

Stereochemistry abstracts

Gabriela Guillena, María del Carmen Hita and Carmen Nájera*

Tetrahedron: Asymmetry 18 (2007) 1272

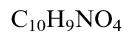
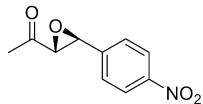
Ee = 83% [HPLC: *Chiraldak* AD column, hexane/
iPrOH: 98/2]

1.25 mL/min; ret. times, 43.9 (major), 53.4 (minor)
min]

$[\alpha]_D^{20} = -15$ (*c* 1.14, CHCl₃)

Source of chirality: asymmetric organocatalysis

Absolute configuration: (3*R*,4*S*)



trans-(3*R*,4*S*)-3,4-Epoxy-4-(4-nitrophenyl)butan-2-one

Gabriela Guillena, María del Carmen Hita and Carmen Nájera*

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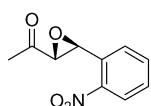
Ee = 96% [HPLC: *Chiraldak* AD column, hexane/
iPrOH: 98/2]

1.25 mL/min; ret. times, 19.7 (major), 36.0 (minor)
min]

$[\alpha]_D^{20} = -40$ (*c* 1.2, CHCl₃)

Source of chirality: asymmetric organocatalysis

Absolute configuration: (3*R*,4*S*)



trans-(3*R*,4*S*)-3,4-Epoxy-4-(2-nitrophenyl)butan-2-one

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Tetrahedron: Asymmetry 18 (2007) 1272

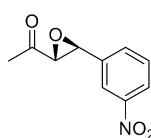
Ee = 97% [HPLC: *Chiraldak* AD column, hexane/
iPrOH: 98/2]

1.25 mL/min; ret. times, 25.4 (major), 32.6 (minor)
min]

$[\alpha]_D^{20} = -17$ (*c* 1.4, CHCl₃)

Source of chirality: asymmetric organocatalysis

Absolute configuration: (3*R*,4*S*)



trans-(3*R*,4*S*)-3,4-Epoxy-4-(3-nitrophenyl)butan-2-one

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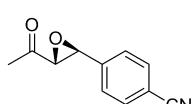
Ee = 93% [HPLC: *Chiraldak* AD column, hexane/
iPrOH: 98/2]

1.25 mL/min; ret. times, 32.3 (major), 43.2 (minor)
min]

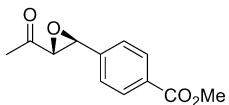
$[\alpha]_D^{20} = -50$ (*c* 0.84, CHCl₃)

Source of chirality: asymmetric organocatalysis

Absolute configuration: (3*R*,4*S*)



trans-(3*R*,4*S*)-3,4-Epoxy-4-(4-cyanophenyl)butan-2-one



C₁₂H₁₂O₄
trans-(3*R*,4*S*)-Epoxy-4-{4-(methoxycarbonyl)phenyl}butan-2-one

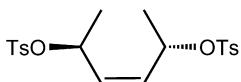
Ee = 87% [HPLC: *Chiralpak AD* column, hexane/*iPrOH*: 98/2]

1.25 mL/min; ret. times, 9.0 (major), 12.0 (minor) min]

[α]_D²⁰ = -63 (*c* 0.5, CHCl₃)

Source of chirality: asymmetric organocatalysis

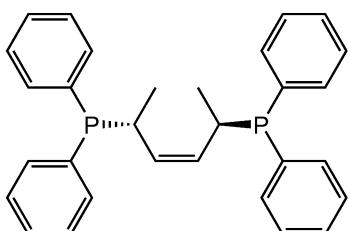
Absolute configuration: (3*R*,4*S*)



C₂₀H₂₄O₆S₂
(2*S*,5*S*,*Z*)-Hex-3-en-2-yl 2,5-(4-methylbenzenesulfonate)

[α]_D²⁵ = +35.38 (*c* 2.1 × 10⁻³ M, C₃H₆O)

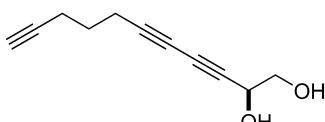
Absolute configuration: (2*S*,5*S*)



C₃₀H₃₀P₂
1-(((2*R*,5*R*,*Z*)-5-(diphenylphosphino)hex-3-en-2-yl)(phenyl)phosphino)benzene

[α]_D²⁵ = -50.3 (*c* 0.001 M, C₃H₆O)

Absolute configuration: (2*R*,5*R*)



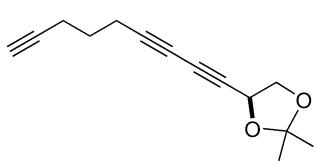
C₁₁H₁₂O₂
(*S*)-Undeca-3,5,10-triyne-1,2-diol

Ee = >98%

[α]_D²³ = +41.4 (*c* 0.06, CHCl₃)

Source of chirality: D-mannitol

Absolute configuration: (*S*)

 $C_{14}H_{16}O_2$

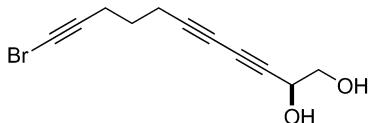
(S)-2,2-Dimethyl-4-nona-1,3,8-triynyl-[1,3]dioxolane

Ee = >98%

 $[\alpha]_D^{23} = +58.3$ (*c* 0.04, CHCl₃)

Source of chirality: D-mannitol

Absolute configuration: (S)

 $C_{11}H_{11}O_2Br$

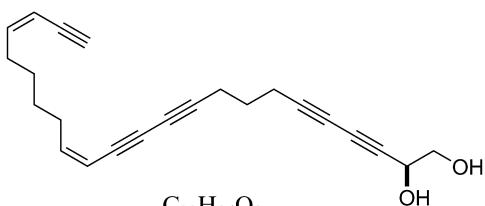
(S)-11-Bromo-undeca-3,5,10-triyne-1,2-diol

Ee = >98%

 $[\alpha]_D^{23} = +24$ (*c* 0.009, CHCl₃)

Source of chirality: D-mannitol

Absolute configuration: (S)

 $C_{23}H_{24}O_2$

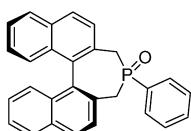
(S)-(+)-Siphonodiol

Ee = >98%

 $[\alpha]_D^{23} = +6.5$ (*c* 0.004, CHCl₃)

Source of chirality: D-mannitol

Absolute configuration: (S)

 $C_{28}H_{21}OP$

(S)-4-Phenyl-4,5-dihydro-3H-dinaphtho[2,1-c:1',2'-e]phosphepine oxide

Ee = >98%

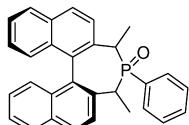
 $[\alpha]^{22} = +79$ (*c* 0.46, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (S)

Stephan Enthaler, Giulia Erre, Kathrin Junge, Dirk Michalik,
Anke Spannenberg, Fabrizio Marras, Serafino Gladiali and
Matthias Beller*

Tetrahedron: Asymmetry 18 (2007) 1288



(*S,S,Sa*)-3,5-Dimethyl-4-phenyl-4,5-dihydro-3*H*-dinaphtho[2,1-*c*:1',2'-*e*]phosphepine oxide

Ee = >98%

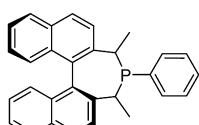
[α]²² = +93.5 (*c* 0.25, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S,S,Sa*)

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(*S,S,Sa*)-3,5-Dimethyl-4-phenyl-4,5-dihydro-3*H*-dinaphtho[2,1-*c*:1',2'-*e*]phosphepine

Ee = >98%

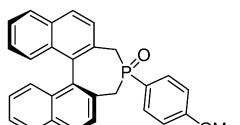
[α]²⁵ = +87.5 (*c* 0.2, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S,S,Sa*)

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(*S*)-4-(4-Methoxy)phenyl-4,5-dihydro-3*H*-dinaphtho[2,1-*c*:1',2'-*e*]phosphepine oxide

Ee = >98%

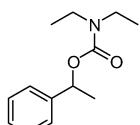
[α]²² = -293 (*c* 0.25, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

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(*S*)-1-Phenylethyl *N,N*-diethylcarbamate

Ee = 96%

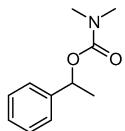
[α]²³ = -146.1 (*c* 0.5, CH₂Cl₂/MeOH 1:1)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

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C₁₁H₁₅NO₂
(S)-1-Phenylethyl *N,N*-dimethylcarbamate

Ee = 75%

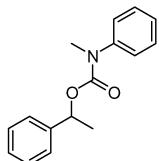
[α]²³ = -2.9 (*c* 0.3, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (S)

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Tetrahedron: Asymmetry 18 (2007) 1288



C₁₆H₁₇NO₂
1-Phenylethyl *N*-methyl *N*-phenylcarbamate

Ee = 65%

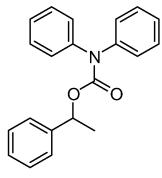
[α]²² = +19.9 (*c* 0.26, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (S)

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Tetrahedron: Asymmetry 18 (2007) 1288



C₂₁H₁₉NO₂
1-Phenylethyl *N,N*-diphenylcarbamate

Ee = 76%

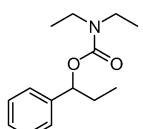
[α]²¹ = -16.8 (*c* 0.33, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (R)

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Anke Spannenberg, Fabrizio Marras, Serafino Gladiali and
Matthias Beller*

Tetrahedron: Asymmetry 18 (2007) 1288



C₁₄H₂₁NO₂
(S)-1-Phenylpropyl *N,N*-diethylcarbamate

Ee = 50%

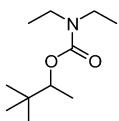
[α]²³ = -143.7 (*c* 0.5, CH₂Cl₂/MeOH 1:1)

Source of chirality: asymmetric synthesis

Absolute configuration: (S)

Stephan Enthaler, Giulia Erre, Kathrin Junge, Dirk Michalik, Anke Spannenberg, Fabrizio Marras, Serafino Gladiali and Matthias Beller*

Tetrahedron: Asymmetry 18 (2007) 1288



C₁₁H₂₃NO₂
(+)-3,3-Dimethylbutan-2-yl diethylcarbamate

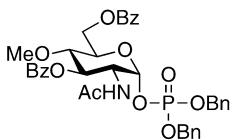
Ee = 67%

[α]_D²² = +135 (*c* 0.04, CHCl₃/MeOH)

Source of chirality: asymmetric synthesis

Thierry Muller, Ramona Danac, Lucy Ball, Sarah J. Gurr and Antony J. Fairbanks*

Tetrahedron: Asymmetry 18 (2007) 1299



C₃₇H₃₈NO₁₁P
Dibenzylphosphate-2-acetamido-3,6-di-*O*-benzoyl-2-deoxy-4-*O*-methyl- α -D-glucopyranoside

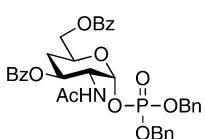
Ee = 100%

[α]_D²³ = +46.3 (*c* 1.0, CHCl₃)

Source of chirality: *N*-acetyl- α -D-glucosamine

Thierry Muller, Ramona Danac, Lucy Ball, Sarah J. Gurr and Antony J. Fairbanks*

Tetrahedron: Asymmetry 18 (2007) 1299



C₃₆H₃₆NO₁₀P
Dibenzylphosphate-2-acetamido-3,6-di-*O*-benzoyl-2,4-dideoxy- α -D-xylo-hexopyranoside

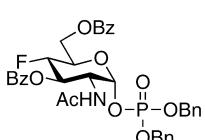
Ee = 100%

[α]_D²³ = +58.5 (*c* 1.0, CHCl₃)

Source of chirality: *N*-acetyl- α -D-glucosamine

Thierry Muller, Ramona Danac, Lucy Ball, Sarah J. Gurr and Antony J. Fairbanks*

Tetrahedron: Asymmetry 18 (2007) 1299

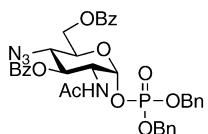


C₃₆H₃₅FNO₁₀P
Dibenzylphosphate-2-acetamido-3,6-di-*O*-benzoyl-2,4-dideoxy-4-fluoro- α -D-glucopyranoside

Ee = 100%

[α]_D²³ = +59.9 (*c* 1.0, CHCl₃)

Source of chirality: *N*-acetyl- α -D-glucosamine



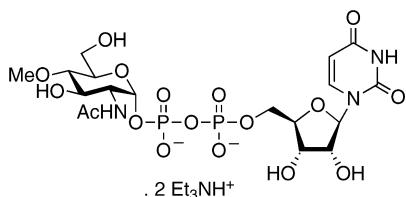
Ee = 100%

$[\alpha]_D^{20} = +90.2$ (c 0.5, MeOH)

Source of chirality: *N*-acetyl-*D*-glucosamine



Dibenzylphosphate-2-acetamido-3,6-di-*O*-benzoyl-2,4-dideoxy-4-azido- α -D-glucopyranoside



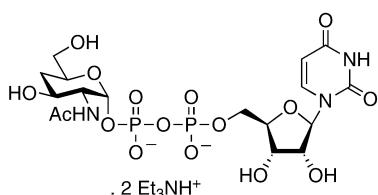
Ee = 100%

$[\alpha]_D^{18} = +40.8$ (c 1.0, MeOH)

Source of chirality: *N*-acetyl-*D*-glucosamine, *D*-uridine



Uridinediphosphoryl-2-acetamido-2,4-dideoxy-4-*O*-methyl- α -D-glucopyranoside, ditriethylammonium salt



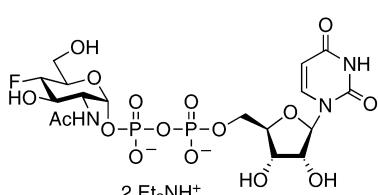
Ee = 100%

$[\alpha]_D^{18} = +40.2$ (c 1.0, MeOH)

Source of chirality: *N*-acetyl-*D*-glucosamine, *D*-uridine



Uridinediphosphoryl-2-acetamido-2,4-dideoxy- α -D-*xylo*-hexopyranoside, ditriethylammonium salt



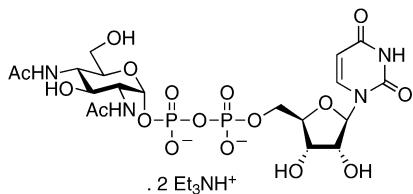
Ee = 100%

$[\alpha]_D^{18} = +45.0$ (c 0.1, MeOH)

Source of chirality: *N*-acetyl-*D*-glucosamine, *D*-uridine



Uridinediphosphoryl-2-acetamido-2,4-dideoxy-4-fluoro- α -D-glucopyranoside, ditriethylammonium salt



Uridinediphosphoryl-2,4-diacetamido-2,4-dideoxy- α -D-glucopyranoside, ditriethylammonium salt

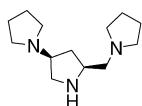
Ee = 100%

[α]_D¹⁸ = +41.6 (c 0.5, MeOH)

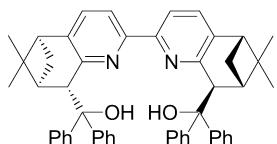
Source of chirality: N-acetyl-D-glucosamine, D-uridine

Ee = 100%

[α]_D²⁰ = +5.0 (c 0.70, CH₂Cl₂)



(2S,4S)-2-Pyrrolidin-1-ylmethyl-4-pyrrolidin-1-yl-pyrrolidine



Ee = 97%

[α]_D¹⁶ = -427.5 (c 0.32, CH₂Cl₂)

Source of chirality: (1R)-(+) α -pinene

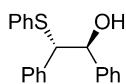
Absolute configuration: (1S,1'S,8R,8'R,9S,9'S)



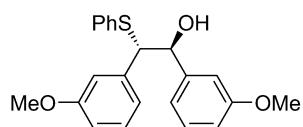
[8'-(Hydroxy-diphenyl-methyl)-10,10,10',10'-tetramethyl-[5,5']bi[6-aza-tricyclo[7.1.1.0^2,7]undecyl]-2(7),3,5,2',4',6'-hexaen-8-yl]-di-phenyl-methanol

[α]_D²¹ = +58.4 (c 1.1, CH₃Cl)

Absolute configuration: (1S,2S)

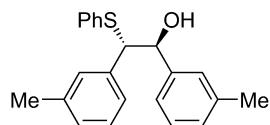


1,2-Diphenyl-2-phenylsulfanyl-ethanol



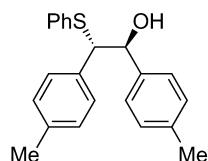
$[\alpha]_D^{21} = +45.6$ (*c* 1.1, CH₃Cl)
Absolute configuration: (1*S*,2*S*)

C₂₂H₂₂O₃S
1,2-Bis-(3-methoxy-phenyl)-2-phenylsulfanyl-ethanol



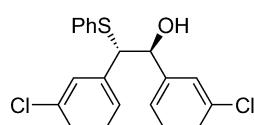
$[\alpha]_D^{21} = +57.7$ (*c* 0.3, CH₃Cl)
Absolute configuration: (1*S*,2*S*)

C₂₂H₂₂OS
2-Phenylsulfanyl-1,2-di-*m*-tolyl-ethanol



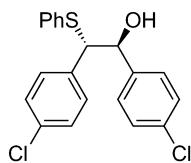
$[\alpha]_D^{21} = +35.9$ (*c* 1.1, CH₃Cl)
Absolute configuration: (1*S*,2*S*)

C₂₂H₂₂OS
2-Phenylsulfanyl-1,2-di-*p*-tolyl-ethanol



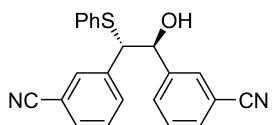
$[\alpha]_D^{21} = +43.6$ (*c* 1.5, CH₃Cl)
Absolute configuration: (1*S*,2*S*)

C₂₀H₁₆Cl₂OS
1,2-Bis-(3-chloro-phenyl)-2-phenylsulfanyl-ethanol



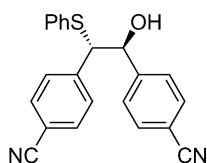
$C_{20}H_{16}Cl_2OS$
1,2-Bis-(4-chloro-phenyl)-2-phenylsulfanyl-ethanol

$[\alpha]_D^{21} = +6.9$ (*c* 1.5, CH₃Cl)
Absolute configuration: (1*S*,2*S*)



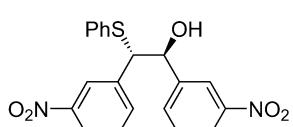
$C_{22}H_{16}N_2OS$
1,2-Bis-(3-cyano-phenyl)-2-phenylsulfanyl-ethanol

$[\alpha]_D^{21} = +13.8$ (*c* 0.7, CH₃Cl)
Absolute configuration: (1*S*,2*S*)



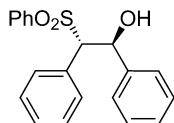
$C_{22}H_{16}N_2OS$
1,2-Bis-(4-cyano-phenyl)-2-phenylsulfanyl-ethanol

$[\alpha]_D^{21} = +5.0$ (*c* 0.6, CH₃Cl)
Absolute configuration: (1*S*,2*S*)



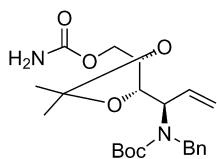
$C_{20}H_{16}N_2O_5S$
1,2-Bis-(3-nitro-phenyl)-2-phenylsulfanyl-ethanol

$[\alpha]_D^{21} = -6.8$ (*c* 0.7, CH₃Cl)
Absolute configuration: (1*S*,2*S*)



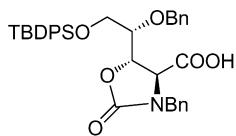
$C_{20}H_{18}O_3S$
2-Benzene-sulfonyl-1,2-diphenyl-ethanol

$[\alpha]_D^{22} = -35.8$ (*c* 0.8, CH_3Cl)
Absolute configuration: (1*S*,2*S*)



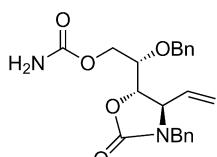
$C_{22}H_{32}N_2O_6$
(2*S*,3*S*,4*R*)-4-Benzylamino-4-*tert*-butyloxycarbonylamino-1-*O*-carbamoyl-2,3-dioxyisopropylidene-hex-5-en

Ee = 89%
 $[\alpha]_D^{25} = -3.5$ (*c* 1.26, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*S*,3*S*,4*R*)



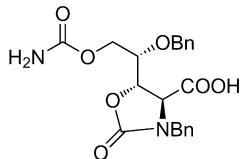
$C_{36}H_{39}NO_6Si$
(2*S*,3*S*,4*S*)-2-Benzyl-3-*O*,4-*N*-benzyl-carbamate-1-*tert*-butylidiphenylsilyloxy-pentanoic acid

Ee = 89%
 $[\alpha]_D^{25} = +22.4$ (*c* 0.75, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*S*,3*S*,4*R*)



$C_{22}H_{24}N_2O_5$
(4*R*,5*S*)-3-Benzyl-5-((1*S*)-2-*O*-carbamoyl-1-benzyloxyethyl)-4-vinyl-1,3-oxazolan-2-one

Ee = 89%
 $[\alpha]_D^{25} = +89.2$ (*c* 1.70, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (4*S*,5*S*,1*S*)

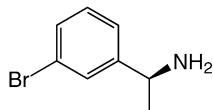


$\text{C}_{21}\text{H}_{22}\text{N}_2\text{O}_7$
(*S,S,4S*)-2-Benzyl-3-*O*-(4-N-benzyl-carbamoyloxy)-4-aminocarbonyloxy-1-aminocarbonyloxy-pentanoic acid

Ee = 89%

 $[\alpha]_D^{25} = +8.6$ (*c* 0.45, CHCl_3)

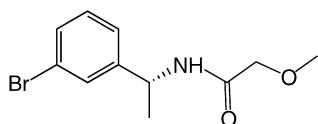
Source of chirality: asymmetric synthesis

Absolute configuration: (*2S,3S,4S*)

(*S*)-1
(*S*)-(3'-Bromophenyl)ethylamine

Pale-yellow oil

Ee = 99.8%

 $[\alpha]_D^{20} = -24.7$ (*c* 2.9, methanol)

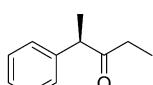
(*R*)-2b
(*R*)-*N*-(2''-Methoxyacetyl)-(3'-bromophenyl)ethylamine

mp 131–135 °C (decomp)

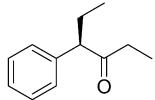
Ee >99.8%

 $[\alpha]_D^{20} = +21.5$ (*c* 3.0, methanol)Ee = 95% (GC, $\text{Rt}\beta\text{DEXse}$) $[\alpha]_D^{25} = -76.4$ (*c* 1.20, CHCl_3)

Source of chirality: enzymatic oxidation

Absolute configuration: (*R*)

$\text{C}_{11}\text{H}_{14}\text{O}$
(*R*)-2-Phenylpentan-3-one



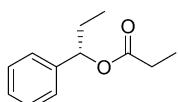
(*R*)-4-Phenylhexan-3-one

Ee = 98% (GC, RtβDEXse)

[α]_D²⁵ = -61.2 (c 0.75, CHCl₃)

Source of chirality: enzymatic oxidation

Absolute configuration: (*R*)



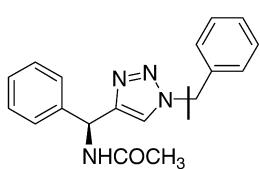
(*S*)-1-Phenylpropyl propionate

Ee = 90% (GC, RtβDEXse)

[α]_D²⁵ = -41.7 (c 0.83, CHCl₃)

Source of chirality: enzymatic oxidation

Absolute configuration: (*S*)



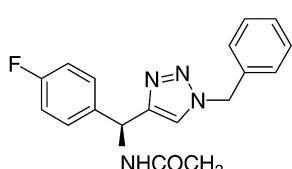
(*S*)-*N*-[(1-Benzyl-1*H*-[1,2,3]triazol-4-yl)-phenyl-methyl]-acetamide

Ee 91%

[α]_D²⁰ = -9.2 (c 0.6, MeOH)

Source of chirality: (*R*)-*N*-acetyl-1-phenyl-2-propynylamine

Absolute configuration: (*S*)



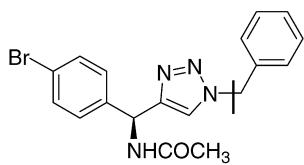
(*S*)-*N*-[(1-Benzyl-1*H*-[1,2,3]triazol-4-yl)-(4-fluorophenyl)-methyl]-acetamide

Ee 93%

[α]_D²⁰ = -7.9 (c 1.1, CHCl₃)

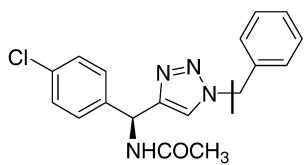
Source of chirality: (*R*)-*N*-acetyl-1-(4-fluorophenyl)-2-propynylamine

Absolute configuration: (*S*)



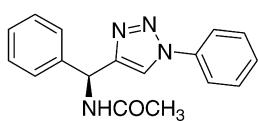
$C_{18}H_{17}BrN_4O$
(*S*)-*N*-[(1-Benzyl-1*H*-[1,2,3]triazol-4-yl)-(4-bromophenyl)-methyl]-acetamide

Ee 95%

 $[\alpha]_D^{20} = -10.0$ (*c* 0.6, CHCl₃)Source of chirality: (*R*)-*N*-acetyl-1-(4-bromophenyl)-2-propynylamineAbsolute configuration: (*S*)

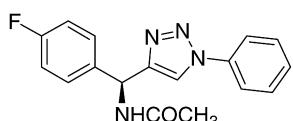
$C_{18}H_{17}ClN_4O$
(*S*)-*N*-[(1-Benzyl-1*H*-[1,2,3]triazol-4-yl)-(4-chlorophenyl)-methyl]-acetamide

Ee 99%

 $[\alpha]_D^{20} = -10.9$ (*c* 1.0, CHCl₃)Source of chirality: (*R*)-*N*-acetyl-1-(4-chlorophenyl)-2-propynylamineAbsolute configuration: (*S*)

$C_{17}H_{16}N_4O$
(*S*)-*N*-[Phenyl-(1-phenyl-1*H*-[1,2,3]triazol-4-yl)-methyl]-acetamide

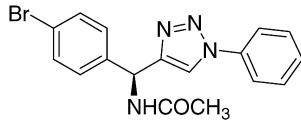
Ee 95%

 $[\alpha]_D^{20} = -9.4$ (*c* 1.0, CHCl₃)Source of chirality: (*R*)-*N*-acetyl-1-phenyl-2-propynylamineAbsolute configuration: (*S*)

$C_{17}H_{15}FN_4O$
(*S*)-*N*-[4-Fluorophenyl-(1-phenyl-1*H*-[1,2,3]triazol-4-yl)-methyl]-acetamide

Ee 95%

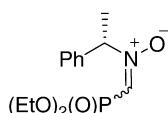
 $[\alpha]_D^{20} = -6.6$ (*c* 0.9, CHCl₃)Source of chirality: (*R*)-*N*-acetyl-1-(4-fluorophenyl)-2-propynylamineAbsolute configuration: (*S*)

 $C_{17}H_{15}BrN_4O$ (S)-N-[4-Bromophenyl-(1-phenyl-1*H*-[1,2,3]triazol-4-yl)-methyl]-acetamide

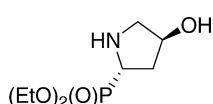
Ee 89%

 $[\alpha]_D^{20} = -6.8$ (*c* 1.7, CHCl₃)Source of chirality: (*R*)-N-acetyl-1-(4-bromophenyl)-2-propynylamineAbsolute configuration: (*S*) $C_{17}H_{15}ClN_4O$ (S)-N-[4-Chlorophenyl-(1-phenyl-1*H*-[1,2,3]triazol-4-yl)-methyl]-acetamide

Ee 79%

 $[\alpha]_D^{20} = -9.8$ (*c* 1.0, CHCl₃)Source of chirality: (*R*)-N-acetyl-1-(4-chlorophenyl)-2-propynylamineAbsolute configuration: (*S*) $C_{13}H_{20}NO_4P$ N-[(*S*)-1-Phenylethyl]-C-(diethoxyphosphoryl)nitronate

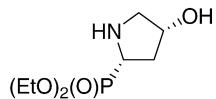
Ee = 100%

 $[\alpha]_D^{20} = +7.5$ (*c* 1.9, CHCl₃)Source of chirality: (*S*)-1-phenylethylamineAbsolute configuration: (*S*) $C_8H_{18}NO_4P$ Diethyl (2*S*,4*S*)-4-hydroxypyrrolidinyl-2-phosphonate

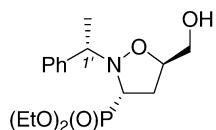
Ee = 100%

 $[\alpha]_D^{20} = -4.6$ (*c* 1.0, CH₃OH)Source of chirality: (*S*)-1-phenylethylamineAbsolute configuration: (2*S*,4*S*)

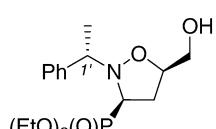
Ee = 100%

 $[\alpha]_D^{20} = +10.7$ (*c* 1.1, CH₃OH)Source of chirality: (*S*)-1-phenylethylamineAbsolute configuration: (2*S*,4*R*)Diethyl (2*S*,4*R*)-4-hydroxypyrrolidinyl-2-phosphonate

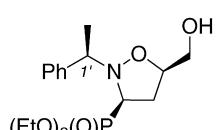
Ee = 100%

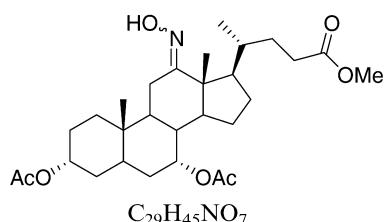
 $[\alpha]_D^{20} = -3.8$ (*c* 1.1, CHCl₃)Source of chirality: (*S*)-1-phenylethylamineAbsolute configuration: (3*S*,5*R*,1'*S*)Diethyl (3*S*,5*R*)-5-(hydroxymethyl)-2-[(*S*)-1-phenylethyl]isoxazolidinyl-3-phosphonate

Ee = 100%

 $[\alpha]_D^{20} = -63.6$ (*c* 1.5, CHCl₃)Source of chirality: (*S*)-1-phenylethylamineAbsolute configuration: (3*R*,5*R*,1'*S*)Diethyl (3*R*,5*R*)-5-(hydroxymethyl)-2-[(*S*)-1-phenylethyl]isoxazolidinyl-3-phosphonate

Ee = 100%

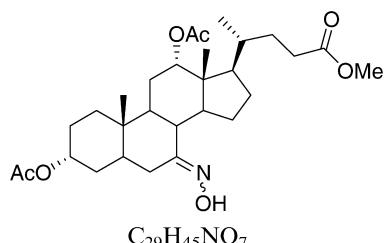
 $[\alpha]_D^{20} = +1.6$ (*c* 1.3, CHCl₃)Source of chirality: (*R*)-1-phenylethylamineAbsolute configuration: (3*R*,5*R*,1'*R*)Diethyl (3*R*,5*R*)-5-(hydroxymethyl)-2-[(*R*)-1-phenylethyl]isoxazolidinyl-3-phosphonate



Methyl-3,7-diacetyloxy-12-oxime-5-cholan-24-oate

 $[\alpha]_D^{22} = +130.0$ (c 1.00, CH_2Cl_2)

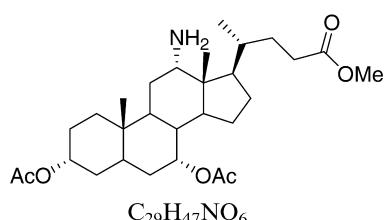
Source of chirality: natural source



Methyl-3,12-diacetyloxy-7-oxime-5-cholan-24-oate

 $[\alpha]_D^{22} = +12.0$ (c 1.00, CH_2Cl_2)

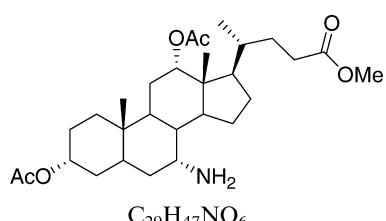
Source of chirality: natural source



Methyl-3,7-diacetyloxy-12-amine-5-cholan-24-oate

 $[\alpha]_D^{22} = +35.0$ (c 1.00, CH_2Cl_2)

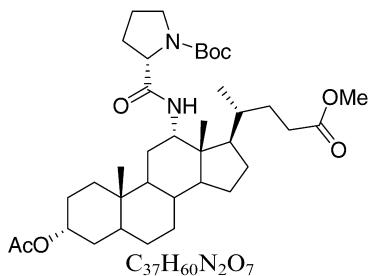
Source of chirality: natural source



Methyl-3,12-diacetyloxy-7-amine-5-cholan-24-oate

 $[\alpha]_D^{22} = +68.0$ (c 1.00, CH_2Cl_2)

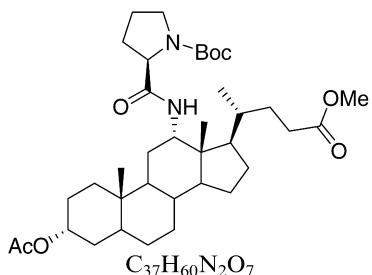
Source of chirality: natural source



Methyl-3-acetyloxy-12-N-(L-Boc-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +31.0$ (*c* 1.00, CH₂Cl₂)

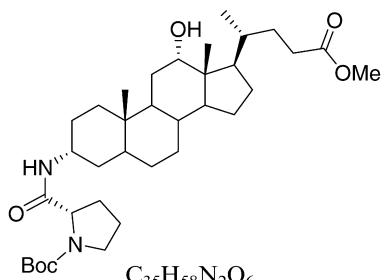
Source of chirality: natural source



Methyl-3-acetyloxy-12-N-(D-Boc-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +176.0$ (*c* 1.00, CH₂Cl₂)

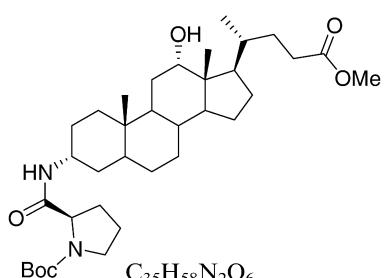
Source of chirality: natural source



Methyl-12-hydroxy-3-N-(L-Boc-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +65.0$ (*c* 1.00, CH₂Cl₂)

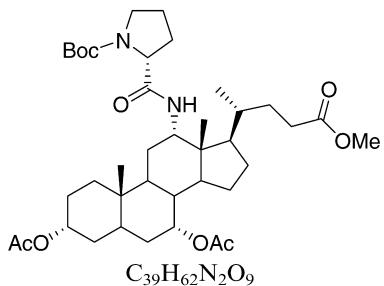
Source of chirality: natural source



Methyl-12-hydroxy-3-N-(D-Boc-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +102.0$ (*c* 1.00, CH₂Cl₂)

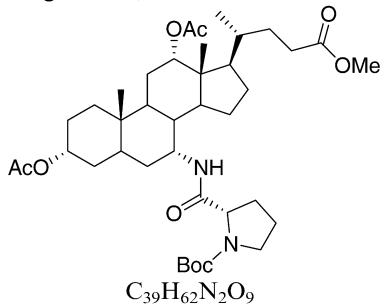
Source of chirality: natural source



Methyl-3,7-diacetyloxy-12-N-(D-Boc-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +113.0$ (*c* 1.00, CH₂Cl₂)

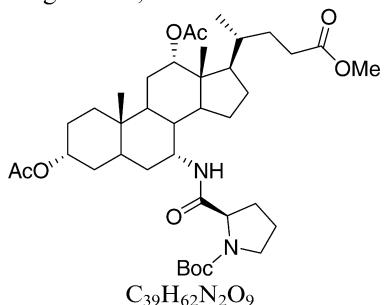
Source of chirality: natural source



Methyl-3,12-diacetyloxy-7-N-(L-Boc-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +23.0$ (*c* 1.00, CH₂Cl₂)

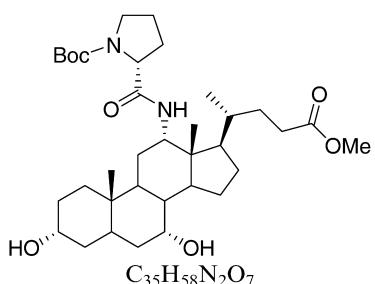
Source of chirality: natural source



Methyl-3,12-diacetyloxy-7-N-(D-Boc-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +103.0$ (*c* 1.00, CH₂Cl₂)

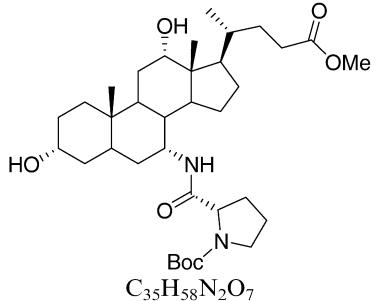
Source of chirality: natural source



Methyl-3,7-dihydroxy-12-N-(D-Boc-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +97.4$ (*c* 1.00, CH₂Cl₂)

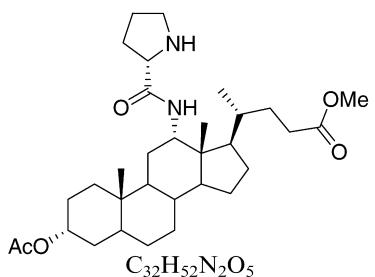
Source of chirality: natural source



Methyl-3,12-dihydroxy-12-N-(L-Boc-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = -3.6$ (*c* 1.00, CH₂Cl₂)

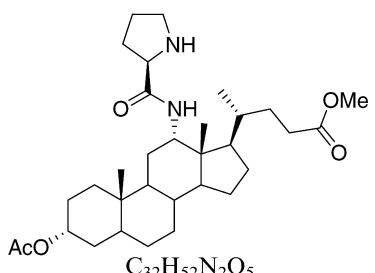
Source of chirality: natural source



Methyl-3-acetyloxy-12-N-(L-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +73.0$ (*c* 1.00, CH₂Cl₂)

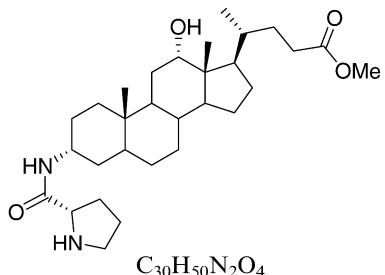
Source of chirality: natural source



Methyl-3-acetyloxy-12-N-(D-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +171.0$ (*c* 1.00, CH₂Cl₂)

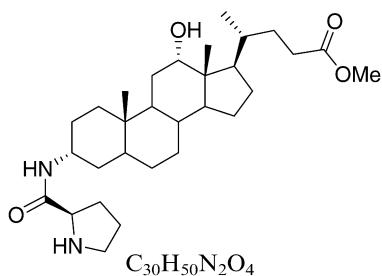
Source of chirality: natural source



Methyl-12-hydroxy-3-N-(L-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +36.0$ (*c* 1.00, CH₂Cl₂)

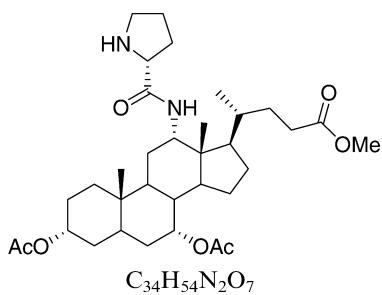
Source of chirality: natural source



Methyl-12-hydroxy-3-N-(D-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +54.0$ (*c* 1.00, CH₂Cl₂)

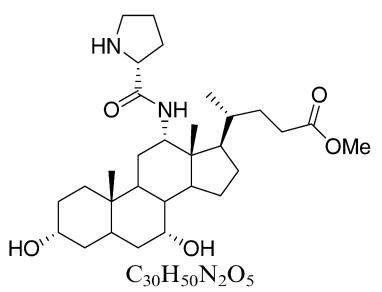
Source of chirality: natural source



Methyl-3,7-diacetoxy-12-N-(D-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +69.5$ (*c* 1.00, CH₂Cl₂)

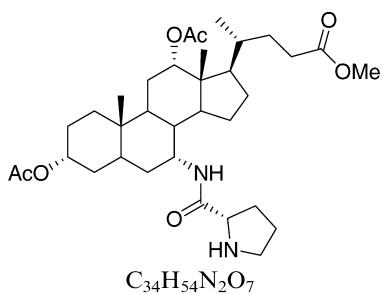
Source of chirality: natural source



Methyl-3,7-hydroxy-12-N-(D-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +79.9$ (*c* 1.00, CH₂Cl₂)

Source of chirality: natural source



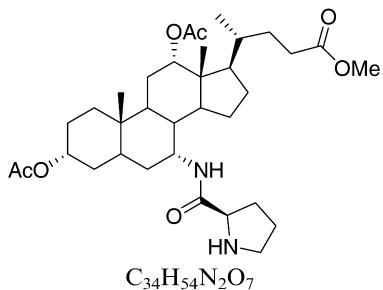
Methyl-3,12-diacetoxy-7-N-(L-prolinoyl)amino-5-cholan-24-oate

 $[\alpha]_D^{22} = +84.0$ (*c* 1.00, CH₂Cl₂)

Source of chirality: natural source

Gian Luigi Puleo, Matteo Masi and Anna Iuliano*

Tetrahedron: Asymmetry 18 (2007) 1364



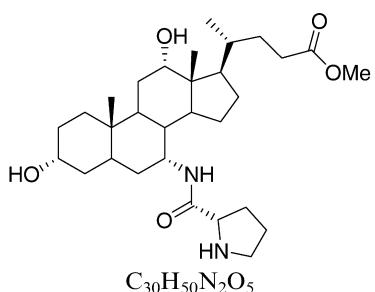
$[\alpha]_D^{22} = +131.0$ (*c* 1.00, CH₂Cl₂)

Source of chirality: natural source

Methyl-3,12-diacetyloxy-7-N-(D-prolinoyl)amino-5-cholan-24-oate

Gian Luigi Puleo, Matteo Masi and Anna Iuliano*

Tetrahedron: Asymmetry 18 (2007) 1364



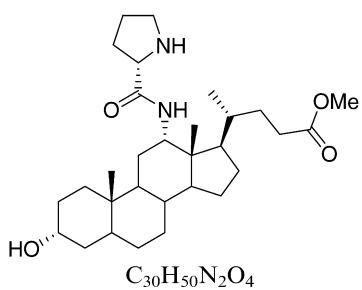
$[\alpha]_D^{22} = +3.7$ (*c* 1.00, CH₂Cl₂)

Source of chirality: natural source

Methyl-3,12-dihydroxy-7-N-(L-prolinoyl)amino-5-cholan-24-oate

Gian Luigi Puleo, Matteo Masi and Anna Iuliano*

Tetrahedron: Asymmetry 18 (2007) 1364



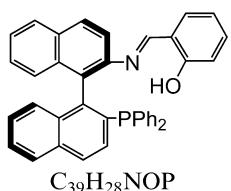
$[\alpha]_D^{22} = +69.6$ (*c* 1.00, CH₂Cl₂)

Source of chirality: natural source

Methyl-3-hydroxy-12-N-(D-prolinoyl)amino-5-cholan-24-oate

Jia-Jun Jiang and Min Shi*

Tetrahedron: Asymmetry 18 (2007) 1376



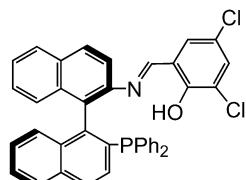
Ee = 100%

$[\alpha]_D^{20} = +224.6$ (*c* 0.45, CHCl₃)

Source of chirality: optical resolution

Absolute configuration: (*R*)

(*R*)-(+)-2-((2-(Diphenylphosphino)-1,1'-binaphthyl-2'-ylimino)methyl)phenol

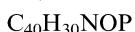
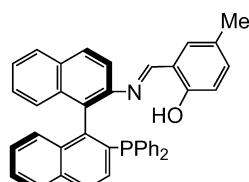


(R)-(+)-2,4-Dichloro-6-((2-(diphenylphosphino)-1,1'-binaphthyl-2'-ylimino)methyl)phenol

Ee = 100%

 $[\alpha]_D^{20} = +163$ (*c* 0.25, CHCl₃)

Source of chirality: optical resolution

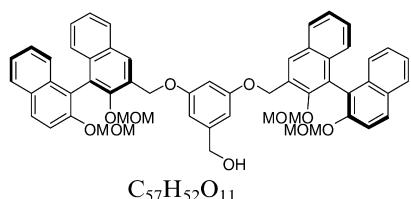
Absolute configuration: (*R*)

(R)-(+)-2-((2-(Diphenylphosphino)-1,1'-binaphthyl-2'-ylimino)methyl)-4-methylphenol

Ee = 100%

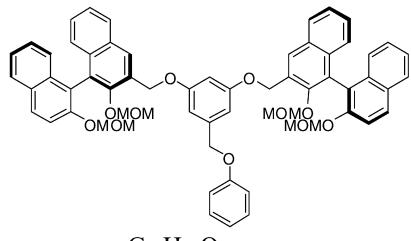
 $[\alpha]_D^{20} = +178$ (*c* 0.25, CHCl₃)

Source of chirality: optical resolution

Absolute configuration: (*R*)

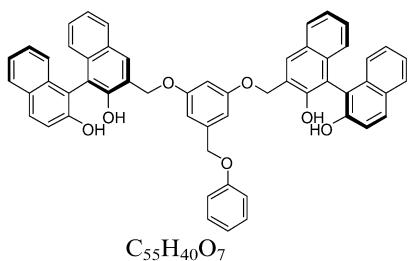
(3,5-Bis(((R)-2,2'-bis(methoxymethoxy)-1,1'-binaphthyl-3-yl)methoxy)phenyl)methanol

Ee = 100%

 $[\alpha]_D^{20} = +103$ (*c* 1.0, CH₂Cl₂)Source of chirality: (*R*)-BINOLAbsolute configuration: (*R*)(1*R*,1'*R*)-3,3'-(5-(Phenoxymethyl)-1,3-phenylene)bis(oxy)bis(methylene)bis(2,2'-bis(methoxymethoxy)-1,1'-binaphthyl)

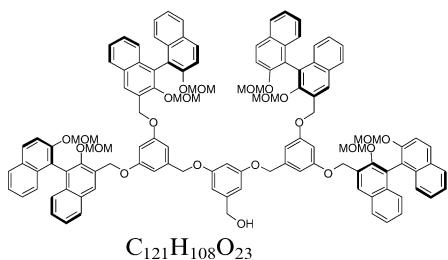
Ee = 100%

 $[\alpha]_D^{20} = +90$ (*c* 1.0, CH₂Cl₂)Source of chirality: (*R*)-BINOLAbsolute configuration: (1*R*,1'*R*)



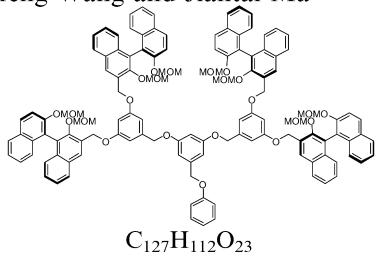
Ee = 100%
 $[\alpha]_D^{20} = +46$ (*c* 1.0, CH₂Cl₂)
 Source of chirality: (*R*)-BINOL
 Absolute configuration: (1*R*,1'*R*)

(1*R*,1'*R*)-3,3'-(5-(Phenoxy)methyl)-1,3-phenylenebis(oxy)bis(methylene)di-1,1'-binaphthyl-2,2'-diol



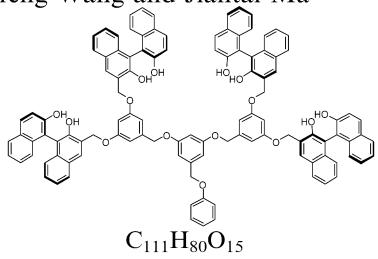
Ee = 100%
 $[\alpha]_D^{20} = +88$ (*c* 1.0, CH₂Cl₂)
 Source of chirality: (*R*)-BINOL
 Absolute configuration: (*R*)

(3,5-Bis(3,5-bis((*R*)-2,2'-bis(methoxymethoxy)-1,1'-binaphthyl-3-yl)methoxy)benzyloxy)phenyl)methanol



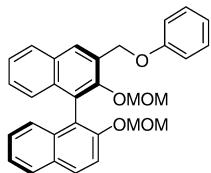
Ee = 100%
 $[\alpha]_D^{20} = +76$ (*c* 1.0, CH₂Cl₂)
 Source of chirality: (*R*)-BINOL
 Absolute configuration: (1*R*,1'*R*,1''*R*,1'''*R*)

(1*R*,1'*R*,1''*R*,1'''*R*)-3,3',3'',3'''-(5,5'-(5-(Phenoxy)methyl)-1,3-phenylenebis(oxy)bis(methylene)bis(benzene-5,3,1-triyl))tetrakis(oxymethoxy)methane



Ee = 100%
 $[\alpha]_D^{20} = +49$ (*c* 1.0, CH₂Cl₂)
 Source of chirality: (*R*)-BINOL
 Absolute configuration: (1*R*,1'*R*,1''*R*,1'''*R*)

(1*R*,1'*R*,1''*R*,1'''*R*)-3,3',3'',3'''-(5,5'-(5-(Phenoxy)methyl)-1,3-phenylenebis(oxy)bis(methylene)bis(benzene-5,3,1-triyl))tetrakis(oxymethoxy)methane



Ee = 100%

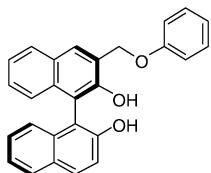
$[\alpha]_D^{20} = +28$ (*c* 1.0, CH₂Cl₂)

Source of chirality: (*R*)-BINOL

Absolute configuration: (*R*)

C₃₁H₂₈O₅

(*R*)-2,2'-Bis(methoxymethoxy)-3-(phenoxyethyl)-1,1'-binaphthyl



Ee = 100%

$[\alpha]_D^{20} = +53$ (*c* 1.0, CH₂Cl₂)

Source of chirality: (*R*)-BINOL

Absolute configuration: (*R*)

C₂₇H₂₀O₃

(*R*)-3-(Phenoxyethyl)-1,1'-binaphthyl-2,2'-diol