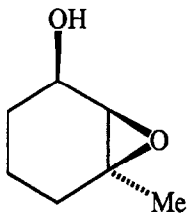


E.e. = 75% [by HPLC using a Pirkle 1A]
$[\alpha]_D^{22}$ = -17.6 (c 0.17, $CHCl_3$)
Source of chirality: kinetic resolution [$Ti(OPr^i)_4$ / (-) - DET]

$C_9H_{14}O_2$ 2-(1-hydroxyethyl)-2-cyclohepten-1-one

S.M.Brown, S.G.Davies and J.A.A.de Sousa.

Tetrahedron: Asymmetry **1991,** *2*, 511



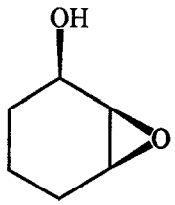
$C_7H_{12}O_2$

E.e = 86% (by ^{19}F nmr of MTPA ester).
$[\alpha]_D^{22}$ = +63.0 (c = 0.7, $CHCl_3$).
Source of Chirality : Double Sharpless Epoxidation.
Absolute Stereochemistry : 1R, 2R, 3S

2,3-epoxy-3-methylcyclohexan-1-ol

S.M.Brown, S.G.Davies and J.A.A.de Sousa.

Tetrahedron: Asymmetry **1991,** *2*, 511



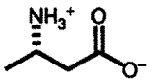
$C_6H_{10}O_2$

E.e = 70% (by ^1H nmr and HPLC of MTPA ester).
Source of Chirality : Double Sharpless Epoxidation.
Absolute Stereochemistry : 1R, 2R, 3S

2,3-epoxycyclohexan-1-ol

W. D. Lubell, M. Kitamura, and R. Noyori

Tetrahedron: Asymmetry **1991**, *2*, 543

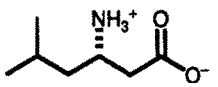


$C_4H_9NO_2$
(*S*)-(+)-3-Aminobutanoic Acid

E.e. = 96% [by HPLC analysis of tetraacetylglucose thiourea derivative]
$[\alpha]_D^{26}$ +34.3 (*c* 1.12, H_2O)
Source of chirality: (*R*)-BINAP—Ru(II)-based asymmetric hydrogenation
Absolute configuration: 3*S*

W. D. Lubell, M. Kitamura, and R. Noyori

Tetrahedron: Asymmetry **1991**, *2*, 543

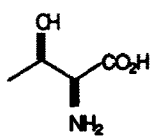


$C_7H_{15}NO_2$
(*S*)-(+)-5-Methyl-3-aminohexanoic Acid

E.e. = 90% [by HPLC analysis of tetraacetylglucose thiourea derivative]
$[\alpha]_D^{25}$ +26.7 (*c* 0.6, H_2O)
Source of chirality: (*R*)-BINAP—Ru(II)-based asymmetric hydrogenation
Absolute configuration: 3*S*

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

Tetrahedron: Asymmetry **1991**, *2*, 555

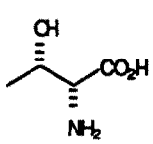


$C_4H_9O_3$
L Threonine

E.e.= 95% (by H.P.L.C. analysis)
Absolute configuration : 2S, 3R
Source of chirality : asymmetric hydrogenation with
(+)BINAP Ruthenium complexe

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

Tetrahedron: Asymmetry **1991**, *2*, 555

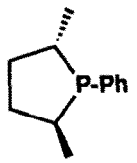


$C_4H_9O_3$
D Threonine

E.e.= 99% (by H.P.L.C. analysis)
Absolute configuration : 2R, 3S
Source of chirality : asymmetric hydrogenation with
(-)CHIRAPHOS Ruthenium complexe

M.J. Burk, J.E. Feaster, and R.L. Harlow

Tetrahedron: Asymmetry **1991,** *2*, 569



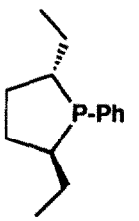
$C_{12}H_{17}P$

2,5-dimethyl-1-phenylphospholane

ee = >98% (optical rotation and ^{31}P NMR on chiral Pd complex)
$[\alpha]_D^{25} = +51.6 \pm 1.0$ (*c* 1, hexane)
Source of chirality: Asymmetric hydrogenation
Absolute configuration: 2*S*, 5*S*

M.J. Burk, J.E. Feaster, and R.L. Harlow

Tetrahedron: Asymmetry **1991,** *2*, 569



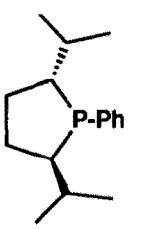
$C_{14}H_{21}P$

2,5-diethyl-1-phenylphospholane

ee = >98% (optical rotation and ^{31}P NMR on chiral Pd complex)
$[\alpha]_D^{25} = -53.0 \pm 1.0$ (*c* 1, hexane)
Source of chirality: Asymmetric hydrogenation
Absolute configuration: 2*S*, 5*S*

M.J. Burk, J.E. Feaster, and R.L. Harlow

Tetrahedron: Asymmetry **1991,** *2*, 569



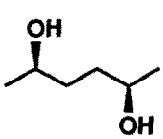
$C_{16}H_{25}P$

2,5-diisopropyl-1-phenylphospholane

ee = >98% (optical rotation and ^{31}P NMR on chiral Pd complex)
$[\alpha]_D^{25} = -92.6 \pm 1.0$ (*c* 1, hexane)
Source of chirality: Asymmetric hydrogenation
Absolute configuration: 2*R*, 5*R*

M.J. Burk, J.E. Feaster, and R.L. Harlow

Tetrahedron: Asymmetry **1991,** *2*, 569



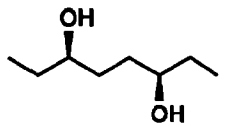
$C_6H_{14}O_2$

2,5-hexanediol

ee = >99% (optical rotation and GC on MPTA esters)
$[\alpha]_D^{25} = -39.6 \pm 0.5$ (*c* 1, $CHCl_3$)
Source of chirality: Asymmetric hydrogenation
Absolute configuration: 2*R*, 5*R*

M.J. Burk, J.E. Feaster, and R.L. Harlow

Tetrahedron: Asymmetry **1991**, *2*, 569



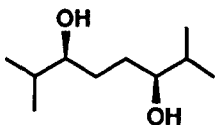
$C_8H_{18}O_2$

3,6-octanediol

ee = >99% (optical rotation and GC on MPTA esters)
$[\alpha]_D^{25} = -22.8 \pm 0.5$ (*c* 1, $CHCl_3$)
Source of chirality: Asymmetric hydrogenation
Absolute configuration: 3*R*, 6*R*

M.J. Burk, J.E. Feaster, and R.L. Harlow

Tetrahedron: Asymmetry **1991**, *2*, 569



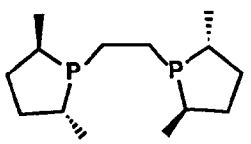
$C_{10}H_{22}O_2$

3,6-dihydroxy-2,7-dimethyloctane

ee = >99% (optical rotation and GC on MPTA esters)
$[\alpha]_D^{25} = -35.2 \pm 0.5$ (*c* 1, $CHCl_3$)
Source of chirality: Asymmetric hydrogenation
Absolute configuration: 3*S*, 6*S*

M.J. Burk, J.E. Feaster, and R.L. Harlow

Tetrahedron: Asymmetry **1991**, *2*, 569



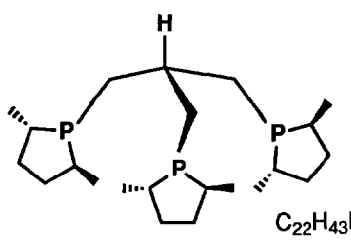
$C_{14}H_{28}P_2$

1,2-bis(2,5-dimethylphospholano)ethane

ee = >98% (optical rotation and ^{31}P NMR on chiral Pd complex)
$[\alpha]_D^{25} = +263 \pm 3.0$ (*c* 1, hexane)
Source of chirality: Asymmetric hydrogenation
Absolute configuration: 2*R*, 5*R* (phospholane)

M.J. Burk, J.E. Feaster, and R.L. Harlow

Tetrahedron: Asymmetry **1991**, *2*, 569



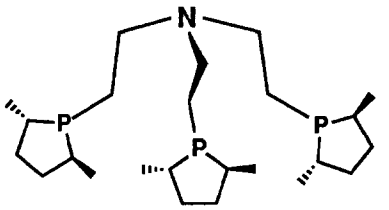
$C_{22}H_{43}P_3$

tris((2,5-dimethylphospholano)methyl)methane

ee = >98% (optical rotation and ^{31}P NMR on chiral Pd complex)
$[\alpha]_D^{25} = -329 \pm 4.0$ (*c* 1, hexane)
Source of chirality: Asymmetric hydrogenation
Absolute configuration: 2*S*, 5*S* (phospholane)

M.J. Burk, J.E. Feaster, and R.L. Harlow

Tetrahedron: Asymmetry **1991**, *2*, 569



$C_{24}H_{48}NP_3$

tris((2,5-dimethylphospholano)ethyl)amine

ee = >98% (optical rotation and ^{31}P NMR on chiral Pd complex)

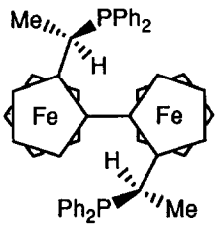
$[\alpha]_D^{25} = -167 \pm 3.0$ (*c* 1, hexane)

Source of chirality: Asymmetric hydrogenation

Absolute configuration: 2*S*, 5*S* (phospholane)

M. Sawamura, H. Hamashima, and Y. Ito

Tetrahedron: Asymmetry **1991**, *2*, 593



$C_{48}H_{44}Fe_2P_2$ (*S*,*S*)-2,2"-Bis[(*R*)-1-(diphenylphosphino)ethyl]-1,1"-biferrocene

E.e. = 100%

$[\alpha]_D^{25} = -426$ (*c* 0.51, $CHCl_3$)

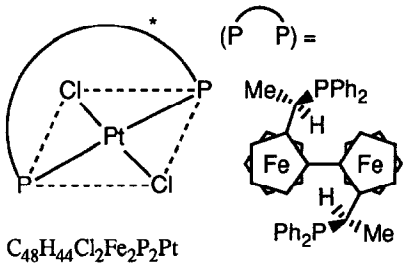
Source of chirality: synthesized from (*R*)-*N*,*N*-Dimethyl-1-(1-ferrocenyl)ethylamine

Absolute configuration: (*R*,*R*)-(*S*,*S*)

mp 99 - 103°C

M. Sawamura, H. Hamashima, and Y. Ito

Tetrahedron: Asymmetry **1991**, *2*, 593



$C_{48}H_{44}Cl_2Fe_2P_2Pt$

trans-Dichloro{(*S*,*S*)-2,2"-bis[(*R*)-1-(diphenylphosphino)ethyl]-1,1"-biferrocene}platinum(II)

E.e. = 100%

$[\alpha]_D^{20} = -571$ (*c* 0.57, $CHCl_3$)

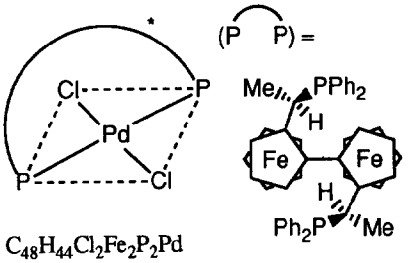
Source of chirality: synthesized from (*R*)-*N*,*N*-Dimethyl-1-(1-ferrocenyl)ethylamine

Absolute configuration: (*R*,*R*)-(*S*,*S*)

mp 240 - 245°C (dec)

M. Sawamura, H. Hamashima, and Y. Ito

Tetrahedron: Asymmetry **1991**, *2*, 593



$C_{48}H_{44}Cl_2Fe_2P_2Pd$

trans-Dichloro{(*S*,*S*)-2,2"-bis[(*R*)-1-(diphenylphosphino)ethyl]-1,1"-biferrocene}palladium(II)

E.e. = 100%

$[\alpha]_D^{20} = -726$ (*c* 0.55, $CHCl_3$)

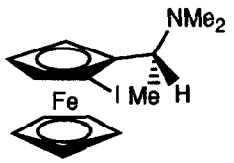
Source of chirality: synthesized from (*R*)-*N*,*N*-Dimethyl-1-(1-ferrocenyl)ethylamine

Absolute configuration: (*R*,*R*)-(*S*,*S*)

mp 230 - 235°C (dec)

M. Sawamura, H. Hamashima, and Y. Ito

Tetrahedron: Asymmetry **1991,** *2*, 593

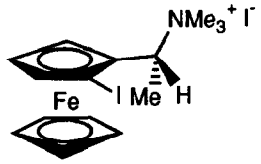


Mixture of (*R*)-(*S*) and (*R*)-(*R*) [(*R*)-(*S*) / (*R*)-(*R*) = 10 / 1]
E.e. = 100%
$[\alpha]_D^{25}$ = -5.4 (*c* 1.08, $CHCl_3$)
Source of chirality: synthesized from (*R*)-*N*,*N*-Dimethyl-1-(1-ferrocenyl)ethylamine
Absolute configuration: (*R*)-(*S*)

$C_{14}H_{18}FeIN$ (*R*)-*N*,*N*-Dimethyl-1-[(*S*)-2-iodoferrocenyl]ethylamine

M. Sawamura, H. Hamashima, and Y. Ito

Tetrahedron: Asymmetry **1991,** *2*, 593

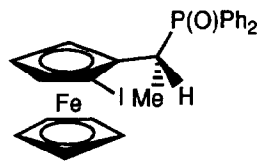


Mixture of (*R*)-(*S*) and (*R*)-(*R*) [(*R*)-(*S*) / (*R*)-(*R*) = 10 / 1]
E.e. = 100%
$[\alpha]_D^{25}$ = -13.0 (*c* 1.05, CH_3CN)
Source of chirality: synthesized from (*R*)-*N*,*N*-Dimethyl-1-(1-ferrocenyl)ethylamine
Absolute configuration: (*R*)-(*S*)
mp 110 - 112°C (dec)

$C_{15}H_{21}FeI_2N$ (*R*)-*N*,*N*,*N*-Trimethyl-1-[(*S*)-2-iodoferrocenyl]ethylammonium iodide

M. Sawamura, H. Hamashima, and Y. Ito

Tetrahedron: Asymmetry **1991,** *2*, 593

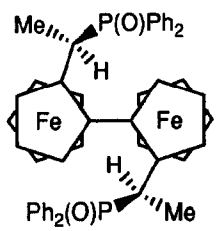


E.e. = 100%
$[\alpha]_D^{25}$ = +17.9 (*c* 0.50, $CHCl_3$)
Source of chirality: synthesized from (*R*)-*N*,*N*-Dimethyl-1-(1-ferrocenyl)ethylamine
Absolute configuration: (*R*)-(*S*)

$C_{24}H_{22}FeIOP$ (*S*)-2-[(*R*)-1-(Diphenylphosphinyl)ethyl]-1-iodoferrocene

M. Sawamura, H. Hamashima, and Y. Ito

Tetrahedron: Asymmetry **1991,** *2*, 593

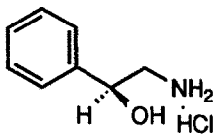


E.e. = 100% (by HPLC with chiral stationary phase)
$[\alpha]_D^{25}$ = -130 (*c* 1.02, $CHCl_3$)
Source of chirality: synthesized from (*R*)-*N*,*N*-Dimethyl-1-(1-ferrocenyl)ethylamine
Absolute configuration: (*R*,*R*)-(*S*,*S*)
mp 245 - 250°C (dec)

$C_{48}H_{44}Fe_2O_2P_2$ (*S*,*S*)-2,2"-Bis[(*R*)-1-(diphenylphosphinyl)ethyl]-1,1"-biferrocene

S. Sakuraba, T. Morimoto, K. Achiwa

Tetrahedron: Asymmetry **1991**, *2*, 597



$C_8H_{11}NO \cdot HCl$

1-Amino-2-phenyl-ethanol hydrochloride

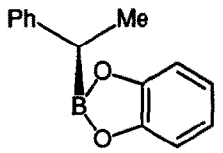
E.e.= 81.0% [by HPLC analysis of free amine]

Source of chirality: (2*S*,4*S*)-BCPM-Rh(I)-based asymmetric hydrogenation

Absolute configuration: *S*

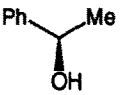
T. Hayashi, Y. Matsumoto, and Y. Ito

Tetrahedron: Asymmetry **1991**, *2*, 601



$C_{14}H_{13}BO_2$

1-Phenylethyl-1,3,2-benzodioxaborole

E.e. = 93.5% [by converting into 

and HPLC analysis of its 3,5-dinitrophenyl carbamate with chiral stationary phase column, Sumipax OA-4100]

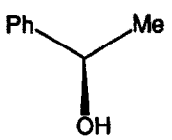
$[\alpha]_D^{20}$ –55.6 (*c* 1.7, benzene)

Source of chirality: catalytic asymmetric hydroboration of styrene

Absolute configuration: *R* (oxidized into (*R*)-1-phenylethanol)

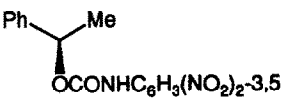
T. Hayashi, Y. Matsumoto, and Y. Ito

Tetrahedron: Asymmetry **1991**, *2*, 601



$C_8H_{10}O$

1-Phenylethanol

E.e. = 96.2% [by converting into 

and HPLC with chiral stationary phase column, Sumipax OA-4100]

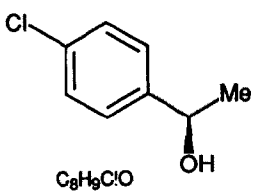
$[\alpha]_D^{23}$ +48.6 (*c* 1.0, CH_2Cl_2)

Source of chirality: catalytic asymmetric hydroboration of styrene, followed by oxidation

Absolute configuration: *R*

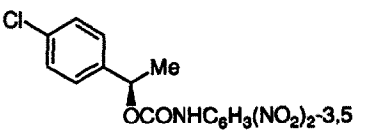
T. Hayashi, Y. Matsumoto, and Y. Ito

Tetrahedron: Asymmetry **1991**, *2*, 601



C_8H_9ClO

1-(4-Chlorophenyl)ethanol

E.e. = 90.5% [by converting into 

and HPLC with chiral stationary phase column, Sumipax OA-4100]

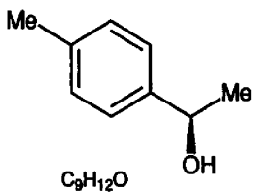
$[\alpha]_D^{21}$ +46.1 (*c* 1.0, Et_2O)

Source of chirality: catalytic asymmetric hydroboration of 4-chlorostyrene, followed by oxidation

Absolute configuration: *R*

T. Hayashi, Y. Matsumoto, and Y. Ito

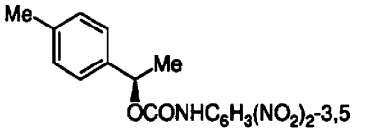
Tetrahedron: Asymmetry **1991**, *2*, 601



$C_9H_{12}O$

1-(4-Methylphenyl)ethanol

E.e. = 93.8% [by converting into



and HPLC with chiral stationary phase column, Sumipax OA-4100]

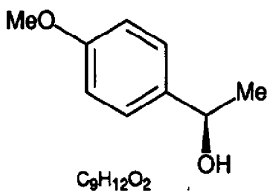
$[\alpha]_D^{25}$ +51.6 (*c* 1.0, $CHCl_3$)

Source of chirality: catalytic asymmetric hydroboration of 4-methylstyrene, followed by oxidation

Absolute configuration: *R*

T. Hayashi, Y. Matsumoto, and Y. Ito

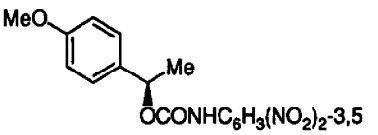
Tetrahedron: Asymmetry **1991**, *2*, 601



$C_9H_{12}O_2$

1-(4-Methoxyphenyl)ethanol

E.e. = 88.5% [by converting into



and HPLC with chiral stationary phase column, Sumipax OA-4100]

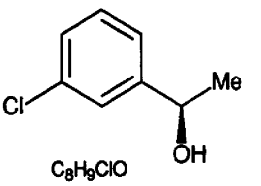
$[\alpha]_D^{20}$ +47.2 (*c* 1.0, $CHCl_3$)

Source of chirality: catalytic asymmetric hydroboration of 4-methoxystyrene, followed by oxidation

Absolute configuration: *R*

T. Hayashi, Y. Matsumoto, and Y. Ito

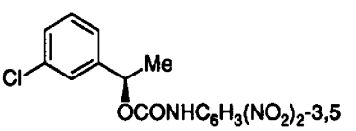
Tetrahedron: Asymmetry **1991**, *2*, 601



C_8H_9ClO

1-(3-Chlorophenyl)ethanol

E.e. = 84.6% [by converting into



and HPLC with chiral stationary phase column, Sumipax OA-4100]

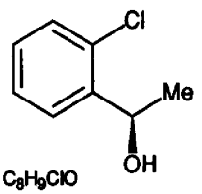
$[\alpha]_D^{20}$ +36.7 (*c* 1.0, $CHCl_3$)

Source of chirality: catalytic asymmetric hydroboration of 3-chlorostyrene, followed by oxidation

Absolute configuration: *R* (assigned by similarity in elution order in the HPLC analysis)

T. Hayashi, Y. Matsumoto, and Y. Ito

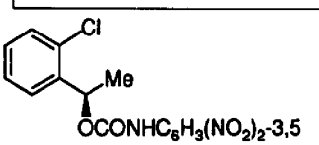
Tetrahedron: Asymmetry **1991**, *2*, 601



C_8H_9ClO

1-(2-Chlorophenyl)ethanol

E.e. = 72.1% [by converting into



and HPLC with chiral stationary phase column, Sumipax OA-4100]

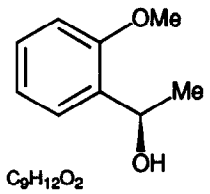
$[\alpha]_D^{20}$ +22.4 (*c* 1.1, $CHCl_3$)

Source of chirality: catalytic asymmetric hydroboration of 2-chlorostyrene, followed by oxidation

Absolute configuration: *R* (assigned by similarity in elution order in the HPLC analysis)

T. Hayashi, Y. Matsumoto, and Y. Ito

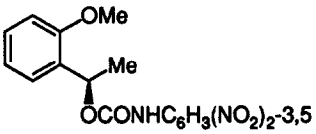
Tetrahedron: Asymmetry **1991**, *2*, 601



$C_9H_{12}O_2$

1-(2-Methoxyphenyl)ethanol

E.e. = 81.5% [by converting into



and HPLC with chiral stationary phase column, Sumipax OA-4100]

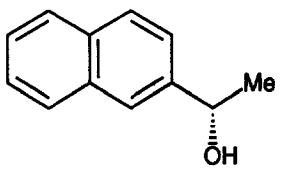
$[\alpha]_D^{20}$ +48.9 (*c* 1.1, toluene)

Source of chirality: catalytic asymmetric hydroboration of 2-methoxystyrene, followed by oxidation

Absolute configuration: *R*

T. Hayashi, Y. Matsumoto, and Y. Ito

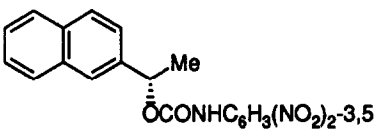
Tetrahedron: Asymmetry **1991**, *2*, 601



$C_{12}H_{12}O$

1-(2-Naphthyl)ethanol

E.e. = 13.2% [by converting into



and HPLC with chiral stationary phase column, Sumipax OA-4100]

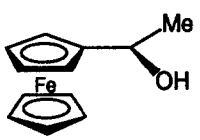
$[\alpha]_D^{20}$ –7.5° (*c* 0.1, EtOH)

Source of chirality: catalytic asymmetric hydroboration of 2-vinylnaphthalene, followed by oxidation

Absolute configuration: *S*

T. Hayashi, Y. Matsumoto, and Y. Ito

Tetrahedron: Asymmetry **1991**, *2*, 601



$C_{12}H_{14}OFe$

1-Ferrocenylethanol

E.e. = 58% [determined by comparison of optical rotation with that reported.]

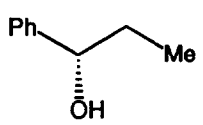
$[\alpha]_D^{25}$ –17.0 (*c* 1.1, benzene)

Source of chirality: catalytic asymmetric hydroboration of vinylferrocene, followed by oxidation

Absolute configuration: *R*

T. Hayashi, Y. Matsumoto, and Y. Ito

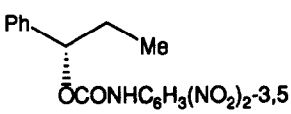
Tetrahedron: Asymmetry **1991**, *2*, 601



$C_9H_{12}O$

1-Phenyl-1-propanol

E.e. = 42.3% [by converting into



and HPLC with chiral stationary phase column, Sumipax OA-4100]

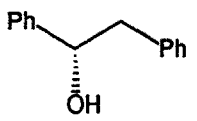
$[\alpha]_D^{20}$ –20.6° (*c* 1.0, $CHCl_3$)

Source of chirality: catalytic asymmetric hydroboration of (*E*)-1-phenylpropene, followed by oxidation

Absolute configuration: *S*

T. Hayashi, Y. Matsumoto, and Y. Ito

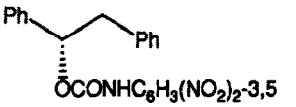
Tetrahedron: Asymmetry **1991**, *2*, 601



$C_{14}H_{14}O$

1,2-Diphenylethanol

E.e. = 16.4% [by converting into



and HPLC with chiral stationary phase column, Sumipax OA-4100]

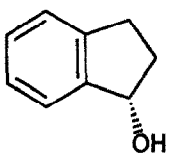
$[\alpha]_D^{23}$ +10.6 (*c* 1.0, EtOH)

Source of chirality: catalytic asymmetric hydroboration of (*E*)-stilbene, followed by oxidation

Absolute configuration: *S*

T. Hayashi, Y. Matsumoto, and Y. Ito

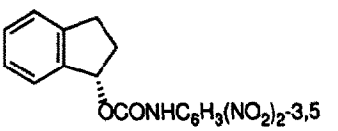
Tetrahedron: Asymmetry **1991**, *2*, 601



$C_9H_{10}O$

1-Indanol

E.e. = 13.1% [by converting into



and HPLC with chiral stationary phase column, Sumipax OA-4100]

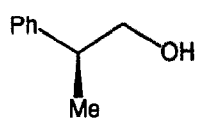
$[\alpha]_D^{22.5}$ –3.81 (*c* 1.2, $CHCl_3$)

Source of chirality: catalytic asymmetric hydroboration of indene, followed by oxidation

Absolute configuration: *S*

T. Hayashi, Y. Matsumoto, and Y. Ito

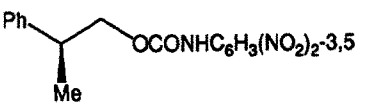
Tetrahedron: Asymmetry **1991**, *2*, 601



$C_9H_{12}O$

2-Phenyl-1-propanol

E.e. = 19.2% [by converting into



and HPLC with chiral stationary phase column, Sumipax OA-1100]

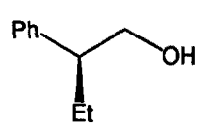
$[\alpha]_D^{17}$ –4.0 (*c* 0.9, benzene)

Source of chirality: catalytic asymmetric hydroboration of 2-phenylpropene, followed by oxidation

Absolute configuration: *S*

T. Hayashi, Y. Matsumoto, and Y. Ito

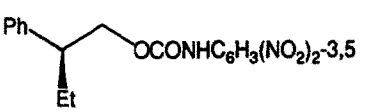
Tetrahedron: Asymmetry **1991**, *2*, 601



$C_{10}H_{14}O$

2-Phenyl-1-butanol

E.e. = 46.5% [by converting into



and HPLC with chiral stationary phase column, Sumipax OA-1100]

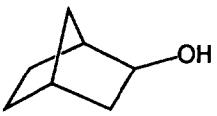
$[\alpha]_D^{22}$ +8.0 (*c* 1.1, EtOH)

Source of chirality: catalytic asymmetric hydroboration of 2-phenyl-1-butene, followed by oxidation

Absolute configuration: *S*

T. Hayashi, Y. Matsumoto, and Y. Ito

Tetrahedron: Asymmetry **1991,** *2*, 601



$C_7H_{12}O$

exo-Norborneol

E.e. = 14.8% [by converting into 

and HPLC with chiral stationary phase column, Sumipax OA-4100]

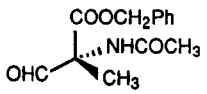
$[\alpha]_D^{25}$ –1.0 (*c* 1.1, $CHCl_3$)

Source of chirality: catalytic asymmetric hydroboration of norbornene, followed by oxidation

Absolute configuration: 1*S*, 2*S*, 4*R*

S. Gladiali and L. Pinna

Tetrahedron: Asymmetry **1991,** *2*, 623



$C_{13}H_{15}NO_4$

Benzyl 2-formyl N-acetylalaninate

E.e. = 75% (by GLC with chiral capillary column)

$[\alpha]_D^{25}$ = +48±2 (c 2, acetone) for the optically pure product

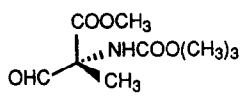
Source of chirality: asymmetric hydroformylation of benzyl N-acetamidoacrylate

Absolute configuration : R

(assigned by correlation of configuration)

S. Gladiali and L. Pinna

Tetrahedron: Asymmetry **1991,** *2*, 623



$C_{10}H_{17}NO_5$

Methyl 2-formyl-N-*t*.butyloxycarbonyl alaninate

E.e. = 46% (by GLC with chiral capillary column)

$[\alpha]_D^{25}$ = +60±2 (c 2, acetone) for the optically pure product

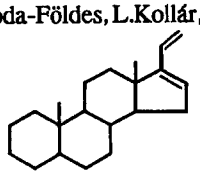
Source of chirality: asymmetric hydroformylation of methyl N-t.butyloxycarbonylamidoacrylate

Absolute configuration : R

(assigned by correlation of configuration)

R.Skoda-Földes, L.Kollár, B.Heil, Gy.Gálik, Z.Tuba and A.Arcadi

Tetrahedron: Asymmetry **1991,** *2*, 633



$C_{21}H_{32}$

16,20-Pregnadiene

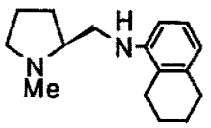
Source of chirality: 17-iodo-androsta-16-ene

$[\alpha]_{546}^{20}$ +26.4 (c 0.53, in $CHCl_3$)

mp 59°C

S. Kobayashi, M. Furuya, A. Ohtsubo and T. Mukaiyama

Tetrahedron: Asymmetry **1991,** *2*, 635



E. e. = Not determined
$[\alpha]_D^{22}$ -27.1 (c 0.88, EtOH)

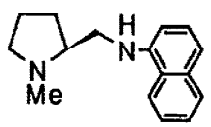
Source of chirality: (S)-proline

Absolute configuration S

$C_{16}H_{24}N_2$
1-Methyl-2-[(N-1-(5,6,7,8-tetrahydronaphthyl)amino)methyl]pyrrolidine

S. Kobayashi, M. Furuya, A. Ohtsubo and T. Mukaiyama

Tetrahedron: Asymmetry **1991,** *2*, 635



E. e. = Not determined
$[\alpha]_D^{30}$ -35.6 (c 1.05, EtOH)

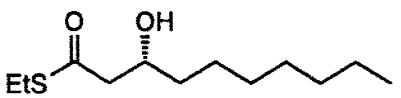
Source of chirality: (S)-proline

Absolute configuration S

$C_{15}H_{20}N_2$
1-Methyl-2-[(N-1-naphthylamino)methyl]pyrrolidine

S. Kobayashi, M. Furuya, A. Ohtsubo and T. Mukaiyama

Tetrahedron: Asymmetry **1991,** *2*, 635



E. e. = 93% (by HPLC using Daicel Chiralcel OD)
$[\alpha]_D^{29}$ -30.0 (c 2.99, benzene)

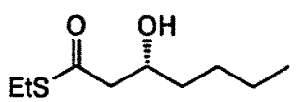
Source of chirality: asymm. synth. (aldol)

Absolute configuration R

$C_{12}H_{24}O_2S$
S-Ethyl 3-hydroxydecanethioate

S. Kobayashi, M. Furuya, A. Ohtsubo and T. Mukaiyama

Tetrahedron: Asymmetry **1991,** *2*, 635



E. e. = 91% (by HPLC using Daicel Chiralcel OD)
$[\alpha]_D^{28}$ -37.9 (c 4.03, benzene)

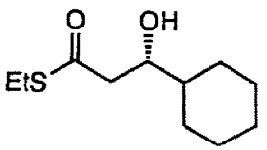
Source of chirality: asymm. synth. (aldol)

Absolute configuration R

$C_9H_{18}O_2S$
S-Ethyl 3-hydroxyheptanethioate

S. Kobayashi, M. Furuya, A. Ohtsubo and T. Mukaiyama

Tetrahedron: Asymmetry **1991**, *2*, 635



E. e. = 92% (by HPLC using Daicel Chiralcel OD)
$[\alpha]_D^{32}$ -42.9 (c 2.45, benzene)

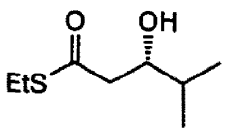
Source of chirality: asymm. synth. (aldol)

Absolute configuration S

$C_{11}H_{20}O_2S$
S-Ethyl 3-cyclohexyl-3-hydroxypropanethioate

S. Kobayashi, M. Furuya, A. Ohtsubo and T. Mukaiyama

Tetrahedron: Asymmetry **1991**, *2*, 635



E. e. = 90% (by HPLC using Daicel Chiralcel OD)
$[\alpha]_D^{28}$ -50.2 (c 1.88, benzene)

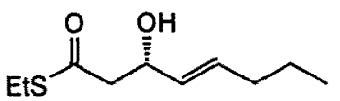
Source of chirality: asymm. synth. (aldol)

Absolute configuration S

$C_8H_{16}O_2S$
S-Ethyl 3-hydroxy-4-methylpentanethioate

S. Kobayashi, M. Furuya, A. Ohtsubo and T. Mukaiyama

Tetrahedron: Asymmetry **1991**, *2*, 635



E. e. = 72% (by HPLC using Daicel Chiralcel OD)
$[\alpha]_D^{30}$ -43.2 (c 1.87, benzene)

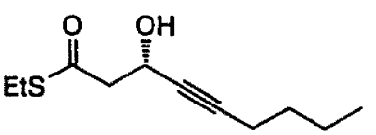
Source of chirality: asymm. synth. (aldol)

Absolute configuration S

$C_{10}H_{18}O_2S$
S-Ethyl 3-hydroxy-trans-4-octenethioate

S. Kobayashi, M. Furuya, A. Ohtsubo and T. Mukaiyama

Tetrahedron: Asymmetry **1991**, *2*, 635



E. e. = 88% (by HPLC using Daicel Chiralcel OD)
$[\alpha]_D^{27}$ -36.1 (c 2.97, benzene)

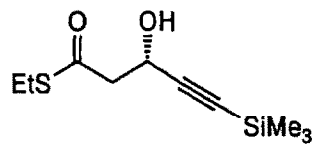
Source of chirality: asymm. synth. (aldol)

Absolute configuration S

$C_{11}H_{18}O_2S$
S-Ethyl 3-hydroxy-4-nonynethioate

S. Kobayashi, M. Furuya, A. Ohtsubo and T. Mukaiyama

Tetrahedron: Asymmetry **1991**, *2*, 635



E. e. = 77% (by HPLC using Daicel Chiralcel AD)
$[\alpha]_D^{29}$ -32.6 (c 1.80, benzene)

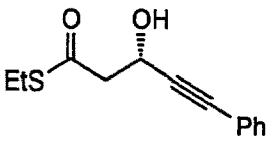
Source of chirality: asymm. synth. (aldol)

Absolute configuration S

$C_{10}H_{18}O_2SSi$
S-Ethyl 3-hydroxy-5-trimethylsilyl-4-pentynethioate

S. Kobayashi, M. Furuya, A. Ohtsubo and T. Mukaiyama

Tetrahedron: Asymmetry **1991**, *2*, 635



E. e. = 79% (by HPLC using Daicel Chiralcel AD)
$[\alpha]_D^{30}$ -37.7 (c 5.70, benzene)

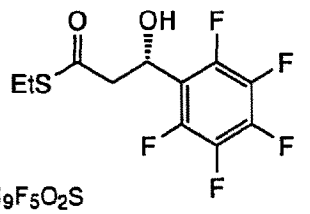
Source of chirality: asymm. synth. (aldol)

Absolute configuration S

$C_{13}H_{14}O_2S$
S-Ethyl 3-hydroxy-5-phenyl-4-pentynethioate

S. Kobayashi, M. Furuya, A. Ohtsubo and T. Mukaiyama

Tetrahedron: Asymmetry **1991**, *2*, 635



E. e. = 68% (by HPLC using Daicel Chiralcel OD)
$[\alpha]_D^{30}$ +15.4 (c 1.15, benzene)

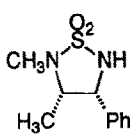
Source of chirality: asymm. synth. (aldol)

Absolute configuration S

$C_{11}H_9F_5O_2S$
S-Ethyl 3-hydroxy-3-pentafluorophenylpropanethioate

D. Sartor, J. Saffrich, G. Helmchen, C. J. Richards and H. Lambert

Tetrahedron: Asymmetry **1991**, *2*, 639

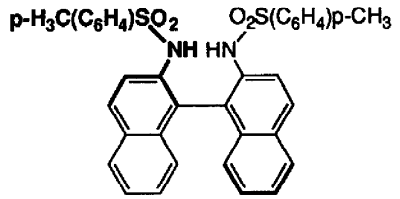


E.e. = 100%
$[\alpha]_D^{20}$ = + 18.6 (c = 3.5, $CHCl_3$)
Source of chirality: commercial (-)-ephedrine

$C_{10}H_{14}N_2O_2S$
(3*R*, 4*S*)-4,5-Dimethyl-1,1-dioxo-3-phenyl-1,2,5-thiadiazolidine

D. Sartor, J. Saffrich, G. Helmchen, C. J. Richards and H. Lambert

Tetrahedron: Asymmetry **1991,** *2*, 639



$C_{34}H_{28}N_2O_4S_2$
(*R*)-N,N´-Ditosyl-2-2´-diamino-1-1´-binaphthyl

E.e. > 99%
$[\alpha]_D^{20}$= +70.5 (c = 2.2, $CHCl_3$)
Source of chirality: commercial (+)-(*R*)- 2,2´-diamino-1,1´-binaphthyl

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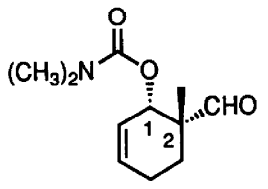
K. Mikami, M. Terada, Y. Motoyama and T. Nakai

Tetrahedron: Asymmetry **1991,** *2*, 643

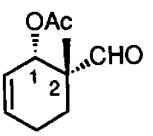


$C_{11}H_{17}N_1O_3$

E.e. = 85% (by LIS-NMR analysis)
$[\alpha]_D^{25}$ = 165.3 (c 1.72, $CHCl_3$) (99.4:0.6 *endo/exo*-mixture)
Source of chirality: Asymmetric Synthesis
Absolute configuration: 1*S*, 2*R*

K. Mikami, M. Terada, Y. Motoyama and T. Nakai

Tetrahedron: Asymmetry **1991,** *2*, 643

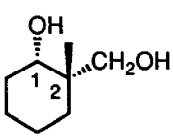


$C_{10}H_{14}O_3$

E.e. = 78% (by LIS-NMR analysis)
$[\alpha]_D^{25}$ = 168.4 (c 0.98, $CHCl_3$) (97:3 *endo/exo*-mixture)
Source of chirality: Asymmetric Synthesis
Absolute configuration: 1*S*, 2*R*

K. Mikami, M. Terada, Y. Motoyama and T. Nakai

Tetrahedron: Asymmetry **1991,** *2*, 643

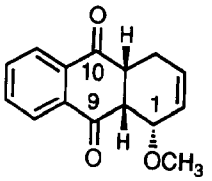


$C_8H_{16}O_2$

E.e. = 85% (by NMR analysis after conversion to MTPA ester)
$[\alpha]_D^{23}$ = 14.8 (c 2.95, $CHCl_3$)
Source of chirality: Asymmetric Synthesis
Absolute configuration: 1*S*, 2*S*

K. Mikami, M. Terada, Y. Motoyama and T. Nakai

Tetrahedron: Asymmetry **1991,** *2*, 643

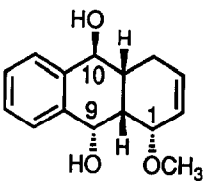


$C_{15}H_{14}O_3$

E.e. = 85% (Not isolable. The % ee was determined after reduction)
Source of chirality: Asymmetric Synthesis
Absolute configuration: 1(*S*), 4a(*R*), 9a(*R*) (supposed on the basis of analogy with general method)

K. Mikami, M. Terada, Y. Motoyama and T. Nakai

Tetrahedron: Asymmetry **1991,** *2*, 643

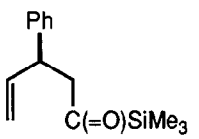


$C_{15}H_{18}O_3$

E.e. = 85% (by NMR analysis after conversion to MTPA ester)
Source of chirality: Asymmetric Synthesis
Absolute configuration: 1(*S*), 4a(*R*), 9(*S*), 9a(*S*), 10(*S*)
(supposed on the basis of analogy with general method)

K. Maruoka, H. Banno, and H. Yamamoto

Tetrahedron: Asymmetry **1991,** *2*, 647

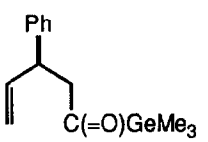


E.e. = 88%
$[a]_D^{24}$ -38.5 (*c* 0.5, $CHCl_3$)
Source of chirality: asymmetric Claisen rearrangement
Absolute configuration: 3*S*

$C_{14}H_{20}OSi$
(*S*)-3-phenyl-1-(trimethylsilyl)-4-penten-1-one

K. Maruoka, H. Banno, and H. Yamamoto

Tetrahedron: Asymmetry **1991,** *2*, 647

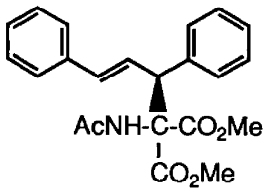


E.e. = 91%
$[a]_D^{24}$ -23.7 (*c* 0.5, $CHCl_3$)
Source of chirality: asymmetric Claisen rearrangement
Absolute configuration: 3*S*

$C_{14}H_{20}OGe$
(*S*)-3-phenyl-1-(trimethylgermyl)-4-penten-1-one

M. Yamaguchi,* T. Shima, T. Yamagishi,* and M. Hida

Tetrahedron: Asymmetry **1991,** *2*, 663

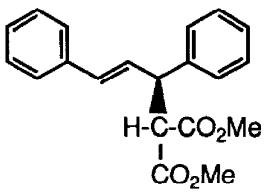


E.e. = 94% (by ^{1}H NMR)
$[\alpha]_D^{20}$ = -51 (c = 0.6, EtOH)
Circular dichroism : λ^{EtOH}_{max} ($\Delta\varepsilon$) = 288 nm (-0.18)
Source of chirality : Asymm. synth. with palladium complex
Absolute configuration : S (assigned by chemical transformation from dimethyl 2-((E)-1,3R-diphenyl-2-propenyl)malonate)

$C_{22}H_{23}NO_5$
Dimethyl 2-acetamido-2-((E)-1,3-diphenyl-2-propenyl)malonate

M. Yamaguchi,* T. Shima, T. Yamagishi,* and M. Hida

Tetrahedron: Asymmetry **1991,** *2*, 663

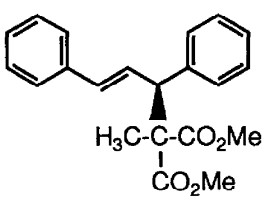


E.e. = 90% (by ^{1}H NMR)
$[\alpha]_D^{20}$ = +18 (c = 0.6, EtOH)
Circular dichroism : λ^{EtOH}_{max} ($\Delta\varepsilon$) = 292 nm (-0.10)
Source of chirality : Asymm. synth. with palladium complex
Absolute configuration : R (ref. Hayashi, T.; Yamamoto, A.; Hagihara, T.; Ito, Y. *Tetrahedron Lett.* **1986**, *27*, 191.)

$C_{20}H_{20}O_4$
Dimethyl 2-((E)-1,3-diphenyl-2-propenyl)malonate

M. Yamaguchi,* T. Shima, T. Yamagishi,* and M. Hida

Tetrahedron: Asymmetry **1991,** *2*, 663

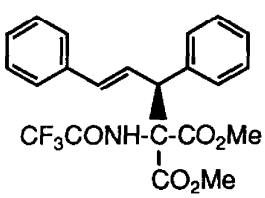


E.e. = 80% (by ^{1}H NMR)
$[\alpha]_D^{20}$ = -37 (c = 0.6, EtOH)
Circular dichroism : λ^{EtOH}_{max} ($\Delta\varepsilon$) = 295 nm (-0.15)
Source of chirality : Asymm. synth. with palladium complex
Absolute configuration : R

$C_{21}H_{22}O_4$
Dimethyl 2-methyl-2-((E)-1,3-diphenyl-2-propenyl)malonate

M. Yamaguchi,* T. Shima, T. Yamagishi,* and M. Hida

Tetrahedron: Asymmetry **1991,** *2*, 663

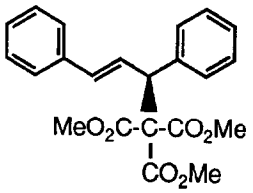


E.e. = 78% (by ^{1}H NMR)
$[\alpha]_D^{20}$ = -41 (c = 0.6, EtOH)
Circular dichroism : λ^{EtOH}_{max} ($\Delta\varepsilon$) = 286nm (-0.43)
Source of chirality : Asymm. synth. with palladium complex
Absolute configuration : S

$C_{22}H_{20}NO_5F_3$
Dimethyl 2-trifluoroacetamido-2-((E)-1,3-diphenyl-2-propenyl)malonate

M. Yamaguchi,* T. Shima, T. Yamagishi,* and M. Hida

Tetrahedron: Asymmetry **1991**, *2*, 663

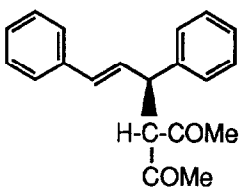


E.e. = 81% (by ^{1}H NMR)
$[\alpha]_D^{20}$ = -23 (c = 0.6, EtOH)
Circular dichroism : λ^{EtOH}_{max} ($\Delta\varepsilon$) = 290 nm (-0.36)
Source of chirality : Asymm. synth. with palladium complex
Absolute configuration : S

$C_{22}H_{22}O_6$
Dimethyl 2-methoxycarbonyl-2-((E)-1,3-diphenyl-2-propenyl)malonate

M. Yamaguchi,* T. Shima, T. Yamagishi,* and M. Hida

Tetrahedron: Asymmetry **1991**, *2*, 663

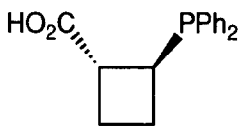


E.e. = 90% (by ^{1}H NMR)
$[\alpha]_D^{20}$ = -10(c = 0.6, EtOH)
Source of chirality : Asymm. synth. with palladium complex
Absolute configuration : R (ref. Hayashi, T.; Yamamoto, A.; Hagihara, T.; Ito, Y. *Tetrahedron Lett.* **1986**, *27*, 191.)

$C_{20}H_{20}O_2$
3-((E)-1,3-diphenyl-2-propenyl)-2,4-pentanedione

Y. Okada, T. Minami, Y. Umezu, S. Nishikawa, R. Mori, and Y. Nakayama

Tetrahedron: Asymmetry **1991**, *2*, 667



(-)-Form: optical purity=96 %ee
$[\alpha]_D$=-90.1 (c 6.3, CH_2Cl_2)

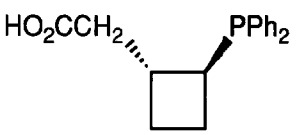
(+)-Form: optical purity=92 %ee
$[\alpha]_D$=86.5 (c 2.2, CH_2Cl_2)

$C_{17}H_{17}O_2P$

trans-(2-Diphenylphosphino)cyclobutanecarboxylic acid

Y. Okada, T. Minami, Y. Umezu, S. Nishikawa, R. Mori, and Y. Nakayama

Tetrahedron: Asymmetry **1991**, *2*, 667



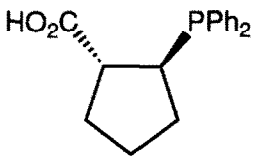
(+)-Form: optical purity=>99 %ee
$[\alpha]_D$=24.1 (c 1.6, CH_2Cl_2)

$C_{18}H_{19}O_2P$

trans-[2-(Diphenylphosphino)cyclobutyl]acetic acid

Y. Okada, T. Minami, Y. Umezu, S. Nishikawa, R. Mori, and Y. Nakayama

Tetrahedron: Asymmetry **1991**, *2*, 667



$C_{18}H_{19}O_2P$

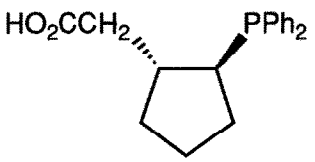
trans-(2-Diphenylphosphino)cyclopentanecarboxylic acid

(-)-Form: optical purity=83 %ee
$[\alpha]_D$=-29.6 (c 1.8, CH_2Cl_2)

(+)-Form: optical purity=95 %ee
$[\alpha]_D$=31.4 (c 1.0, CH_2Cl_2)

Y. Okada, T. Minami, Y. Umezu, S. Nishikawa, R. Mori, and Y. Nakayama

Tetrahedron: Asymmetry **1991**, *2*, 667



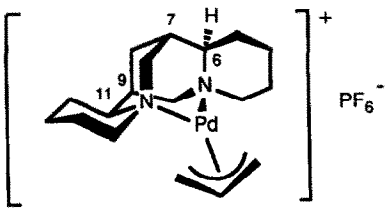
$C_{18}H_{19}O_2P$

trans-[2-(Diphenylphosphino)cyclopentyl]acetic acid

(-)-Form: optical purity=94 %ee
$[\alpha]_D$=-2.69 (c 1.0, CH_2Cl_2)
(+)-Form: optical purity=97 %ee
$[\alpha]_D$=6.79 (c 1.0, CH_2Cl_2)

Antonio Togni

Tetrahedron: Asymmetry **1991**, *2*, 683

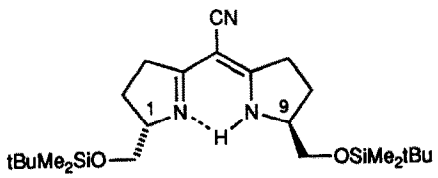


(η^3-Allyl)(Sparteine)palladium(II) Hexafluorophosphate
$C_{18}H_{31}F_6N_2PPd$

E.e.=100 %
$[\alpha]^{22}_D$=-67 (c=1.035, CH_2Cl_2)
Source of chirality : natural
Absolute configuration (of natural (-)-sparteine):
6R, 7S, 9S, 11S

P. von Matt and A. Pfaltz

Tetrahedron: Asymmetry **1991**, *2*, 691



$C_{24}H_{45}N_3O_2Si_2$

1,9-Bis{[(*tert*-butyl)dimethylsilyloxy]methyl}-5-cyano-semicorrin

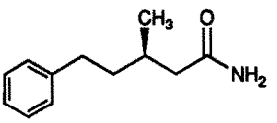
$[\alpha]_D = -64.7$ (c 1.0, $CHCl_3$, 23°C)

Source of chirality: synthesis from L-pyroglutamic acid

Absolute configuration 1*S*, 9*S*
(based on configuration of pyroglutamic acid)

P. von Matt and A. Pfaltz

Tetrahedron: Asymmetry **1991**, *2*, 691



$C_{12}H_{17}NO$

3-Methyl-5-phenylpentanamide

E.e. = 95.1 % (by HPLC analysis of the corresponding (*R*)-1-naphthyl)ethylamide)

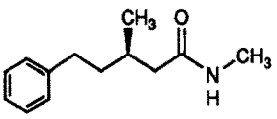
$[\alpha]_D$ = +17.6 (c 1.0, $CHCl_3$, 23 °C)

Source of chirality: asymmetric synthesis

Absolute configuration *R*
(assigned by optical rotation according to the literature)

P. von Matt and A. Pfaltz

Tetrahedron: Asymmetry **1991**, *2*, 691



$C_{13}H_{19}NO$

N,3-Dimethyl-5-phenylpentanamide

E.e. = 98.7 % (by HPLC analysis of the corresponding (*R*)-1-naphthyl)ethylamide)

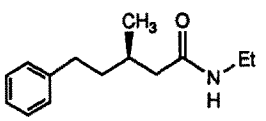
$[\alpha]_D$ = +18.4 (c 1.0, $CHCl_3$, 23 °C)

Source of chirality: asymmetric synthesis

Absolute configuration *R*
(assigned by optical rotation according to the literature)

P. von Matt and A. Pfaltz

Tetrahedron: Asymmetry **1991**, *2*, 691



$C_{14}H_{21}NO$

N-Ethyl-3-methyl-5-phenylpentanamide

E.e. = 94.8 % (by HPLC analysis of the corresponding (*R*)-1-naphthyl)ethylamide)

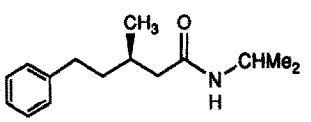
$[\alpha]_D$ = +14.7 (c 1.0, $CHCl_3$, 23 °C)

Source of chirality: asymmetric synthesis

Absolute configuration *R*
(assigned by optical rotation according to the literature)

P. von Matt and A. Pfaltz

Tetrahedron: Asymmetry **1991**, *2*, 691



$C_{15}H_{23}NO$

N-Isopropyl-3-methyl-5-phenylpentanamide

E.e. = 93.5 % (by HPLC analysis of the corresponding (*R*)-1-naphthyl)ethylamide)

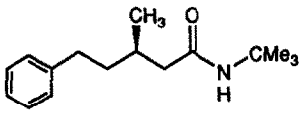
$[\alpha]_D$ = +9.6 (c 1.0, $CHCl_3$, 23 °C)

Source of chirality: asymmetric synthesis

Absolute configuration *R*
(assigned by optical rotation according to the literature)

P. von Matt and A. Pfaltz

Tetrahedron: Asymmetry **1991**, *2*, 691



$C_{16}H_{25}NO$

N-*tert*-Butyl-3-methyl-5-phenylpentanamide

E.e. = 92.0 % (by HPLC analysis of the corresponding (*R*)-1-naphthyl)ethylamide)

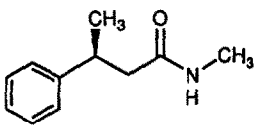
$[\alpha]_D$ = +8.9 (c 1.0, $CHCl_3$, 23°C)

Source of chirality: asymmetric synthesis

Absolute configuration *R*
(assigned by optical rotation according to the literature)

P. von Matt and A. Pfaltz

Tetrahedron: Asymmetry **1991**, *2*, 691



$C_{11}H_{15}NO$

N-Methyl-3-phenylbutanamide

E.e. = 92.3 % (by HPLC analysis of the corresponding (*R*)-1-naphthyl)ethylamide)

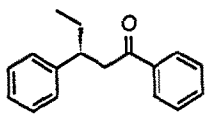
$[\alpha]_D$ = +38.2 (c 1.0, $CHCl_3$, 23°C)

Source of chirality: asymmetric synthesis

Absolute configuration *S*
(assigned by optical rotation according to the literature)

C. Bolm

Tetrahedron: Asymmetry **1991**, *2*, 701



$C_{17}H_{18}O$

1,3-Diphenylpentanone

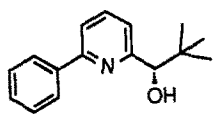
Ee = 86% (by HPLC analysis)

Absolute configuration: R

Source of chirality: asymmetric synthesis

C. Bolm

Tetrahedron: Asymmetry **1991**, *2*, 701



$C_{16}H_{19}NO$

2,2-Dimethyl-1-(6-phenyl-pyridin-2-yl)propanol

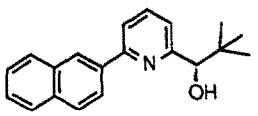
Ee = 98% (by HPLC analysis)

Absolute configuration: S

Source of chirality: asymmetric synthesis

C. Bolm

Tetrahedron: Asymmetry **1991**, *2*, 701



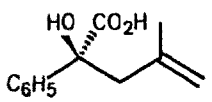
***Ee* = 98% (by HPLC analysis)**
Absolute configuration: S
Source of chirality: asymmetric synthesis

$C_{20}H_{21}NO$

2,2-Dimethyl-1-[6-(naphth-2-yl)-pyridin-2-yl]propanol

H. Moorlag and R.M. Kellogg

Tetrahedron: Asymmetry **1991**, *2*, 705



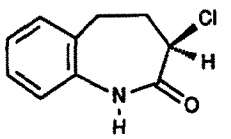
ee ≥ 98% (by ^1H NMR with (S)-2-chloropropanoyl chloride)
$[\alpha]^{rt}_{578}$ = -27.0 (c 1, $CHCl_3$)
Source of chirality: enzymatic resolution
Absolute configuration: S
(assigned by chemical correlation)

$C_{12}H_{14}O_3$

2-Hydroxy-2-phenyl-4-methyl-4-pentenoic acid

H.U. Blaser*, S.K. Boyer and U. Pittelkow

Tetrahedron: Asymmetry **1991**, *2*, 721



e.e. = 50% (by HPLC on tribenzoylcellulose)

$[\alpha]_D^{20}$ = 370 ± 20 (c=0.5, MeOH)

Source of chirality: cinchonine in the catalytic system
$Pd/BaSO_4$ - cinchonine

Absolute configuration: R

3(R)-3-chloro-2,3,4,5-tetrahydro-1H-[1]benzazepin-2-one