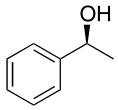
Nathan J. Gilmore and Simon Jones*

Tetrahedron: Asymmetry *14 (2003) 2115*



$C_8H_{10}O$

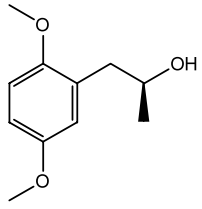
(*S*)-1-Phenyl-ethanol

$[\alpha]_D = -47.3$ (*c* 1, $CHCl_3$)

Enantiomeric excess 85% (HPLC)

Jared M. Wagner, Charles J. McElhinny, Jr., Anita H. Lewin* and F. Ivy Carroll

Tetrahedron: Asymmetry *14 (2003) 2119*



$C_{11}H_{16}O_3$

(*S*)-2,5-Dimethoxyphenyl-2-propanol

E.e. = 100%

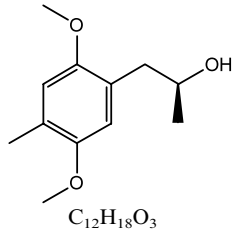
$[\alpha]_D^{23} = +14.8$ (*c*. 1.01, MeOH)

Source of chirality: regioselective synthesis using (*S*)-propylene oxide

Absolute configuration: *S*

Jared M. Wagner, Charles J. McElhinny, Jr., Anita H. Lewin* and F. Ivy Carroll

Tetrahedron: Asymmetry *14 (2003) 2119*



$C_{12}H_{18}O_3$

(*S*)-(2,5-Dimethoxy-4-methylphenyl)-2-propanol

E.e. = 100%

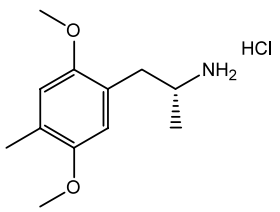
$[\alpha]_D^{22} = +10.5$ (*c*. 1.01, MeOH)

Source of chirality: regioselective synthesis using (*S*)-propylene oxide

Absolute configuration: *S*

Jared M. Wagner, Charles J. McElhinny, Jr., Anita H. Lewin* and F. Ivy Carroll

Tetrahedron: Asymmetry *14 (2003) 2119*



$C_{12}H_{20}ClNO_2$

(*R*)-2,5-Dimethoxy-4-methylamphetamine hydrochloride

E.e. = 96%

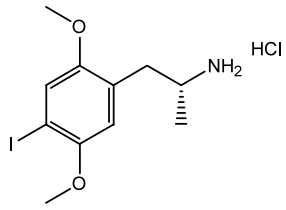
$[\alpha]_D^{22} = +16.2$ (*c*. 1.00, H_2O)

Source of chirality: chiral (*S*)-(2,5-dimethoxy-4-methylphenyl)-2-propyl tosylate using S_N2 displacement with sodium azide

Absolute configuration: *R*

Jared M. Wagner, Charles J. McElhinny, Jr., Anita H. Lewin* and F. Ivy Carroll

Tetrahedron: Asymmetry *14 (2003) 2119*



$C_{11}H_{17}ClINO_2$

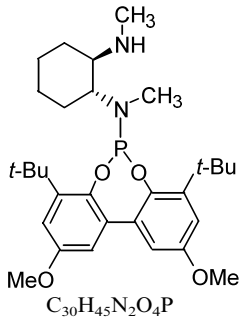
(*R*)-4-Iodo-2,5-dimethoxyamphetamine hydrochloride

$[\alpha]_D^{23} = +12.7$ (*c*. 1.01, H_2O)

Source of chirality: (*R*)-2,5-dimethoxyamphetamine

Carmela G. Arena,* Vincenzo Casilli and Felice Faraone

Tetrahedron: Asymmetry *14 (2003) 2127*



$C_{30}H_{45}N_2O_4P$

N-[(3,3′-Bis-*tert*-butyl-5,5′-bis-methoxy-1,1′-biphenyl-2,2′-diyl)phosphate]-(*R*,*R*)-*N*,*N*′-dimethyl-1,2-diaminocyclohexane

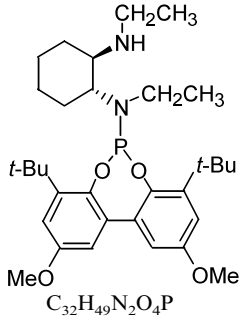
$[\alpha]_D^{21} = -168$ (*c* 3.1, hexane)

Source of chirality: (*R*,*R*)-1,2-diaminocyclohexane

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

Carmela G. Arena,* Vincenzo Casilli and Felice Faraone

Tetrahedron: Asymmetry *14 (2003) 2127*



$C_{32}H_{49}N_2O_4P$

N-[(3,3′-Bis-*tert*-butyl-5,5′-bis-methoxy-1,1′-biphenyl-2,2′-diyl)phosphate]-(*R*,*R*)-N]-(*R*,*R*)-*N*,*N*′-diethyl-1,2-diaminocyclohexane

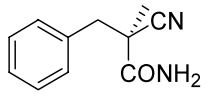
$[\alpha]_D^{21} = -65.4$ (*c* 1.3, hexane)

Source of chirality: (*R*,*R*)-1,2-diaminocyclohexane

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

Zhong-Liu Wu and Zu-Yi Li*

Tetrahedron: Asymmetry *14 (2003) 2133*



$C_{11}H_{12}N_2O$

(*S*)-2-Cyano-2-methyl-3-phenylpropanamide

Ee >99%

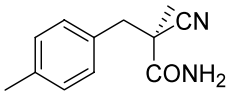
$[\alpha]_D^{17} = +46.85$ (*c* 0.98, $CHCl_3$)

Source of chirality: *Rhodococcus* sp. CGMCC 0497 catalyzed enantioselective hydrolysis of the corresponding dinitrile

Absolute configuration: (*S*)

Zhong-Liu Wu and Zu-Yi Li*

Tetrahedron: Asymmetry *14 (2003) 2133*



$C_{12}H_{14}N_2O$

(*S*)-2-Cyano-2-methyl-3-(4′-methylphenyl)propanamide

Ee = 88%

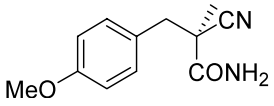
$[\alpha]_D^{25} = +16.7$ (*c* 0.76, $CHCl_3$)

Source of chirality: *Rhodococcus* sp. CGMCC 0497 catalyzed enantioselective hydrolysis of the corresponding dinitrile

Absolute configuration: (*S*)

Zhong-Liu Wu and Zu-Yi Li*

Tetrahedron: Asymmetry *14 (2003) 2133*



$C_{12}H_{14}N_2O_2$

(*S*)-2-Cyano-2-methyl-3-(4′-methoxyphenyl)propanamide

Ee = 96%

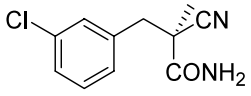
$[\alpha]_D^{28} = +41.0$ (*c* 1.60, $CHCl_3$)

Source of chirality: *Rhodococcus* sp. CGMCC 0497 catalyzed enantioselective hydrolysis of the corresponding dinitrile

Absolute configuration: (*S*)

Zhong-Liu Wu and Zu-Yi Li*

Tetrahedron: Asymmetry *14 (2003) 2133*



$C_{11}H_{11}ClN_2O$

(*S*)-2-Cyano-2-methyl-3-(3′-chlorophenyl)propanamide

Ee = 81%

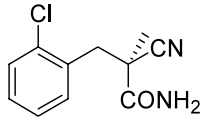
$[\alpha]_D^{25} = +33.7$ (*c* 0.895, $CHCl_3$)

Source of chirality: *Rhodococcus* sp. CGMCC 0497 catalyzed enantioselective hydrolysis of the corresponding dinitrile

Absolute configuration: (*S*)

Zhong-Liu Wu and Zu-Yi Li*

Tetrahedron: Asymmetry *14 (2003) 2133*



$C_{11}H_{11}ClN_2O$

(*S*)-2-Cyano-2-methyl-3-(2′-chlorophenyl)propanamide

Ee >99%

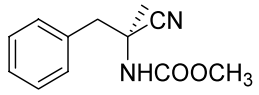
$[\alpha]_D^{25} = +64.9$ (*c* 1.54, $CHCl_3$)

Source of chirality: *Rhodococcus* sp. CGMCC 0497 catalyzed enantioselective hydrolysis of the corresponding dinitrile

Absolute configuration: (*S*)

Zhong-Liu Wu and Zu-Yi Li*

Tetrahedron: Asymmetry *14 (2003) 2133*



$C_{12}H_{14}N_2O_2$

(*S*)-2-Methoxycarbonylamino-2-methyl-3-phenylpropanonitrile

Ee >99%

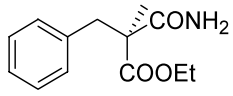
$[\alpha]_D^{22} = -46.6$ (*c* 0.798, $CHCl_3$)

Source of chirality: Hoffman rearrangement from (*S*)-2-cyano-2-methyl-3-phenylpropanamide

Absolute configuration: (*S*)

Zhong-Liu Wu and Zu-Yi Li*

Tetrahedron: Asymmetry *14 (2003) 2133*



$C_{13}H_{17}NO_3$

(*S*)-2-Benzyl-2-methylmalonamic acid ethyl ester

Ee >99%

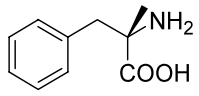
$[\alpha]_D^{16} = +3.3$ (*c* 2.6, $CHCl_3$)

Source of chirality: chemical conversion from (*S*)-2-cyano-2-methyl-3-phenylpropanamide

Absolute configuration: (*S*)

Zhong-Liu Wu and Zu-Yi Li*

Tetrahedron: Asymmetry *14 (2003) 2133*



$C_{10}H_{13}NO_2$

(*S*)-α-Methylphenylalanine

Ee >99%

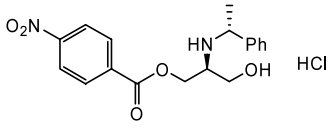
$[\alpha]_D^{17} = -22.0$ (*c* 0.61, H_2O)

Source of chirality: chemical conversion from (*S*)-2-cyano-2-methyl-3-phenylpropanamide

Absolute configuration: (*S*)

Shigeo Sugiyama,* Takayuki Inoue and Keitaro Ishii*

Tetrahedron: Asymmetry *14 (2003) 2153*



$C_{18}H_{20}N_2O_5 \cdot HCl$

(2*S*,α*R*)-3-Hydroxy-2-(α-methylbenzyl)aminopropyl 4-nitrobenzoate hydrochloride

E.e. >98%

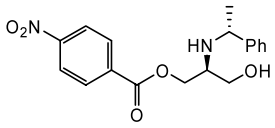
$[\alpha]_D^{21} = -15.4$ (*c* 1.0, DMSO)

Source of chirality: (*R*)-(α-methylbenzyl)amine

Absolute configuration: (2*S*,α*R*)

Shigeo Sugiyama,* Takayuki Inoue and Keitaro Ishii*

Tetrahedron: Asymmetry *14 (2003) 2153*



$C_{18}H_{20}N_2O_5$

(2*S*,α*R*)-3-Hydroxy-2-(α-methylbenzyl)aminopropyl 4-nitrobenzoate

E.e. >98%

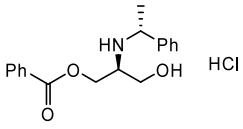
$[\alpha]_D^{21} = -14.4$ (*c* 1.0, $CHCl_3$)

Source of chirality: (*R*)-(α-methylbenzyl)amine

Absolute configuration: (2*S*,α*R*)

Shigeo Sugiyama,* Takayuki Inoue and Keitaro Ishii*

Tetrahedron: Asymmetry *14 (2003) 2153*



$C_{18}H_{21}NO_3 \cdot HCl$

(2*S*,α*R*)-3-Hydroxy-2-(α-methylbenzyl)aminopropyl benzoate hydrochloride

E.e. >98%

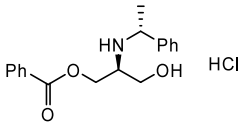
$[\alpha]_D^{21} = -12.1$ (*c* 1.0, MeOH)

Source of chirality: (*R*)-(α-methylbenzyl)amine

Absolute configuration: (2*S*,α*R*)

Shigeo Sugiyama,* Takayuki Inoue and Keitaro Ishii*

Tetrahedron: Asymmetry *14 (2003) 2153*



$C_{18}H_{21}NO_3 \cdot HBr$

(2*S*,α*R*)-3-Hydroxy-2-(α-methylbenzyl)aminopropyl benzoate hydrobromide

E.e. >98%

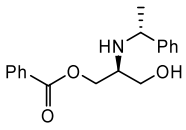
$[\alpha]_D^{21} = -6.5$ (*c* 1.0, MeOH)

Source of chirality: (*R*)-(α-methylbenzyl)amine

Absolute configuration: (2*S*,α*R*)

Shigeo Sugiyama,* Takayuki Inoue and Keitaro Ishii*

Tetrahedron: Asymmetry *14 (2003) 2153*



$C_{18}H_{21}NO_3$

(2*S*,α*R*)-3-Hydroxy-2-(α-methylbenzyl)aminopropyl benzoate

E.e. >98%

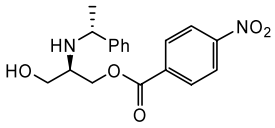
$[\alpha]_D^{21} = -11.3$ (*c* 0.3, $CHCl_3$)

Source of chirality: (*R*)-(α-methylbenzyl)amine

Absolute configuration: (2*S*,α*R*)

Shigeo Sugiyama,* Takayuki Inoue and Keitaro Ishii*

Tetrahedron: Asymmetry *14 (2003) 2153*



$C_{18}H_{20}N_2O_5$

(2*R*,α*R*)-3-Hydroxy-2-(α-methylbenzyl)aminopropyl 4-nitrobenzoate

E.e. >98%

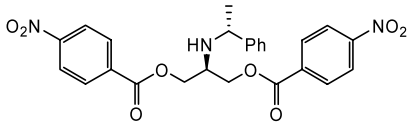
$[\alpha]_D^{21} = +46.6$ (*c* 1.0, $CHCl_3$)

Source of chirality: (*R*)-(α-methylbenzyl)amine

Absolute configuration: (2*R*,α*R*)

Shigeo Sugiyama,* Takayuki Inoue and Keitaro Ishii*

Tetrahedron: Asymmetry *14 (2003) 2153*



$C_{25}H_{23}N_3O_8$

(α*R*)-2-(α-Methylbenzyl)amino-1,3-propyl di-4-nitrobenzoate

E.e. >98%

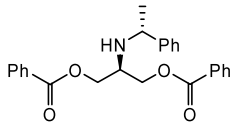
$[\alpha]_D^{21} = -3.2$ (*c* 0.3, $CHCl_3$)

Source of chirality: (*R*)-(α-methylbenzyl)amine

Absolute configuration: (α*R*)

Shigeo Sugiyama,* Takayuki Inoue and Keitaro Ishii*

Tetrahedron: Asymmetry *14 (2003) 2153*



$C_{25}H_{25}NO_4$

(α*R*)-2-(α-Methylbenzyl)amino-1,3-propyl dibenzoate

E.e. >98%

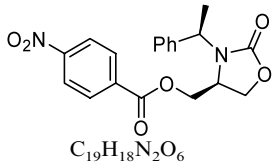
$[\alpha]_D^{21} = -18.6$ (*c* 0.5, $CHCl_3$)

Source of chirality: (*R*)-(α-methylbenzyl)amine

Absolute configuration: (2*S*,α*R*)

Shigeo Sugiyama,* Takayuki Inoue and Keitaro Ishii*

Tetrahedron: Asymmetry *14 (2003) 2153*



$C_{19}H_{18}N_2O_6$

(4*S*,α*R*)-(3-α-Methylbenzyl-2-oxazolidinon-4-yl)methyl 4-nitrobenzoate

E.e. >98%

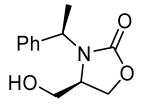
$[\alpha]_D^{26} = -51.5$ (*c* 1.1, $CHCl_3$).

Source of chirality: (*R*)-(α-methylbenzyl)amine

Absolute configuration: (4*S*,α*R*)

Shigeo Sugiyama,* Takayuki Inoue and Keitaro Ishii*

Tetrahedron: Asymmetry *14 (2003) 2153*



$C_{12}H_{15}NO_3$

(4*S*,α*R*)-4-Hydroxymethyl-3-α-methylbenzyl-2-oxazolidinone

E.e. >98%

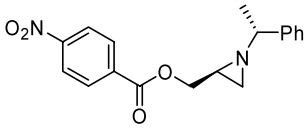
$[\alpha]_D^{26} = +102.1$ (*c* 1.0, $CHCl_3$)

Source of chirality: (*R*)-(α-methylbenzyl)amine

Absolute configuration: (4*S*,α*R*)

Shigeo Sugiyama,* Takayuki Inoue and Keitaro Ishii*

Tetrahedron: Asymmetry *14 (2003) 2153*



$C_{18}H_{18}N_2O_4$

(2*S*,α*R*)-1-α-Methylbenzyl-2-aziridinyl)methyl 4-nitrobenzoate

E.e. >98%

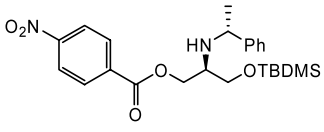
$[\alpha]_D^{28} = +31.4$ (*c* 1.1, $CHCl_3$)

Source of chirality: (*R*)-(α-methylbenzyl)amine

Absolute configuration: (2*S*,α*R*)

Shigeo Sugiyama,* Takayuki Inoue and Keitaro Ishii*

Tetrahedron: Asymmetry *14 (2003) 2153*



$C_{24}H_{34}N_2O_5Si$

(2*R*,α*R*)-3-(*tert*-Butyldimethylsilyl)oxy-2-(*N*-α-methylbenzyl)aminopropyl 4-nitrobenzoate

E.e. >98%

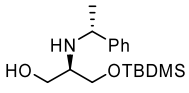
$[\alpha]_D^{26} = -0.8$ (*c* 1.0, $CHCl_3$)

Source of chirality: (*R*)-(α-methylbenzyl)amine

Absolute configuration: (2*R*,α*R*)

Shigeo Sugiyama,* Takayuki Inoue and Keitaro Ishii*

Tetrahedron: Asymmetry *14 (2003) 2153*



$C_{17}H_{31}NO_2Si$

(2*R*,α*R*)-3-(*tert*-Butyldimethylsilyl)oxy-2-(*N*-α-methylbenzyl)amino-1-propanol

E.e. >98%

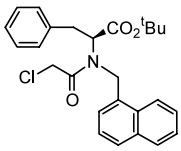
$[\alpha]_D^{26} = -0.3$ (*c* 0.46, $CHCl_3$)

Source of chirality: (*R*)-(α-methylbenzyl)amine

Absolute configuration: (2*R*,α*R*)

Mª Angeles Bonache, Guillermo Gerona-Navarro, Carlos García-Aparicio, Miriam Alías, Mercedes Martín-Martínez, Mª Teresa García-López, Pilar López, Carlos Cativiela and Rosario González-Muñiz*

Tetrahedron: Asymmetry *14 (2003) 2161*



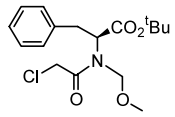
$C_{26}H_{28}ClNO_3$

N-Chloroacetyl-*N*-(1-naphthyl)methyl-L-Phe-O^{t}Bu

$[\alpha]_D = -117.1$ (*c* 1.05, $CHCl_3$)
Source of chirality: L-Phe-O^{t}Bu
Absolute configuration: *S*

Mª Angeles Bonache, Guillermo Gerona-Navarro, Carlos García-Aparicio, Miriam Alías, Mercedes Martín-Martínez, Mª Teresa García-López, Pilar López, Carlos Cativiela and Rosario González-Muñiz*

Tetrahedron: Asymmetry *14 (2003) 2161*



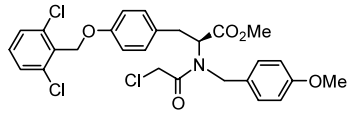
$C_{17}H_{24}ClNO_4$

N-Chloroacetyl-*N*-methoxymethyl-L-Phe-O^{t}Bu

$[\alpha]_D = -65.85$ (*c* 0.56, $CHCl_3$)
Source of chirality: L-Phe-O^{t}Bu
Absolute configuration: *S*

Mª Angeles Bonache, Guillermo Gerona-Navarro, Carlos García-Aparicio, Miriam Alías, Mercedes Martín-Martínez, Mª Teresa García-López, Pilar López, Carlos Cativiela and Rosario González-Muñiz*

Tetrahedron: Asymmetry *14 (2003) 2161*



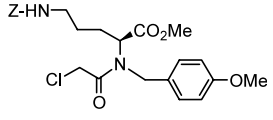
$C_{27}H_{26}Cl_3NO_5$

N-Chloroacetyl-*N*-(*p*-methoxybenzyl)-L-Tyr(O-di-Cl-Bzl)-O^{t}Bu

$[\alpha]_D = -43.4$ (*c* 1.47, $CHCl_3$)
Source of chirality: L-Tyr(O-di-Cl-Bzl)-OMe
Absolute configuration: *S*

Mª Angeles Bonache, Guillermo Gerona-Navarro, Carlos García-Aparicio, Miriam Alías, Mercedes Martín-Martínez, Mª Teresa García-López, Pilar López, Carlos Cativiela and Rosario González-Muñiz*

Tetrahedron: Asymmetry *14 (2003) 2161*



$C_{24}H_{29}ClN_2O_6$

N-Chloroacetyl-*N*-(*p*-methoxybenzyl)-L-Orn(Z)-OMe

$[\alpha]_D = -32.9$ (*c* 2.19, $CHCl_3$)
Source of chirality: L-Orn(Z)-OMe
Absolute configuration: *S*

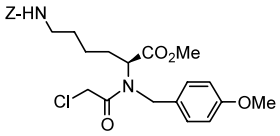
Mª Angeles Bonache, Guillermo Gerona-Navarro, Carlos García-Aparicio, Miriam Alías, Mercedes Martín-Martínez, Mª Teresa García-López, Pilar López, Carlos Cativiela and Rosario González-Muñiz*

Tetrahedron: Asymmetry *14 (2003) 2161*

$[\alpha]_D = -35.3$ (*c* 1.04, $CHCl_3$)

Source of chirality: L-Lys(Z)-OMe

Absolute configuration: *S*



$C_{25}H_{31}ClN_2O_6$

N-Chloroacetyl-*N*-(*p*-methoxybenzyl)-L-Lys(Z)-OMe

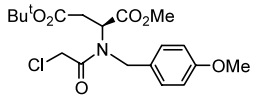
Mª Angeles Bonache, Guillermo Gerona-Navarro, Carlos García-Aparicio, Miriam Alías, Mercedes Martín-Martínez, Mª Teresa García-López, Pilar López, Carlos Cativiela and Rosario González-Muñiz*

Tetrahedron: Asymmetry *14 (2003) 2161*

$[\alpha]_D = -62.3$ (*c* 1.96, $CHCl_3$)

Source of chirality: L-Asp(O′Bu)-OMe

Absolute configuration: *S*



$C_{19}H_{26}ClNO_6$

N-Chloroacetyl-*N*-(*p*-methoxybenzyl)-L-Asp(O′Bu)-OMe

Mª Angeles Bonache, Guillermo Gerona-Navarro, Carlos García-Aparicio, Miriam Alías, Mercedes Martín-Martínez, Mª Teresa García-López, Pilar López, Carlos Cativiela and Rosario González-Muñiz*

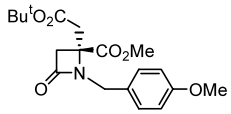
Tetrahedron: Asymmetry *14 (2003) 2161*

E.e. 20%

$[\alpha]_D = -2.3$ (*c* 1.33, $CHCl_3$)

Source of chirality: L-Asp(O′Bu)-OMe and memory of chirality

Absolute configuration: *R*



$C_{19}H_{25}NO_6$

1-(*p*-Methoxybenzyl)-4-methoxycarbonil-4-(*tert*-butoxycarbonyl)methyl-2-azetidinone

---

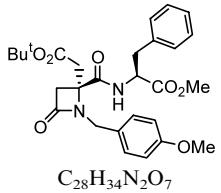
Mª Angeles Bonache, Guillermo Gerona-Navarro, Carlos García-Aparicio, Miriam Alías, Mercedes Martín-Martínez, Mª Teresa García-López, Pilar López, Carlos Cativiela and Rosario González-Muñiz*

Tetrahedron: Asymmetry *14 (2003) 2161*

$[\alpha]_D = +73.5$ (*c* 1.07, $CHCl_3$)

Source of chirality: diastereoisomeric resolution

Absolute configuration: 4*R*,1′*S*



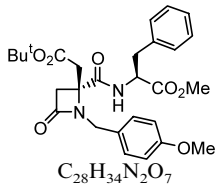
$C_{28}H_{34}N_2O_7$

(4*R*,1′*S*)-1-(*p*-Methoxybenzyl)-4-[*N*-(1′-methoxycarbonyl-2′-phenyl)ethyl]carbamoyl-4-(*tert*-butoxycarbonyl)-methyl-2-azetidinone

Mª Angeles Bonache, Guillermo Gerona-Navarro, Carlos García-Aparicio, Miriam Alías, Mercedes Martín-Martínez, Mª Teresa García-López, Pilar López, Carlos Cativiela and Rosario González-Muñiz*

Tetrahedron: Asymmetry *14 (2003) 2161*

$[\alpha]_D = -24.5$ (c 0.69, $CHCl_3$)
Source of chirality: diastereoisomeric resolution
Absolute configuration: 4*S*,1′*S*



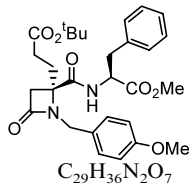
$C_{28}H_{34}N_2O_7$

(4*S*,1′*S*)-1-(*p*-Methoxybenzyl)-4-[*N*-(1′-methoxycarbonyl-2′-phenyl)ethyl]carbamoyl-4-(*tert*-butoxycarbonyl)-methyl-2-azetidinone

Mª Angeles Bonache, Guillermo Gerona-Navarro, Carlos García-Aparicio, Miriam Alías, Mercedes Martín-Martínez, Mª Teresa García-López, Pilar López, Carlos Cativiela and Rosario González-Muñiz*

Tetrahedron: Asymmetry *14 (2003) 2161*

$[\alpha]_D = -4.8$ (c 1.20, $CHCl_3$)
Source of chirality: diastereoisomeric resolution
Absolute configuration: 4*S*,1′*S*



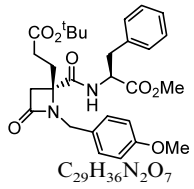
$C_{29}H_{36}N_2O_7$

(4*S*,1′*S*)-1-(*p*-Methoxybenzyl)-4-[*N*-(1′-methoxycarbonyl-2′-phenyl)ethyl]carbamoyl-4-(2-*tert*-butoxycarbonyl)ethyl-2-azetidinone

Mª Angeles Bonache, Guillermo Gerona-Navarro, Carlos García-Aparicio, Miriam Alías, Mercedes Martín-Martínez, Mª Teresa García-López, Pilar López, Carlos Cativiela and Rosario González-Muñiz*

Tetrahedron: Asymmetry *14 (2003) 2161*

$[\alpha]_D = +22.8$ (c 1.04, $CHCl_3$)
Source of chirality: diastereoisomeric resolution
Absolute configuration: 4*R*,1′*S*

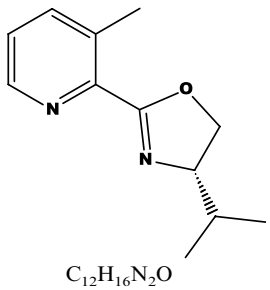


$C_{29}H_{36}N_2O_7$

(4*R*,1′*S*)-1-(*p*-Methoxybenzyl)-4-[*N*-(1′-methoxycarbonyl-2′-phenyl)ethyl]carbamoyl-4-(2-*tert*-butoxycarbonyl)ethyl-2-azetidinone

Henri Brunner,* Henri B. Kagan and Georg Kreutzer

Tetrahedron: Asymmetry *14 (2003) 2177*



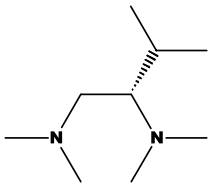
$C_{12}H_{16}N_2O$

$[\alpha]_D = -82$ (c 0.93, $CHCl_3$)
Source of chirality: (*S*)-valine
Absolute configuration: *S*

2-[4-(*S*)-Isopropyloxazolin-2-yl]-3-methylpyridine

Henri Brunner,* Henri B. Kagan and Georg Kreutzer

Tetrahedron: Asymmetry *14 (2003) 2177*



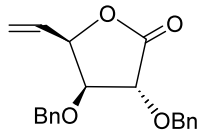
$[\alpha]_D = 178$ (c 2.61, $CHCl_3$)
Source of chirality: (*S*)-valine
Absolute configuration: *S*

$C_9H_{22}N_2$
(*S*)-(+)-*N*,*N*,*N*′,*N*′-Tetramethyl-1,2-diamino-3-methylbutane

Cai Jia, Yongmin Zhang and Lihe Zhang*

Tetrahedron: Asymmetry *14 (2003) 2195*

$[\alpha]_D^{20} = +108.9$ (c 2.2, MeOH)

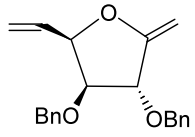


$C_{20}H_{20}O_4$
1-Dehydro-2,3-di-*O*-benzyl-5,6-dideoxy-5-ene-D-glucofuranose

Cai Jia, Yongmin Zhang and Lihe Zhang*

Tetrahedron: Asymmetry *14 (2003) 2195*

$[\alpha]_D^{20} = +2.9$ (c 1.2, MeOH)

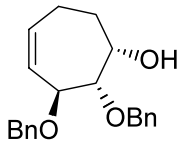


$C_{21}H_{22}O_3$
1,5,6-Trideoxy-1-methylidene-3,4-di-*O*-benzyl-5-ene-D-glucofuranose

Cai Jia, Yongmin Zhang and Lihe Zhang*

Tetrahedron: Asymmetry *14 (2003) 2195*

$[\alpha]_D^{20} = -300.2$ (c 0.5, $CHCl_3$)

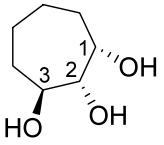


$C_{21}H_{24}O_3$
(1*S*,6*S*,7*S*)-2,3-Dibenzyloxycyclohepta-4-en-1-ol

Cai Jia, Yongmin Zhang and Lihe Zhang*

Tetrahedron: Asymmetry *14 (2003) 2195*

$[\alpha]_D^{20} = +10.8$ (c 0.315, MeOH)



$C_7H_{14}O_3$

(1*S*,3*S*)-1,2-*cis*-2,3-*trans*-Cycloheptatriol

Ramón Badorrey, Carlos Cativiela, María D. Díaz-de-Villegas* and José A. Gálvez*

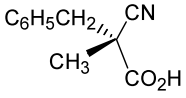
Tetrahedron: Asymmetry *14 (2003) 2209*

Ee = >98%

$[\alpha]_D^{25} = -27.8$ (c 2.0, $CHCl_3$)

Source of chirality: resolution

Absolute configuration: *R*



$C_{11}H_{11}NO_2$

(*R*)-2-Cyano-2-methyl-3-phenylpropanoic acid

Ramón Badorrey, Carlos Cativiela, María D. Díaz-de-Villegas,* José A. Gálvez* and Ana Gil

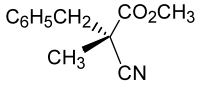
Tetrahedron: Asymmetry *14 (2003) 2209*

Ee >98%

$[\alpha]_D^{25} = +31.2$ (c 1.0, $CHCl_3$)

Source of chirality: resolution

Absolute configuration: *S*



$C_{12}H_{13}NO_2$

Methyl (*S*)-2-cyano-2-methyl-3-phenylpropanoate

Ramón Badorrey, Carlos Cativiela, María D. Díaz-de-Villegas,* José A. Gálvez* and Ana Gil

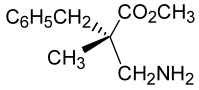
Tetrahedron: Asymmetry *14 (2003) 2209*

Ee >98%

$[\alpha]_D^{25} = -18.0$ (c 1.0, $CHCl_3$)

Source of chirality: resolution

Absolute configuration: *S*

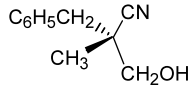


$C_{12}H_{17}NO_2$

(*S*)-α-Benzyl-α-methyl-β-alanine methyl ester

Ramón Badorrey, Carlos Cativiela, María D. Díaz-de-Villegas,* José A. Gálvez* and Ana Gil

Tetrahedron: Asymmetry *14 (2003) 2209*



$C_{11}H_{13}NO$

(*R*)-2-Hydroxymethyl-2-methyl-3-phenylpropionitrile

Ee >98%

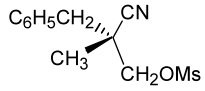
$[\alpha]_D^{25} = -9.9$ (*c* 1.0, $CHCl_3$)

Source of chirality: resolution

Absolute configuration: *R*

Ramón Badorrey, Carlos Cativiela, María D. Díaz-de-Villegas,* José A. Gálvez* and Ana Gil

Tetrahedron: Asymmetry *14 (2003) 2209*



$C_{12}H_{15}NO_3S$

(*R*)-2-Mesyloxymethyl-2-methyl-3-phenylpropionitrile

Ee >98%

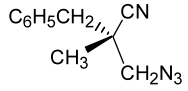
$[\alpha]_D^{25} = -3.3$ (*c* 1.0, $CHCl_3$)

Source of chirality: resolution

Absolute configuration: *R*

Ramón Badorrey, Carlos Cativiela, María D. Díaz-de-Villegas,* José A. Gálvez* and Ana Gil

Tetrahedron: Asymmetry *14 (2003) 2209*



$C_{11}H_{12}N_4$

(*S*)-3-Azido-2-benzyl-2-methylpropionitrile

Ee >98%

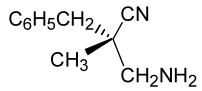
$[\alpha]_D^{25} = -9.2$ (*c* 1.0, $CHCl_3$)

Source of chirality: resolution

Absolute configuration: *S*

Ramón Badorrey, Carlos Cativiela, María D. Díaz-de-Villegas,* José A. Gálvez* and Ana Gil

Tetrahedron: Asymmetry *14 (2003) 2209*



$C_{11}H_{14}N_2$

(*S*)-3-Amino-2-benzyl-2-methylpropionitrile

Ee >98%

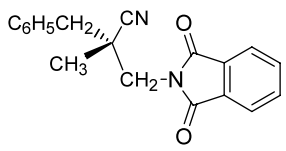
$[\alpha]_D^{25} = -11.8$ (*c* 1.0, $CHCl_3$)

Source of chirality: resolution

Absolute configuration: *S*

Ramón Badorrey, Carlos Cativiela, María D. Díaz-de-Villegas,* José A. Gálvez* and Ana Gil

Tetrahedron: Asymmetry *14 (2003) 2209*



$C_{19}H_{16}N_2O_2$

(*S*)-2-Benzyl-3-(1,3-dioxo-1,3-dihydroisoindollyl)-2-methylpropionitrile

Ee >98%

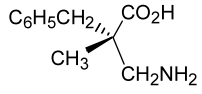
$[\alpha]_D^{25} = +2.8$ (*c* 1.0, $CHCl_3$)

Source of chirality: resolution

Absolute configuration: *S*

Ramón Badorrey, Carlos Cativiela, María D. Díaz-de-Villegas,* José A. Gálvez* and Ana Gil

Tetrahedron: Asymmetry *14 (2003) 2209*



$C_{11}H_{15}NO_2$

(*S*)-α-Benzyl-α-methyl-β-alanine

Ee >98%

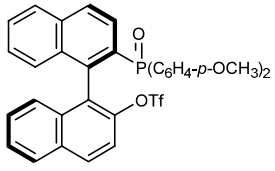
$[\alpha]_D^{25} = +20.7$ (*c* 1.0 H_2O)

Source of chirality: resolution

Absolute configuration: *S*

Jerôme Bayardon, Marco Cavazzini, David Maillard, Gianluca Pozzi,* Silvio Quici and Denis Sinou*

Tetrahedron: Asymmetry *14 (2003) 2215*



$C_{35}H_{26}F_3O_6PS$

(*R*)-2-[Bis-2′-(4-methoxyphenyl)phosphinyl]-[(trifluoromethanesulfonyl)oxy]-1,1′-binaphthyl

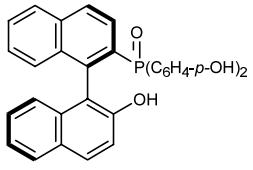
$[\alpha]_D^{20} = +66.2$ (*c* 0.7, $CHCl_3$)

Source of chirality: (*R*)-1,1′-binaphthol

Absolute configuration: *R*

Jerôme Bayardon, Marco Cavazzini, David Maillard, Gianluca Pozzi,* Silvio Quici and Denis Sinou*

Tetrahedron: Asymmetry *14 (2003) 2215*



$C_{32}H_{23}O_4P$

(*R*)-2-[Bis(4-hydroxyphenyl)phosphinyl]-2′-hydroxy-1,1′-binaphthyl

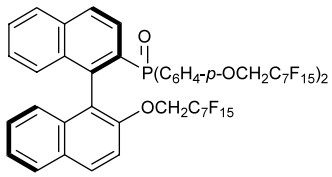
$[\alpha]_D^{20} = +124.3$ (*c* 0.5, CH_3OH)

Source of chirality: (*R*)-1,1′-binaphtol

Absolute configuration: *R*

Jerôme Bayardon, Marco Cavazzini, David Maillard, Gianluca Pozzi,* Silvio Quici and Denis Sinou*

Tetrahedron: Asymmetry *14 (2003) 2215*



$[\alpha]_D^{20} = +60.0$ (c 0.7, $CHCl_3$)
Source of chirality: (*R*)-1,1′-binaphtol
Absolute configuration: *R*

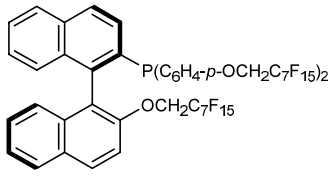
$C_{56}H_{26}F_{45}O_4P$

(*R*)-2-{Bis[4-(1*H*,1*H*-pentadecafluorooctyloxy)phenyl]phosphinyl}-2′-(1*H*,1*H*-pendecafluorooctyloxy)-1,1′-binaphthyl

---

Jerôme Bayardon, Marco Cavazzini, David Maillard, Gianluca Pozzi,* Silvio Quici and Denis Sinou*

Tetrahedron: Asymmetry *14 (2003) 2215*



$[\alpha]_D^{20} = +23.1$ (c 0.3, $CHCl_3$)
Source of chirality: (*R*)-1,1′-binaphtol
Absolute configuration: *R*

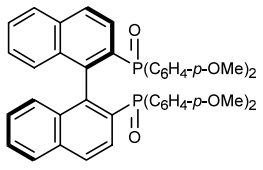
$C_{56}H_{26}F_{45}O_3P$

(*R*)-2-{Bis[4-(1*H*,1*H*-pentadecafluorooctyloxy)phenyl]phosphino}-2′-(1*H*,1*H*-pentadecafluorooctyloxy)-1,1′-binaphthyl

---

Jerôme Bayardon, Marco Cavazzini, David Maillard, Gianluca Pozzi,* Silvio Quici and Denis Sinou*

Tetrahedron: Asymmetry *14 (2003) 2215*



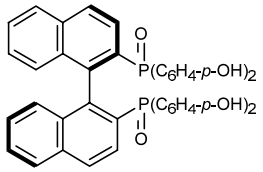
E.e. > 95%
$[\alpha]_D^{20} = +107.6$ (c 0.4, $CHCl_3$)
Resolution
Absolute configuration: *R*

$C_{48}H_{40}O_6P_2$

(*R*)-2,2′-[Bis(4-methoxyphenyl)phosphinyl]-1,1′-binaphthyl

Jerôme Bayardon, Marco Cavazzini, David Maillard, Gianluca Pozzi,* Silvio Quici and Denis Sinou*

Tetrahedron: Asymmetry *14 (2003) 2215*



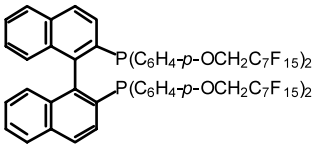
E.e. >95%
$[\alpha]_D^{20} = +15.0$ (c 0.5, CH_3OH)
Resolution
Absolute configuration: *R*

$C_{44}H_{32}O_6P_2$

(*R*)-2,2′-[Bis(4-hydroxyphenyl)phosphinyl]-1,1′-binaphthyl

Jerôme Bayardon, Marco Cavazzini, David Maillard, Gianluca Pozzi,* Silvio Quici and Denis Sinou*

Tetrahedron: Asymmetry *14 (2003) 2215*



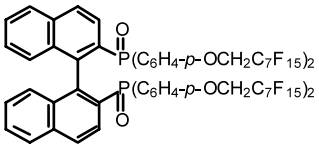
E.e. >95%
$[\alpha]_D^{20} = +47.2$ (*c* 0.7, $CFCl_2CClF_2$)
Resolution
Absolute configuration: *R*

$C_{76}H_{36}F_{60}O_6P_2$

(*R*)-2,2′-[Bis(4-(1*H*,1*H*-pentadecafluorooctyloxy)phenyl)phosphinyl]-1,1′-binaphthyl

Jerôme Bayardon, Marco Cavazzini, David Maillard, Gianluca Pozzi,* Silvio Quici and Denis Sinou*

Tetrahedron: Asymmetry *14 (2003) 2215*



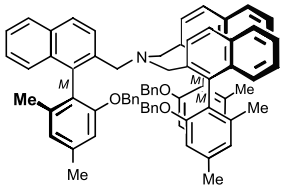
E.e. >95%
$[\alpha]_D^{20} = +27.6$ (*c* 0.4, $CHCl_3$)
Resolution
Absolute configuration: *R*

$C_{76}H_{36}F_{60}O_4P_2$

(*R*)-2,2′-[Bis(4-(1*H*,1*H*-pentadecafluorooctyloxy)phenyl)phosphino]-1,1′-binaphthyl

Gerhard Bringmann,* Matthias Breuning, Robert-Michael Pfeifer and Petra Schreiber

Tetrahedron: Asymmetry *14 (2003) 2225*



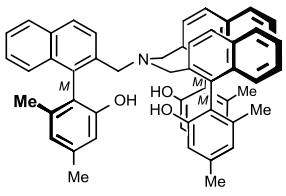
$[\alpha]_D^{20} = 69.1$ (*c* 1.1, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: *M*,*M*,*M*

$C_{78}H_{69}NO_3$

Tris-{(*M*)-2-[1-(2′-benzyloxy-4′,6′-dimethylphenyl)]naphthylmethyl}amine

Gerhard Bringmann,* Matthias Breuning, Robert-Michael Pfeifer and Petra Schreiber

Tetrahedron: Asymmetry *14 (2003) 2225*



$[\alpha]_D^{20} = -12.7$ (*c* 1.2, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: *M*,*M*,*M*

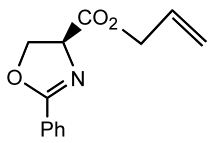
$C_{57}H_{51}NO_3$

Tris-{(*M*)-2-[1-(2′-hydroxy-4′,6′-dimethylphenyl)]naphthylmethyl}amine

Franck Meyer, Abdelhamid Laaziri, Anna Maria Papini, Jacques Uziel and Sylvain Jugé*

Tetrahedron: Asymmetry *14 (2003) 2229*

$[\alpha]_D^{20} = +124$ (c 1, $CHCl_3$)
Prepared from L-serine

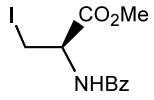


$C_{13}H_{13}NO_3$
(*S*)-(+)-2-Phenyl-4-allyloxycarbonyl-2-oxazoline

Franck Meyer, Abdelhamid Laaziri, Anna Maria Papini, Jacques Uziel and Sylvain Jugé*

Tetrahedron: Asymmetry *14 (2003) 2229*

$[\alpha]_D^{20} = +59$ (c 1, $CHCl_3$)
Prepared from L-serine

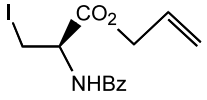


$C_{11}H_{12}INO_3$
(*R*)-(+)-Methyl-2-benzamido-3-iodopropanoate

Franck Meyer, Abdelhamid Laaziri, Anna Maria Papini, Jacques Uziel and Sylvain Jugé*

Tetrahedron: Asymmetry *14 (2003) 2229*

$[\alpha]_D^{20} = +31.9$ (c 1, $CHCl_3$)
Prepared from L-serine

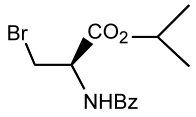


$C_{13}H_{14}INO_3$
(*R*)-(+)-Allyl-2-benzamido-3-iodopropanoate

Franck Meyer, Abdelhamid Laaziri, Anna Maria Papini, Jacques Uziel and Sylvain Jugé*

Tetrahedron: Asymmetry *14 (2003) 2229*

$[\alpha]_D^{20} = +57.6$ (c 1, $CHCl_3$)
Prepared from L-serine

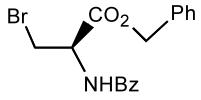


$C_{13}H_{16}BrNO_3$
(*R*)-(+)-Isopropyl-2-benzamido-3-bromopropanoate

Franck Meyer, Abdelhamid Laaziri, Anna Maria Papini, Jacques Uziel and Sylvain Jugé*

Tetrahedron: Asymmetry *14 (2003) 2229*

$[\alpha]_D^{20} = +34.8$ (c 1, $CHCl_3$)
Prepared from L-serine

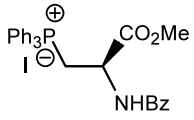


$C_{17}H_{16}BrNO_3$
(*R*)-(+)-Benzyl-2-benzamido-3-bromopropanoate

Franck Meyer, Abdelhamid Laaziri, Anna Maria Papini, Jacques Uziel and Sylvain Jugé*

Tetrahedron: Asymmetry *14 (2003) 2229*

$[\alpha]_D^{20} = -33.3$ (c 1, $CHCl_3$)
Prepared from L-serine

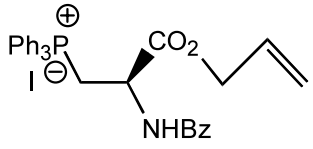


$C_{29}H_{27}INO_3P$
(*R*)-(−)-(2-Benzamido-2-methoxycarbonyl)ethyl triphenylphosphonium iodide

Franck Meyer, Abdelhamid Laaziri, Anna Maria Papini, Jacques Uziel and Sylvain Jugé*

Tetrahedron: Asymmetry *14 (2003) 2229*

$[\alpha]_D^{20} = -26.2$ (c 1, $CHCl_3$)
Prepared from L-serine

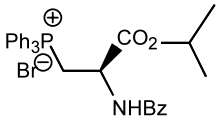


$C_{31}H_{29}INO_3P$
(*R*)-(−)-(2-Allyloxycarbonyl-2-benzamido)ethyl triphenylphosphonium iodide

Franck Meyer, Abdelhamid Laaziri, Anna Maria Papini, Jacques Uziel and Sylvain Jugé*

Tetrahedron: Asymmetry *14 (2003) 2229*

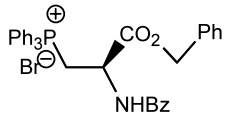
$[\alpha]_D^{20} = -28$ (c 1, $CHCl_3$)
Prepared from L-serine



$C_{31}H_{31}BrNO_3P$
(*R*)-(−)-(2-Benzamido-2-isopropyloxycarbonyl)ethyl triphenylphosphonium bromide

Franck Meyer, Abdelhamid Laaziri, Anna Maria Papini, Jacques Uziel and Sylvain Jugé*

Tetrahedron: Asymmetry *14 (2003) 2229*



$C_{35}H_{31}BrNO_3P$

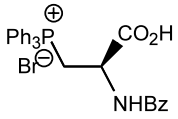
(*R*)-(−)-(2-Benzamido-2-benzyloxycarbonyl)ethyl triphenylphosphonium bromide

$[\alpha]_D^{20} = -18.5$ (*c* 1, $CHCl_3$)

Prepared from L-serine

Franck Meyer, Abdelhamid Laaziri, Anna Maria Papini, Jacques Uziel and Sylvain Jugé*

Tetrahedron: Asymmetry *14 (2003) 2229*



$C_{28}H_{25}BrNO_3P$

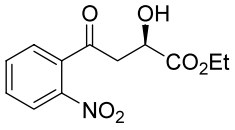
(*R*)-(−)-(2-Benzamido-2-carboxyl)ethyl triphenylphosphonium bromide

$[\alpha]_D^{20} = -37.4$ (*c* 1, $CHCl_3$)

Prepared from L-serine

Ching-Yao Chang and Teng-Kuei Yang*

Tetrahedron: Asymmetry *14 (2003) 2239*



$C_{12}H_{13}NO_6$

(2*R*)-2-Hydroxy-4-(2-nitrophenyl)-4-oxobutyric acid ethyl ester

E.e. = 80%

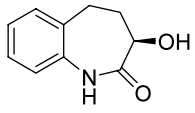
$[\alpha]_D = +4.2$ (*c* 1.25, $CHCl_3$)

Source of chirality: biocatalytic reduction

Absolute configuration: 2*R*

Ching-Yao Chang and Teng-Kuei Yang*

Tetrahedron: Asymmetry *14 (2003) 2239*



$C_{10}H_{11}NO_2$

(3*R*)-3-Hydroxy-1,3,4,5-tetrahydrobenzo[*b*]azepin-2-one

E.e. = 80%

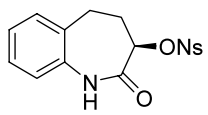
$[\alpha]_D = +287.2$ (*c* 1.08, $CHCl_3$)

Source of chirality: biocatalytic reduction

Absolute configuration: 3*R*

Ching-Yao Chang and Teng-Kuei Yang*

Tetrahedron: Asymmetry *14 (2003) 2239*



$C_{16}H_{14}N_2O_6S$

4-Nitrobenzenesulfonic acid (3*R*)-2-oxo-2,3,4,5-tetrahydro-1*H*-benzo[*b*]azepin-3-yl ester

E.e. = 80%

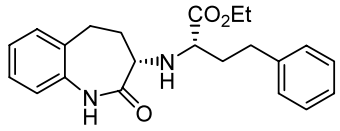
$[\alpha]_D = +215.0$ (*c* 0.98, DMF)

Source of chirality: biocatalytic reduction

Absolute configuration: 3*R*

Ching-Yao Chang and Teng-Kuei Yang*

Tetrahedron: Asymmetry *14 (2003) 2239*



$C_{22}H_{26}N_2O_3$

(2*S*,3′*S*)-2-(2-Oxo-2,3,4,5-tetrahydro-1*H*-benzo[*b*]azepin-3-ylamino)-4-phenylbutyric acid ethyl ester

D.e. >98%

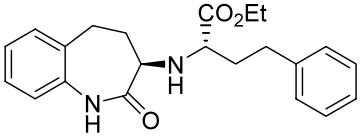
$[\alpha]_D = -168.1$ (*c* 1.09, $CHCl_3$)

Source of chirality: biocatalytic reduction and *L*-homophenylalanine ethyl ester

Absolute configuration: 2*S*,3′*S*

Ching-Yao Chang and Teng-Kuei Yang*

Tetrahedron: Asymmetry *14 (2003) 2239*



$C_{22}H_{26}N_2O_3$

(2*S*,3′*R*)-2-(2-Oxo-2,3,4,5-tetrahydro-1*H*-benzo[*b*]azepin-3-ylamino)-4-phenylbutyric acid ethyl ester

E.e. >99%

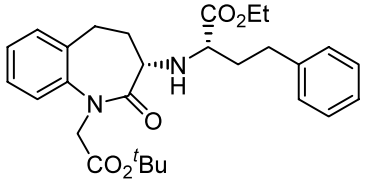
$[\alpha]_D = +63.5$ (*c* 1.10, $CHCl_3$)

Source of chirality: biocatalytic reduction and *L*-homophenylalanine ethyl ester

Absolute configuration: 2*S*,3′*R*

Ching-Yao Chang and Teng-Kuei Yang*

Tetrahedron: Asymmetry *14 (2003) 2239*



$C_{28}H_{36}N_2O_5$

(2*S*,3′*S*)-2-(1-*tert*-Butoxycarbonylmethyl-2-oxo-2,3,4,5-tetrahydro-1*H*-benzo[*b*]azepin-3-ylamino)-4-phenylacid ethyl ester

E.e. >99%

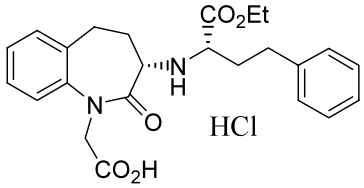
$[\alpha]_D = -145.6$ (*c* 1.05, $CHCl_3$)

Source of chirality: biocatalytic reduction and *L*-homophenylalanine ethyl ester

Absolute configuration: 2*S*,3′*S*

Ching-Yao Chang and Teng-Kuei Yang*

Tetrahedron: Asymmetry *14 (2003) 2239*



$C_{24}H_{29}ClN_2O_5$

Benazepril HCl

E.e. >99%

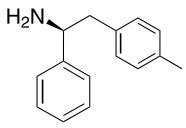
$[\alpha]_D = -142.6$ (c 0.98, EtOH)

Source of chirality: biocatalytic reduction and *L*-homophenylalanine ethyl ester

Absolute configuration: 2*S*,3′*S*

Marco Pallavicini,* Cristiano Bolchi, Barbara Moroni, Ermanno Valoti and Oreste Piccolo

Tetrahedron: Asymmetry *14 (2003) 2247*



$C_{15}H_{16}N$

(*S*)-1-Phenyl-2-(*p*-tolyl)ethylamine

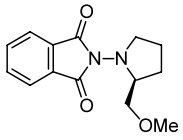
$[\alpha]_D^{25} = +62.2$ (c 1, MeOH)

E.e. >99%

Source of chirality: resolution via diastereomeric salt formation

Eric Deniau,* Dieter Enders, Axel Couture and Pierre Grandclaudon

Tetrahedron: Asymmetry *14 (2003) 2253*



$C_{14}H_{16}N_2O_3$

(2*S*)-2-(2-Methoxymethylpyrrolidin-1-yl)phthalimide

E.e. >96%

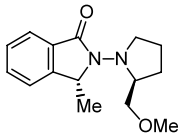
$[\alpha]_D^{28} = +14.0$ (c 1.00 in $CHCl_3$)

Source of chirality: (*S*)-proline

Absolute configuration: 2*S*

Eric Deniau,* Dieter Enders, Axel Couture and Pierre Grandclaudon

Tetrahedron: Asymmetry *14 (2003) 2253*



$C_{15}H_{20}N_2O_2$

(2*S*,3*R*)-2-(2-Methoxymethylpyrrolidin-1-yl)-3-methyl-2,3-dihydro-1*H*-isoindol-1-one

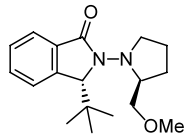
D.e. >96%

$[\alpha]_D^{28} = -16.4$ (c 1.30 in $CHCl_3$)

Source of chirality: (*S*)-proline

Absolute configuration: 2*S*,3*R*

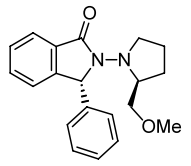
Eric Deniau,* Dieter Enders, Axel Couture and Pierre Grandclaudon | *Tetrahedron:* Asymmetry *14 (2003) 2253*



D.e. >96%
$[\alpha]_D^{26} = +40.0$ (c 0.93 in $CHCl_3$)
Source of chirality: (*S*)-proline
Absolute configuration: 2*S*,3*R*

$C_{18}H_{26}N_2O_2$
(2*S*,3*R*)-3-*tert*-Butyl-2-(2-methoxymethylpyrrolidin-1-yl)-2,3-dihydro-1*H*-isoindol-1-one

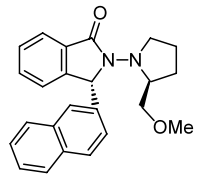
Eric Deniau,* Dieter Enders, Axel Couture and Pierre Grandclaudon | *Tetrahedron:* Asymmetry *14 (2003) 2253*



D.e. >96%
$[\alpha]_D^{28} = -49.5$ (c 1.05 in $CHCl_3$)
Source of chirality: (*S*)-proline
Absolute configuration: 2*S*,3*R*

$C_{20}H_{22}N_2O_2$
(2*S*,3*R*)-2-(2-Methoxymethylpyrrolidin-1-yl)-(3-phenyl-2,3-dihydro-1*H*-isoindol-1-one

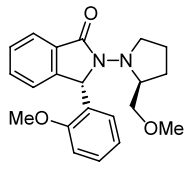
Eric Deniau,* Dieter Enders, Axel Couture and Pierre Grandclaudon | *Tetrahedron:* Asymmetry *14 (2003) 2253*



D.e. >96%
$[\alpha]_D^{26} = -126.0$ (c 1.23 in $CHCl_3$)
Source of chirality: (*S*)-proline
Absolute configuration: 2*S*,3*R*

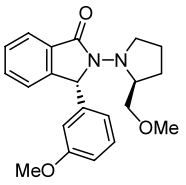
$C_{24}H_{24}N_2O_2$
(2*S*,3*R*)-2-(2-Methoxymethylpyrrolidin-1-yl)-3-(naphthalen-2-yl)-2,3-dihydro-1*H*-isoindol-1-one

Eric Deniau,* Dieter Enders, Axel Couture and Pierre Grandclaudon | *Tetrahedron:* Asymmetry *14 (2003) 2253*



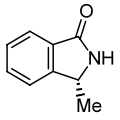
D.e. >96%
$[\alpha]_D^{25} = -93.9$ (c 1.14 in $CHCl_3$)
Source of chirality: (*S*)-proline
Absolute configuration: 2*S*,3*S*

$C_{21}H_{24}N_2O_3$
(2*S*,3*S*)-2-(2-Methoxymethylpyrrolidin-1-yl)-3-(2-methoxyphenyl)-2,3-dihydro-1*H*-isoindol-1-one



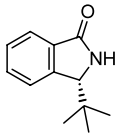
D.e. >96%
$[\alpha]_D^{26} = -75.2$ (*c* 1.05 in $CHCl_3$)
Source of chirality: (*S*)-proline
Absolute configuration: 2*S*,3*R*

$C_{21}H_{24}N_2O_3$
(2*S*,3*R*)-2-(2-Methoxymethylpyrrolidin-1-yl)-3-(3-methoxyphenyl)-2,3-dihydro-1*H*-isoindol-1-one



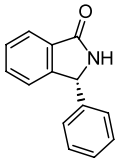
E.e. >96%
$[\alpha]_D^{25} = +44.0$ (*c* 0.56 in MeOH)
Source of chirality: (*S*)-proline
Absolute configuration: 3*R*

C_9H_9NO
(3*R*)-3-Methyl-2,3-dihydro-1*H*-isoindol-1-one



E.e. >96%
$[\alpha]_D^{25} = +25.0$ (*c* 0.76 in MeOH)
Source of chirality: (*S*)-proline
Absolute configuration: 3*R*

$C_{12}H_{15}NO$
(3*R*)-3-*tert*-Butyl-2,3-dihydro-1*H*-isoindol-1-one

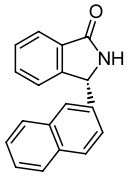


E.e. >96%
$[\alpha]_D^{25} = -193.3$ (*c* 0.73 in DMSO)
Source of chirality: (*S*)-proline
Absolute configuration: 3*R*

$C_{14}H_{11}NO$
(3*R*)-3-Phenyl-2,3-dihydro-1*H*-isoindol-1-one

Eric Deniau,* Dieter Enders, Axel Couture and Pierre Grandclaudon

Tetrahedron: Asymmetry *14 (2003) 2253*



$C_{18}H_{13}NO$

(3*R*)-3-(Naphthalen-2-yl)-2,3-dihydro-1*H*-isoindol-1-one

E.e. >96%

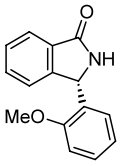
$[\alpha]_D^{25} = -201.0$ (*c* 0.71 in DMSO)

Source of chirality: (*S*)-proline

Absolute configuration: 3*R*

Eric Deniau,* Dieter Enders, Axel Couture and Pierre Grandclaudon

Tetrahedron: Asymmetry *14 (2003) 2253*



$C_{15}H_{13}NO_2$

(3*S*)-3-(2-Methoxyphenyl)-2,3-dihydro-1*H*-isoindol-1-one

E.e. >96%

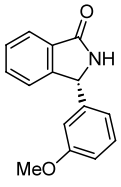
$[\alpha]_D^{25} = -294.5$ (*c* 0.84 in DMSO)

Source of chirality: (*S*)-proline

Absolute configuration: 3*S*

Eric Deniau,* Dieter Enders, Axel Couture and Pierre Grandclaudon

Tetrahedron: Asymmetry *14 (2003) 2253*



$C_{15}H_{13}NO_2$

(3*R*)-3-(3-Methoxyphenyl)-2,3-dihydro-1*H*-isoindol-1-one

E.e. >96%

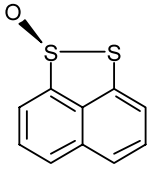
$[\alpha]_D^{25} = -216.4$ (*c* 1.03 in DMSO)

Source of chirality: (*S*)-proline

Absolute configuration: 3*R*

Anders Holmén,* Joakim Oxelbark and Stig Allenmark

Tetrahedron: Asymmetry *14 (2003) 2267*



$C_{10}H_6OS_2$

(+)-(*S*)-Naphtho[1,8-*cd*]-1,2-dithiole 1-oxide

E.e >99%

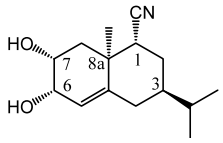
$[\alpha]_{546}^{20} = +1540$ (*c* 0.3, CH_2Cl_2)

Source of chirality: resolution via liquid chromatography on a (3*S*,4*R*)-Whelk-O1 preparative column

Absolute configuration: *S* (using VCD method)

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



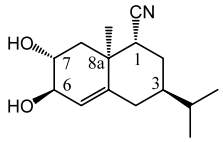
E.e. ≥99%
$[\alpha]_D^{20} = +15$ (*c* 2.94, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,3*R*,6*S*,7*R*,8a*S*)

$C_{15}H_{23}NO_2$

(6*S*,7*R*)-Dihydroxy-(3*R*)-isopropyl-(8a*S*)-methyl-1,2,3,4,6,7,8,8a-octahydro-naphthalene-(1*R*)-carbonitrile

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



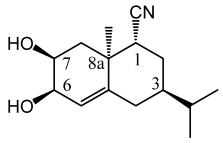
E.e. ≥99%
$[\alpha]_D^{20} = -58$ (*c* 1.29, $CHCl_3$))
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,3*R*,6*R*,7*R*,8a*S*)

$C_{15}H_{23}NO_2$

(6*R*,7*R*)-Dihydroxy-(3*R*)-isopropyl-(8a*S*)-methyl-1,2,3,4,6,7,8,8a-octahydro-naphthalene-(1*R*)-carbonitrile

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



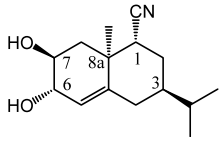
E.e. ≥99%
$[\alpha]_D^{20} = -182$ (*c* 1.22, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,3*R*,6*R*,7*S*,8a*S*)

$C_{15}H_{23}NO_2$

(6*R*,7*S*)-Dihydroxy-(3*R*)-isopropyl-(8a*S*)-methyl-1,2,3,4,6,7,8,8a-octahydro-naphthalene-(1*R*)-carbonitrile

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



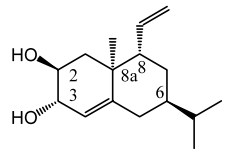
E.e. ≥99%
Mp: 114–116°C (heptane–ether)
$[\alpha]_D^{20} = +77$ (*c* 1.16, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,3*R*,6*S*,7*S*,8a*S*)

$C_{15}H_{23}NO_2$

(6*S*,7*S*)-Dihydroxy-(3*R*)-isopropyl-(8a*S*)-methyl-1,2,3,4,6,7,8,8a-octahydro-naphthalene-(1*R*)-carbonitrile

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99%
Mp: 85–87°C (heptane–ether)
$[\alpha]_D^{20} = -12$ (*c* 0.90, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (2*S*,3*S*,6*R*,8a*S*,8*S*)

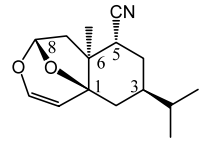
$C_{16}H_{26}O_2$

(6*R*)-Isopropyl-(8a*S*)-methyl-(8*S*)-vinyl-1,2,3,5,6,7,8,8a-octahydro-naphthalene-(2*S*,3*S*)-diol

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99
$[\alpha]_D^{20} = -11$ (*c* 1.84, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*S*,3*R*,5*R*,6*S*,8*S*)

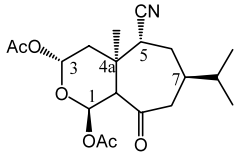
$C_{15}H_{21}NO_2$

(3*R*)-Isopropyl-(6*S*)-methyl-9,12-dioxa-tricyclo[6.3.1.0]dodec-10-ene-(5*R*)-carbonitrile

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99
$[\alpha]_D^{20} = +79$ (*c* 1.57, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,3*R*,4a*S*,5*R*,7*R*)

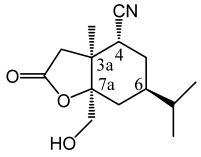
$C_{19}H_{27}NO_6$

Acetic acid (1*R*)-acetoxy-(5*R*)-cyano-(7*R*)-isopropyl-(4a*S*)-methyl-9-oxo-decahydro-cyclohepta[*c*]pyran-(3*R*)-yl ester

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



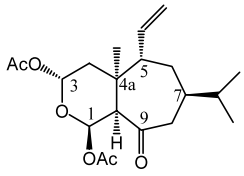
E.e. ≥99
$[\alpha]_D^{20} = -59$ (*c* 0.85, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (3a*S*,4*R*,6*R*,7a*R*)

$C_{14}H_{21}NO_3$

(7a*R*)-Hydroxymethyl-(6*R*)-isopropyl-(3a*S*)-methyl-2-oxo-octahydro-benzofuran-(4*R*)-carbonitrile

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99
$[\alpha]_D^{20}=+93$ (*c* 1.04, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,3*R*,4a*S*,5*S*,7*R*,9a*R*)

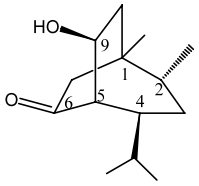
$C_{20}H_{30}O_6$

Acetic acid (3*R*)-acetoxy-(7*R*)-isopropyl-(4a*S*)-methyl-9-oxo-(5*S*)-vinyl-decahydro-cyclohepta[*c*]pyran-(1*R*)-yl ester

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99%
Mp: 85–86°C (heptane–ether)
$[\alpha]_D^{20}=-90$ (*c* 0.80, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,2*S*,4*S*,5*S*,9*R*)

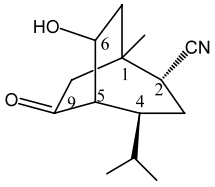
$C_{15}H_{24}O_2$

(9*R*)-Hydroxy-(4*S*)-isopropyl-(1*R*)-methyl-(2*S*)-vinyl-bicyclo[3.2.2]nonan-6-one

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99%
Mp: 122–124°C (heptane–ether)
$[\alpha]_D^{20}=-70$ (*c* 1.10, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,2*R*,4*S*,5*S*,6*R*)

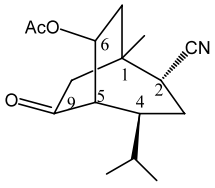
$C_{14}H_{21}NO_2$

(6*R*)-Hydroxy-(4*S*)-isopropyl-(1*R*)-methyl-9-oxo-bicyclo[3.2.2]nonane-(2*R*)-carbonitrile

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



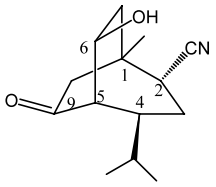
E.e. ≥99%
Mp: 94–95°C (heptane–ether)
$[\alpha]_D^{20}=-36$ (*c* 1.20, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,2*R*,4*S*,5*S*,6*R*)

$C_{16}H_{23}NO_3$

Acetic acid-(2*R*)-cyano-(4*S*)-isopropyl-(1*R*)-methyl-9-oxo-bicyclo[3.2.2]non-(6*S*)-yl ester

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99%
$[\alpha]_D^{20} = -10$ (*c* 0.98, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,2*R*,4*S*,5*S*,6*S*)

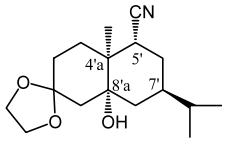
$C_{14}H_{21}NO_2$

(6*S*)-Hydroxy-(4*S*)-isopropyl-(1*R*)-methyl-9-oxo-bicyclo[3.2.2]nonane-(2*R*)-carbonitrile

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99%
Mp: 130–132°C (heptane–ether)
$[\alpha]_D^{20} = +36$ (*c* 2.32, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (4′a*S*,5′*R*,7′*R*,8′a*R*)

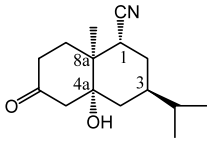
$C_{17}H_{27}NO_3$

(8′a*R*)-Hydroxy-(7′*R*)-isopropyl-(4′a*S*)-methyl-octahydro-spiro[[1,3]dioxolane-2,2′-naphthalene]-(5′*R*)-carbonitrile

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99%
Mp: 128–130°C (heptane–ether)
$[\alpha]_D^{20} = +40$ (*c* 0.96, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,3*R*,4a*R*,8a*S*)

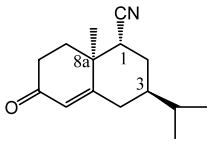
$C_{15}H_{23}NO_2$

(4a*R*)-Hydroxy-(3*R*)-isopropyl-(8a*S*)-methyl-6-oxo-decahydro-naphthalene-(1*R*)-carbonitrile

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



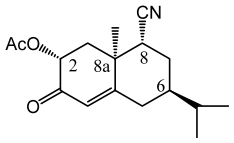
E.e. ≥99%
Mp: 118–120°C (heptane–ether)
$[\alpha]_D^{20} = -183$ (*c* 2.00, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,3*R*,8a*S*)

$C_{15}H_{21}NO$

(3*R*)-Isopropyl-(8a*S*)-methyl-6-oxo-1,2,3,4,6,7,8,8a-octahydro-naphthalene-(1*R*)-carbonitrile

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99%
$[\alpha]_D^{20} = -8$ (*c* 1.76, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (2*R*,6*R*,8*R*,8a*S*)

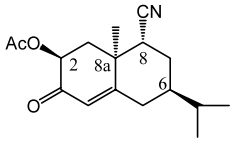
$C_{17}H_{23}NO_3$

Acetic acid (8*R*)-cyano-(6*R*)-isopropyl-(8a*S*)-methyl-3-oxo-1,2,3,5,6,7,8,8a-octahydro-naphthalen-(2*R*)-yl ester

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99%
Mp: 134–136°C (heptane–ether)
$[\alpha]_D^{20} = -176$ (*c* 3.26, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (2*S*,6*R*,8*R*,8a*S*)

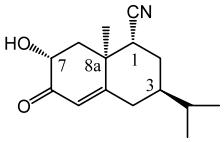
$C_{17}H_{23}NO_3$

Acetic acid (8*R*)-cyano-(6*R*)-isopropyl-(8a*S*)-methyl-3-oxo-1,2,3,5,6,7,8,8a-octahydro-naphthalen-(2*S*)-yl ester

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99%
$[\alpha]_D^{20} = +29$ (*c* 1.61, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,3*R*,7*R*,8a*S*)

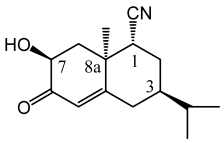
$C_{15}H_{21}NO_2$

(7*R*)-Hydroxy-(3*R*)-isopropyl-(8a*S*)-methyl-6-oxo-1,2,3,4,6,7,8,8a-octahydro-naphthalene-(1*R*)-carbonitrile

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



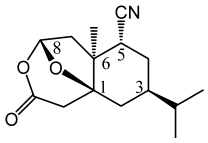
E.e. ≥99%
$[\alpha]_D^{20} = -204$ (*c* 2.02, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,3*R*,7*S*,8a*S*)

$C_{15}H_{21}NO_2$

(7*S*)-Hydroxy-(3*R*)-isopropyl-(8a*S*)-methyl-6-oxo-1,2,3,4,6,7,8,8a-octahydro-naphthalene-(1*R*)-carbonitrile

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99

$[\alpha]_D^{20} = -19$ (*c* 0.92, $CHCl_3$)

Source of chirality: (*R*)-(−)-carvone

Absolute configuration: (1*S*,3*R*,5*R*,6*S*,8*R*)

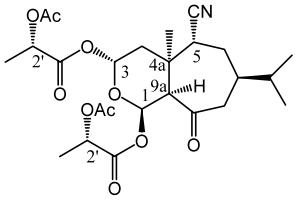
$C_{15}H_{21}NO_3$

(3*R*)-Isopropyl-(6*S*)-methyl-10-oxo-9,12-dioxa-tricyclo[6.3.1.0]dodecane-(5*R*)-carbonitrile

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99%

$[\alpha]_D^{20} = +18$ (*c* 0.93, $CHCl_3$)

Source of chirality: enzymatic resolution (Horse Liver Esterase, HLE)

Absolute configuration: (1*R*,2′*S*,3*R*,4a*S*,5*R*,9a*R*)

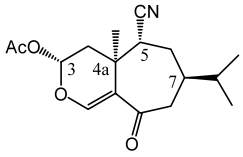
$C_{25}H_{35}NO_{10}$

(2′*S*)-Acetoxy-propionic acid (1*R*)-[(2′*S*)-acetoxy-propionyloxy]-(5*R*)-cyano-(7*R*)-isopropyl-(4a*S*)-methyl-9-oxo-decahydro-cyclohepta[*c*]-pyran-(3*R*)-yl ester

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99

Mp: 110–112°C (heptane–ether)

$[\alpha]_D^{20} = +12$ (*c* 1.61, $CHCl_3$)

Source of chirality: (*R*)-(−)-carvone

Absolute configuration: (3*R*,4a*S*,5*R*,7*R*)

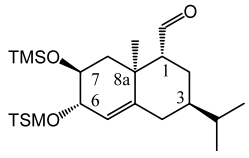
$C_{17}H_{23}NO_4$

Acetic acid (5*R*)-cyano-(7*R*)-isopropyl-(4a*S*)-methyl-9-oxo-3,4,4a,5,6,7,8,9-octahydro-cyclohepta[*c*]pyran-(3*R*)-yl ester

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99

$[\alpha]_D^{20} = -2.5$ (*c* 1.25, $CHCl_3$)

Source of chirality: (*R*)-(−)-carvone

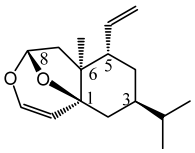
Absolute configuration: (1*S*,3*R*,6*S*,7*S*,8a*S*)

$C_{21}H_{40}O_3Si_2$

(3*R*)-Isopropyl-(8a*S*)-methyl-(6*S*,7*S*)-bis-(trimethyl-silanyloxy)-1,2,3,4,6,7,8,8a-octahydro-naphtalene-1-carbal

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99
$[\alpha]_D^{20}=+25$ (*c* 1.25, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*S*,3*R*,5*S*,6*S*,8*S*)

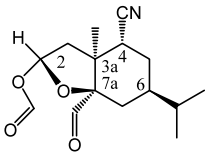
$C_{16}H_{24}O_2$

(3*R*)-Isopropyl-(6*S*)-methyl-(5*S*)-vinyl-9,12-dioxa-tricyclo[6.3.1.$0^{0,0}$]dodec-10-ene

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99
Mp: 94–96°C (heptane–ether)
$[\alpha]_D^{20}=+38$ (*c* 1.22, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (2*R*,3a*S*,4*R*,6*R*,7a*R*)

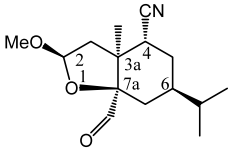
$C_{15}H_{21}NO_4$

Formic acid (4*R*)-cyano-(7a*R*)-formyl-(6*R*)-isopropyl-(3a*S*)-methyl-octahydro-benzofuran-(2*R*)-yl ester

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99
$[\alpha]_D^{20}=-95$ (*c* 0.32, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (2*R*,3a*S*,4*R*,6*R*,7a*R*)

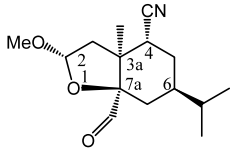
$C_{15}H_{23}NO_3$

(7a*R*)-Formyl-(6*R*)-isopropyl-(2*R*)-methoxy-(3a*S*)-methyl-octahydro-benzofuran-(4*R*)-carbonitrile

---

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



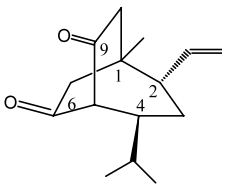
E.e. ≥99
$[\alpha]_D^{20}=+25$ (*c* 0.2, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (2*S*,3a*S*,4*R*,6*R*,7a*R*)

$C_{15}H_{23}NO_3$

(7a*R*)-Formyl-(6*R*)-isopropyl-(2*S*)-methoxy-(3a*S*)-methyl-octahydro-benzofuran-(4*R*)-carbonitrile

Elena M. Sanchez Fernandez, José I. Candela Lena, Ertan Altinel, Nicolas Birlirakis, Alejandro F. Barrero and Siméon Arseniyadis*

Tetrahedron: Asymmetry *14 (2003) 2277*



E.e. ≥99%
$[\alpha]_D^{20} = -55$ (*c* 1.47, $CHCl_3$)
Source of chirality: (*R*)-(−)-carvone
Absolute configuration: (1*R*,2*S*,4*S*,5*S*)

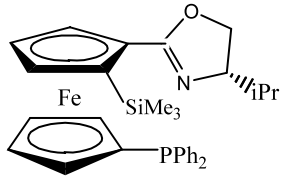
$C_{15}H_{22}O_2$

(4*S*)-Isopropyl-(1*R*)-methyl-(2*S*)-vinyl-bicyclo[3.2.2]nonane-6,9-dione

---

Lailai Wang, Wai Him Kwok, Albert S. C. Chan,* Tao Tu, Xuelong Hou* and Lixin Dai

Tetrahedron: Asymmetry *14 (2003) 2291*



Ee = 100%
$[\alpha]_D^{20} = +64$ (*c* 0.20, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (*S*,*Sp*)

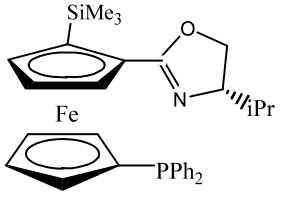
$C_{31}H_{36}NOSiPFe$

1-Diphenylphosphino-1′-[(*S*)-4-isopropyl-2.5-oxazolinyl]-2′(S_p)-(trimethylsilyl)ferrocene

---

Lailai Wang, Wai Him Kwok, Albert S. C. Chan,* Tao Tu, Xuelong Hou* and Lixin Dai

Tetrahedron: Asymmetry *14 (2003) 2291*



Ee = 100%
$[\alpha]_D^{20} = -203$ (*c* 0.19, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (*S*,R_p)

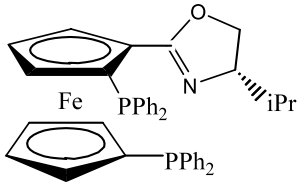
$C_{31}H_{36}NOSiPFe$

1-Diphenylphosphino-1′-[(*S*)-4-isopropyl-2.5-oxazolinyl]-2′-(R_p)-(trimethylsilyl)ferrocene

---

Lailai Wang, Wai Him Kwok, Albert S. C. Chan,* Tao Tu, Xuelong Hou* and Lixin Dai

Tetrahedron: Asymmetry *14 (2003) 2291*



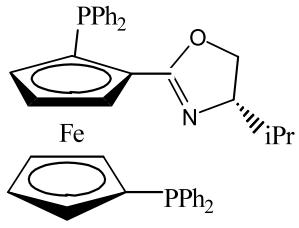
Ee = 100%
$[\alpha]_D^{20} = -65.5$ (*c* 0.15, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (*S*,*Sp*)

$C_{40}H_{37}NOP_2Fe$

1-Diphenylphosphino-1′-[(*S*)-4-isopropyl-2.5-oxazolinyl]-2′-(S_p)-(diphenylphosphino)ferrocene

Lailai Wang, Wai Him Kwok, Albert S. C. Chan,*
Tao Tu, Xuelong Hou* and Lixin Dai

Tetrahedron: Asymmetry *14 (2003) 2291*



Ee = 100%

$[\alpha]_D^{20} = +161.0$ (c 0.16, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (S,Rp)

$C_{40}H_{37}NOP_2Fe$

1-Diphenylphosphino-1′-[(*S*)-4-isopropyl-2.5-oxazolinyl]-2′-(R_p)-(diphenylphosphino)ferrocene