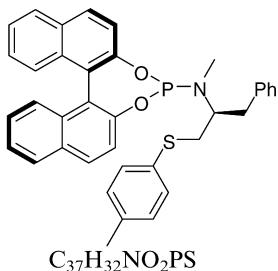


Stereochemistry abstracts

Fabien Boeda, Diane Rix, Hervé Clavier, Christophe Crévisy\*  
and Marc Mauduit\*

Tetrahedron: Asymmetry 17 (2006) 2726



*O,O'-(R)-(1,1'-Dinaphyl-2,2'-diyl)-N-methyl-N'-(S)-1-phenyl-3-(p-tolylthio)propanephosphoramidite*

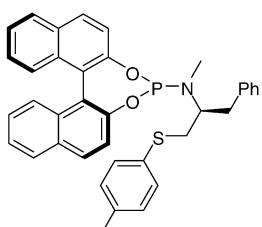
$[\alpha]^{20} = -246.0$  (*c* 1.7, chloroform)

Source of chirality: (*R*)-BINOL 99% ee,  
(*S*)-phenylalaninol 99% ee

Absolute configuration: (*R,S*)

Fabien Boeda, Diane Rix, Hervé Clavier, Christophe Crévisy\*  
and Marc Mauduit\*

Tetrahedron: Asymmetry 17 (2006) 2726



*O,O'-(S)-(1,1'-Dinaphyl-2,2'-diyl)-N-methyl-N'-(S)-1-phenyl-3-(p-tolylthio)propanephosphoramidite*

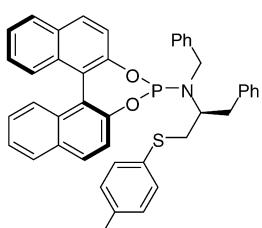
$[\alpha]^{20} = +250.0$  (*c* 1.2, chloroform)

Source of chirality: (*S*)-BINOL 99% ee,  
(*S*)-phenylalaninol 99% ee

Absolute configuration: (*S,S*)

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and Marc Mauduit\*

Tetrahedron: Asymmetry 17 (2006) 2726



*O,O'-(S)-(1,1'-Dinaphyl-2,2'-diyl)-N-benzyl-N'-(S)-1-phenyl-3-(p-tolylthio)propanephosphoramidite*

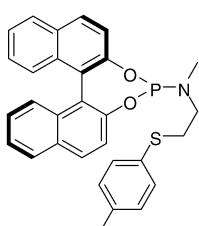
$[\alpha]^{20} = +258.2$  (*c* 1.7, chloroform)

Source of chirality: (*S*)-BINOL 99% ee,  
(*S*)-phenylalaninol 99% ee

Absolute configuration: (*S,S*)

Fabien Boeda, Diane Rix, Hervé Clavier, Christophe Crévisy\*  
and Marc Mauduit\*

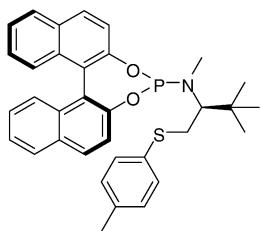
Tetrahedron: Asymmetry 17 (2006) 2726



*O,O'-(R)-(1,1'-Dinaphyl-2,2'-diyl)-N-methyl-N'-(R)-2-(p-tolylthio)ethanephosphoramidite*

$[\alpha]^{20} = -54.3$  (*c* 0.53, chloroform)

Source of chirality: (*R*)-BINOL 99% ee  
Absolute configuration: (*R*)



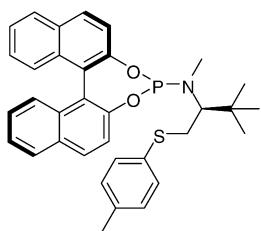
C<sub>34</sub>H<sub>34</sub>NO<sub>2</sub>PS

O,O'-(S)-(1,1'-Dinaphthyl-2,2'-diyl)-N-methyl-N'-(S)-1,1',1''-trimethyl-3-(p-tolylthio)propanephosphoramidite

$[\alpha]^{20} = +102.6$  (*c* 0.70, chloroform)

Source of chirality: (S)-BINOL 99% ee,  
(S)-*tert*-leucinol 99% ee

Absolute configuration: (S,S)



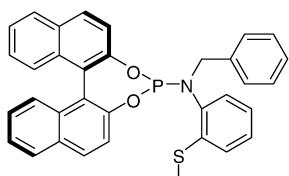
C<sub>34</sub>H<sub>34</sub>NO<sub>2</sub>PS

O,O'-(R)-(1,1'-Dinaphthyl-2,2'-diyl)-N-methyl-N'-(S)-1,1',1''-trimethyl-3-(p-tolylthio)propanephosphoramidite

$[\alpha]^{20} = -99.2$  (*c* 0.60, chloroform)

Source of chirality: (R)-BINOL 99% ee,  
(S)-*tert*-leucinol 99% ee

Absolute configuration: R,S



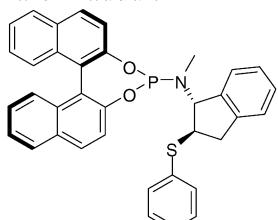
C<sub>34</sub>H<sub>26</sub>NO<sub>2</sub>PS

O,O'-(R)-(1,1'-Dinaphthyl-2,2'-diyl)-N-benzyl-N'-(2-(methylthio)phenyl)phenyl phosphoramidite

$[\alpha]^{20} = -113.4$  (*c* 0.50, chloroform)

Source of chirality: (R)-BINOL 99% ee

Absolute configuration: R



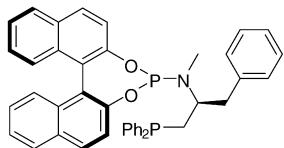
C<sub>37</sub>H<sub>30</sub>NO<sub>2</sub>PS

O,O'-(R)-(1,1'-Dinaphthyl-2,2'-diyl)-N-methyl-N'-(1R,2R)-2-(p-tolylthio)-2,3-dihydro-1H-inden-1-yl phosphoramidite

$[\alpha]^{20} = -39.4$  (*c* 0.66, chloroform)

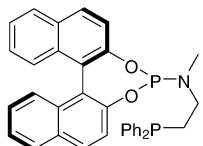
Source of chirality: (R)-BINOL 99% ee,  
(1*R*,2*S*)-*cis*-1-amino-2-indanol 99% ee

Absolute configuration: (R,R,R)



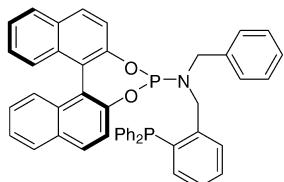
$C_{42}H_{35}NO_2P_2$   
 $O,O'-(S)-(1,1'-Dinaphthyl-2,2'-diyl)-N\text{-methyl-}N'\text{-(S)\text{-}1-phenyl-}3\text{-(diphenylphosphino)propanephosphoramidite}$

$[\alpha]^{20} = +58.5$  (*c* 0.20, chloroform)  
Source of chirality: (*S*)-BINOL 99% ee,  
(*S*)-phenylalaninol 99% ee  
Absolute configuration: (*S,S*)



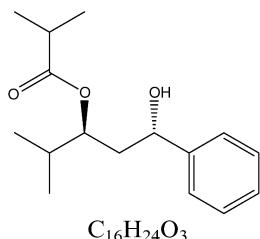
$C_{35}H_{29}NO_2P_2$   
 $O,O'-(R)-(1,1'-Dinaphthyl-2,2'-diyl)-N\text{-methyl-}N'\text{-(R)\text{-}2-(diphenylphosphino)ethanephosphoramidite}$

$[\alpha]^{20} = -70.7$  (*c* 0.20, chloroform)  
Source of chirality: (*R*)-BINOL 99% ee  
Absolute configuration: (*R*)



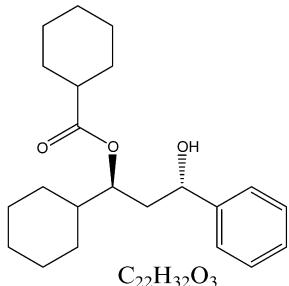
$C_{46}H_{35}NO_2P_2$   
 $O,O'-(S)-(1,1'-Dinaphthyl-2,2'-diyl)-N\text{-benzyl-}N'\text{-(S)\text{-}2-(o-diphenylphosphino)benzyl phosphoramidite}$

$[\alpha]^{20} = +38.0$  (*c* 0.33, chloroform)  
Source of chirality: (*S*)-BINOL 99% ee  
Absolute configuration: (*S*)

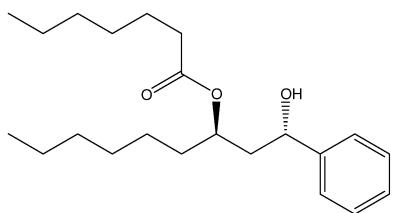


$C_{16}H_{24}O_3$   
(*1S,3S*)-1-Hydroxy-4-methyl-1-phenylpentan-3-yl isobutyrate

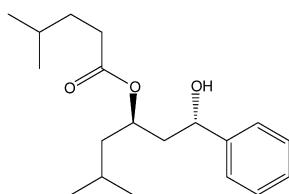
Ee = 60%  
De > 95%  
 $[\alpha]_D^{20} = -5.7$  (*c* 1.0, CHCl<sub>3</sub>)  
Source of chirality: asymmetric synthesis  
Absolute configuration: (*1S,3S*)

(1*S*,*S*)-1-Cyclohexyl-3-hydroxy-3-phenylpropyl cyclohexanecarboxylate $Ee = 54\%$  $De > 95\%$  $[\alpha]_D^{20} = -17.3 (c \ 1.1, \ CHCl_3)$ 

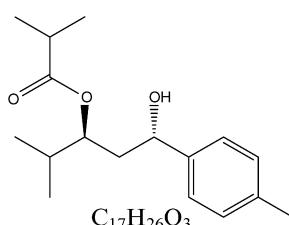
Source of chirality: asymmetric synthesis

Absolute configuration: (*1S,3S*)(1*S*,*R*)-1-Hydroxy-1-phenylnonan-3-yl heptanoate $Ee = 41\%$  $De > 95\%$  $[\alpha]_D^{20} = -3.0 (c \ 0.5, \ CHCl_3)$ 

Source of chirality: asymmetric synthesis

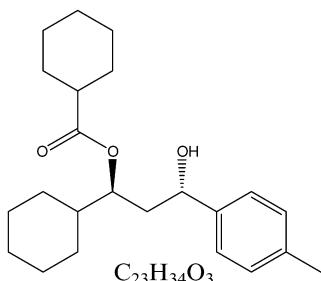
Absolute configuration: (*1S,3R*)(1*S*,*R*)-1-Hydroxy-5-methyl-1-phenylhexan-3-yl 4-methylpentanoate $Ee = 42\%$  $De > 95\%$  $[\alpha]_D^{20} = -4.5 (c \ 1.2, \ CHCl_3)$ 

Source of chirality: asymmetric synthesis

Absolute configuration: (*1S,3R*)(1*S*,*S*)-1-Hydroxy-4-methyl-1-*p*-tolylpentan-3-yl isobutyrate $Ee = 50\%$  $De > 95\%$  $[\alpha]_D^{20} = -14.8 (c \ 1.2, \ CHCl_3)$ 

Source of chirality: asymmetric synthesis

Absolute configuration: (*1S,3S*)



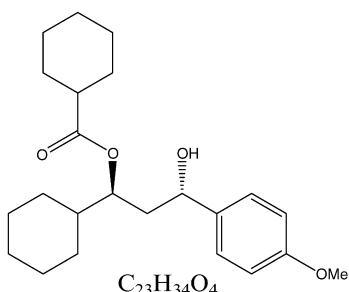
(1S,3S)-1-Cyclohexyl-3-hydroxy-3-p-tolylpropyl cyclohexanecarboxylate

Ee = 56%

De &gt; 95%

 $[\alpha]_D^{20} = -15.7$  (*c* 1.1, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,3*S*)

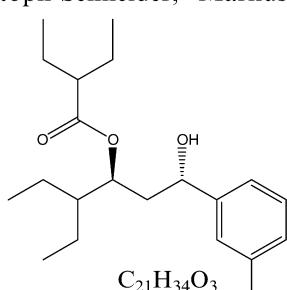
(1S,3S)-1-Cyclohexyl-3-hydroxy-3-(4-methoxyphenyl)propyl cyclohexanecarboxylate

Ee = 60%

De &gt; 95%

 $[\alpha]_D^{20} = -9.3$  (*c* 1.1, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,3*S*)

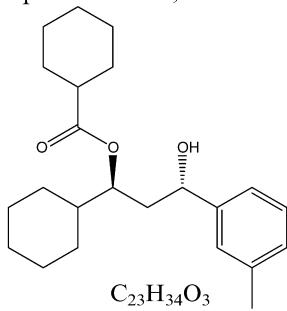
(1S,3S)-4-Ethyl-1-hydroxy-1-m-tolylhexan-3-yl 2-ethylbutanoate

Ee = 49%

De &gt; 95%

 $[\alpha]_D^{20} = -10.4$  (*c* 1.2, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,3*S*)

(1S,3S)-1-Cyclohexyl-3-hydroxy-3-m-tolylpropyl cyclohexanecarboxylate

Ee = 53%

De &gt; 95%

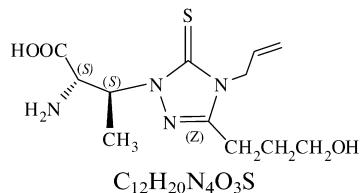
 $[\alpha]_D^{20} = -11.3$  (*c* 1.1, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,3*S*)

Ashot S. Saghiyan,\* Luisa L. Manasyan, Arpine V. Geolchanyan, Anahit M. Hovhannisyan, Tariel V. Ghochikyan, Vilik S. Haroutunyan, Aida A. Avetisyan, Koryun S. Mirzoyan, Victor I. Maleev and Victor N. Khrustalev

*Tetrahedron: Asymmetry* 17 (2006) 2743



(2*S*,*S*)-3-(4'-Allyl-3'-hydroxypropyl-5'-thioxo-1,2,4-triazol-1'-yl)-2-aminobutyric acid

Ee pure

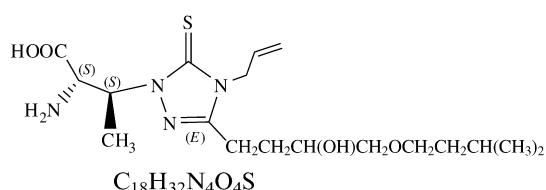
$[\alpha]_D^{20} = -30$  (*c* 0.1, 6 M HCl)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S,S*)

Ashot S. Saghiyan,\* Luisa L. Manasyan, Arpine V. Geolchanyan, Anahit M. Hovhannisyan, Tariel V. Ghochikyan, Vilik S. Haroutunyan, Aida A. Avetisyan, Koryun S. Mirzoyan, Victor I. Maleev and Victor N. Khrustalev

*Tetrahedron: Asymmetry* 17 (2006) 2743



(2*S*,*S*)-3-(4'-Allyl-3'-hydroxyisoamyoxybutyl-5'-thioxo-1,2,4-triazol-1'-yl)-2-aminobutyric acid

Ee pure

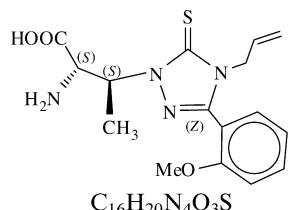
$[\alpha]_D^{20} = -22.5$  (*c* 0.04; 4.9 M HCl)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S,S*)

Ashot S. Saghiyan,\* Luisa L. Manasyan, Arpine V. Geolchanyan, Anahit M. Hovhannisyan, Tariel V. Ghochikyan, Vilik S. Haroutunyan, Aida A. Avetisyan, Koryun S. Mirzoyan, Victor I. Maleev and Victor N. Khrustalev

*Tetrahedron: Asymmetry* 17 (2006) 2743



(2*S*,*S*)-3-(4'-Allyl-3'-o-methoxyphenyl-5'-thioxo-1,2,4-triazol-1'-yl)-2-aminobutyric acid

Ee pure

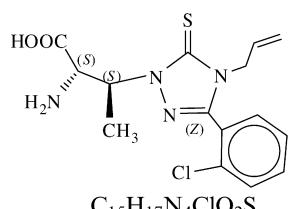
$[\alpha]_D^{20} = -33.3$  (*c* 0.1, 4.9 M HCl)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S,S*)

Ashot S. Saghiyan,\* Luisa L. Manasyan, Arpine V. Geolchanyan, Anahit M. Hovhannisyan, Tariel V. Ghochikyan, Vilik S. Haroutunyan, Aida A. Avetisyan, Koryun S. Mirzoyan, Victor I. Maleev and Victor N. Khrustalev

*Tetrahedron: Asymmetry* 17 (2006) 2743



(2*S*,*S*)-3-(4'-Allyl-3'-o-chlorophenyl-5'-thioxo-1,2,4-triazol-1'-yl)-2-aminobutyric acid

Ee pure

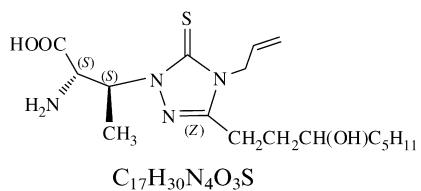
$[\alpha]_D^{20} = -25.6$  (*c* 0.1, 4.9 M HCl)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S,S*)

Ashot S. Saghiyan,\* Luisa L. Manasyan, Arpine V. Geolchanyan,  
Anahit M. Hovhannisyan, Tariel V. Ghochikyan, Vilik S. Haroutunyan,  
Aida A. Avetisyan, Koryun S. Mirzoyan, Victor I. Maleev  
and Victor N. Khrustalev

*Tetrahedron: Asymmetry* 17 (2006) 2743



Ee pure

$[\alpha]_D^{20} = -5.0$  (*c* 0.1, 4.9 M HCl)

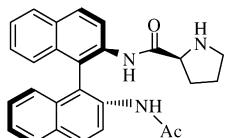
Source of chirality: asymmetric synthesis

Absolute configuration: (S,S)

$C_{17}H_{30}N_4O_3S$   
(2*S*,3*S*)-3-(4'-Allyl-3'-hydroxyoctyl-5'-thioxo-1,2,4-triazol-1'-yl)-2-aminobutyric acid

Stefania Guizzetti, Maurizio Benaglia,\* Luca Pignataro  
and Alessandra Puglisi

*Tetrahedron: Asymmetry* 17 (2006) 2754



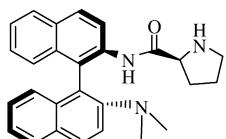
Ee = 100%

$[\alpha]_D^{23} = +25.3$  (*c* 0.31, DCM)

$C_{27}H_{25}N_3O_2$   
*N'*-Acetyl-*N*-(*S*)-prolyl-(*R*)-1,1'-binaphthyl-2,2'-diamine

Stefania Guizzetti, Maurizio Benaglia,\* Luca Pignataro  
and Alessandra Puglisi

*Tetrahedron: Asymmetry* 17 (2006) 2754



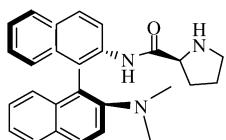
Ee = 100%

$[\alpha]_D^{23} = -95.9$  (*c* 0.21, DCM)

$C_{27}H_{25}N_3O_2$   
*N'*,*N*'-Dimethyl-*N*-(*S*)-prolyl-(*R*)-1,1'-binaphthyl-2,2'-diamine

Stefania Guizzetti, Maurizio Benaglia,\* Luca Pignataro  
and Alessandra Puglisi

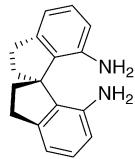
*Tetrahedron: Asymmetry* 17 (2006) 2754



Ee = 100%

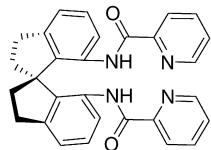
$[\alpha]_D^{23} = -16.2$  (*c* 0.35, DCM)

$C_{27}H_{25}N_3O_2$   
*N'*,*N*'-Dimethyl-*N*-(*S*)-prolyl-(*S*)-1,1'-binaphthyl-2,2'-diamine



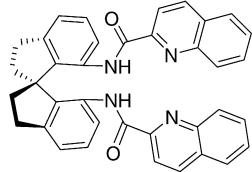
$C_{17}H_{18}N_2$   
(*S*)-1,1'-Spirobiindane-7,7'-diamine

Ee = 100%  
 $[\alpha]_D^{20} = -128$  (*c* 0.2, CH<sub>2</sub>Cl<sub>2</sub>)  
 Source of chirality: resolution  
 Absolute configuration: *S*



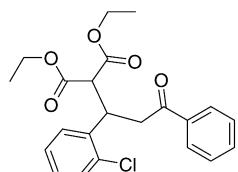
$C_{29}H_{24}N_4O_2$   
(*S*)-7,7'-Bis(2-pyridinecarboxamido)-1,1'-spiropiindane

Ee = 100%  
 $[\alpha]_D^{20} = -364$  (*c* 0.5, CH<sub>2</sub>Cl<sub>2</sub>)  
 Source of chirality: resolution  
 Absolute configuration: *S*



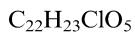
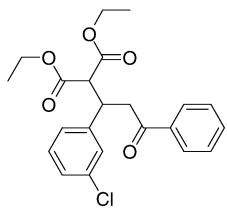
$C_{37}H_{28}N_4O_2$   
(*S*)-7,7'-Bis(2-quinolinecarboxamido)-1,1'-spiropiindane

Ee = 100%  
 $[\alpha]_D^{20} = -442$  (*c* 0.5, CH<sub>2</sub>Cl<sub>2</sub>)  
 Source of chirality: resolution  
 Absolute configuration: *S*



$C_{22}H_{23}ClO_5$   
Diethyl 2-[1-(2-chlorophenyl)-3-oxo-3-phenylpropyl]malonate

Ee = 49%  
 $[\alpha]_D^{26} = +35.3$  (*c* 0.15, CH<sub>2</sub>Cl<sub>2</sub>)  
 Source of chirality: asymmetric catalysis

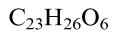
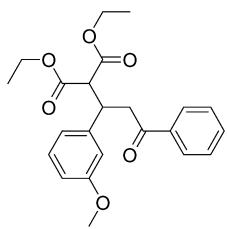


Diethyl 2-[1-(3-chlorophenyl)-3-oxo-3-phenylpropyl]malonate

Ee = 53%

$[\alpha]_D^{26} = +17.0$  (*c* 0.5, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: asymmetric catalysis

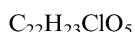
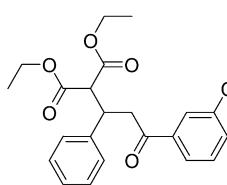


Diethyl 2-[1-(3-methoxyphenyl)-3-oxo-3-phenylpropyl]malonate

Ee = 49%

$[\alpha]_D^{26} = +12.0$  (*c* 0.5, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: asymmetric catalysis

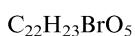
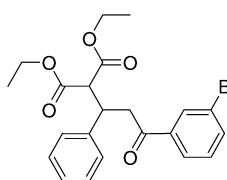


Diethyl 2-[3-(3-chlorophenyl)-3-oxo-1-phenylpropyl]malonate

Ee = 53%

$[\alpha]_D^{26} = +13.4$  (*c* 0.5, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: asymmetric catalysis

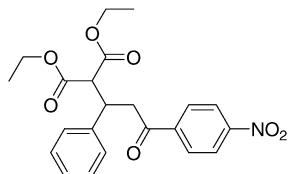


Diethyl 2-[3-(3-bromophenyl)-3-oxo-1-phenylpropyl]malonate

Ee = 53%

$[\alpha]_D^{26} = +12.4$  (*c* 0.5, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: asymmetric catalysis

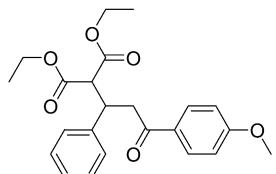


$C_{22}H_{23}NO_7$   
Diethyl 2-[3-(4-nitrophenyl)-3-oxo-1-phenylpropyl]malonate

Ee = 54%

 $[\alpha]_D^{26} = +15.0$  (*c* 0.8,  $\text{CH}_2\text{Cl}_2$ )

Source of chirality: asymmetric catalysis

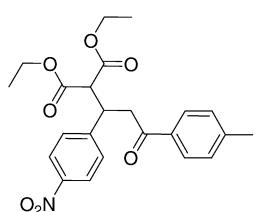


$C_{23}H_{26}O_6$   
Diethyl 2-[3-(4-methoxyphenyl)-3-oxo-1-phenylpropyl]malonate

Ee = 53%

 $[\alpha]_D^{26} = +15.0$  (*c* 0.5,  $\text{CH}_2\text{Cl}_2$ )

Source of chirality: asymmetric catalysis

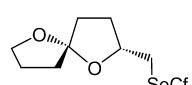


$C_{23}H_{25}NO_7$   
Diethyl 2-[1-(4-nitrophenyl)-3-oxo-3-p-tolylpropyl]malonate

Ee = 51%

 $[\alpha]_D^{26} = +19.0$  (*c* 0.2,  $\text{CH}_2\text{Cl}_2$ )

Source of chirality: asymmetric catalysis



$C_{18}H_{28}O_3Se$   
(2*R*,5*S*)-2[(Camphorseleno)methyl]-1,6-dioxaspiro[4.4]nonane

 $[\alpha]_D^{17} = +73.0$  (*c* 1.95,  $\text{CHCl}_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: 2*R*,5*S*

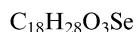
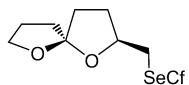
Marcello Tiecco,\* Lorenzo Testaferri, Luana Bagnoli, Catalina Scarponi,  
Andrea Temperini, Francesca Marini and Claudio Santi

*Tetrahedron: Asymmetry* 17 (2006) 2768

$$[\alpha]_D^{18} = -18.2 \text{ (c } 2.18, \text{ CHCl}_3\text{)}$$

Source of chirality: asymmetric synthesis

Absolute configuration: 2S,5R



(2S,5R)-2-[(Camphorseleno)methyl]-1,6-dioxaspiro[4.4]nonane

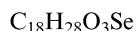
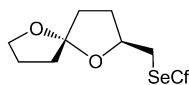
Marcello Tiecco,\* Lorenzo Testaferri, Luana Bagnoli, Catalina Scarponi,  
Andrea Temperini, Francesca Marini and Claudio Santi

*Tetrahedron: Asymmetry* 17 (2006) 2768

$$[\alpha]_D^{16} = +32.7 \text{ (c } 2.57, \text{ CHCl}_3\text{)}$$

Source of chirality: asymmetric synthesis

Absolute configuration: 2S,5S



(2S,5S)-2-[(Camphorseleno)methyl]-1,6-dioxaspiro[4.4]nonane

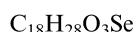
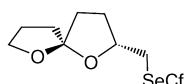
Marcello Tiecco,\* Lorenzo Testaferri, Luana Bagnoli, Catalina Scarponi,  
Andrea Temperini, Francesca Marini and Claudio Santi

*Tetrahedron: Asymmetry* 17 (2006) 2768

$$[\alpha]_D^{18} = -20.2 \text{ (c } 1.82, \text{ CHCl}_3\text{)}$$

Source of chirality: asymmetric synthesis

Absolute configuration: 2R,5R



(2R,5R)-2-[(Camphorseleno)methyl]-1,6-dioxaspiro[4.4]nonane

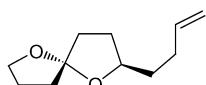
Marcello Tiecco,\* Lorenzo Testaferri, Luana Bagnoli, Catalina Scarponi,  
Andrea Temperini, Francesca Marini and Claudio Santi

*Tetrahedron: Asymmetry* 17 (2006) 2768

$$[\alpha]_D^{16} = +55.3 \text{ (c } 1.22, \text{ CHCl}_3\text{)}$$

Source of chirality: asymmetric synthesis

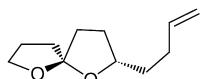
Absolute configuration: 2R,5S



(2R,5S)-2-But-3-enyl-1,6-dioxaspiro[4.4]nonane

Marcello Tiecco,\* Lorenzo Testaferri, Luana Bagnoli, Catalina Scarponi, Andrea Temperini, Francesca Marini and Claudio Santi

*Tetrahedron: Asymmetry* 17 (2006) 2768



C<sub>11</sub>H<sub>18</sub>O<sub>2</sub>  
(2S,5R)-2-But-3-enyl-1,6-dioxaspiro[4.4]nonane

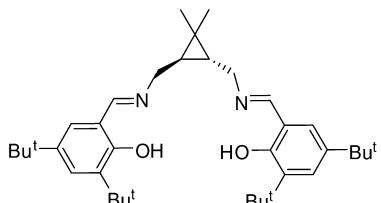
[ $\alpha$ ]<sub>D</sub><sup>16</sup> = -57.7 (*c* 1.25, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: 2*S*,5*R*

Guo-Qiang Feng, De-Xian Wang, Qi-Yu Zheng and Mei-Xiang Wang\*

*Tetrahedron: Asymmetry* 17 (2006) 2775



C<sub>21</sub>H<sub>20</sub>N<sub>2</sub>O<sub>2</sub>

Ee >99%

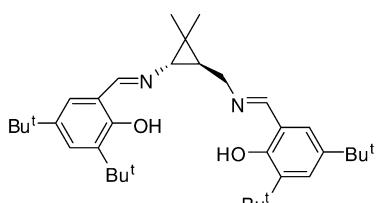
[ $\alpha$ ]<sub>D</sub><sup>25</sup> = -40 (*c* 1.0, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: chemoenzymatic synthesis

Absolute configuration: (1*R*,2*R*)

Guo-Qiang Feng, De-Xian Wang, Qi-Yu Zheng and Mei-Xiang Wang\*

*Tetrahedron: Asymmetry* 17 (2006) 2775



C<sub>20</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub>

Ee >99%

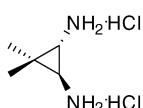
[ $\alpha$ ]<sub>D</sub><sup>25</sup> = +16 (*c* 1.5, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: chemoenzymatic synthesis

Absolute configuration: (1*S*,3*S*)

Guo-Qiang Feng, De-Xian Wang, Qi-Yu Zheng and Mei-Xiang Wang\*

*Tetrahedron: Asymmetry* 17 (2006) 2775



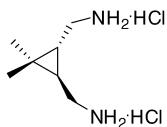
C<sub>5</sub>H<sub>14</sub>N<sub>2</sub>Cl<sub>2</sub>  
(1*S*,2*S*)-3,3-Dimethylcyclopropane-1,2-diamine dihydrochloride

Ee >99%

[ $\alpha$ ]<sub>D</sub><sup>25</sup> = +5.5 (*c* 1.0, CH<sub>3</sub>OH)

Source of chirality: chemoenzymatic synthesis

Absolute configuration: (1*S*,2*S*)

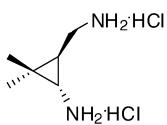


$C_7H_{18}N_2Cl_2$   
((1*R*,2*R*)-3,3-dimethylcyclopropane-1,2-diyl) dimethanamine dihydrochloride

Ee &gt;99%

 $[\alpha]_D^{25} = -5$  (*c* 1.0, CH<sub>3</sub>OH)

Source of chirality: chemoenzymatic synthesis

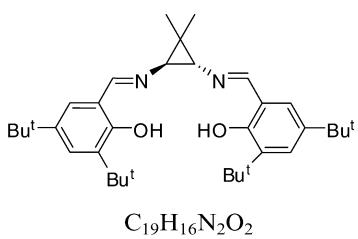
Absolute configuration: (1*R*,2*R*)

$C_6H_{16}N_2Cl_2$   
(1*S*,3*S*)-3-(Aminomethyl)-2,2-dimethylcyclopropanamine

Ee &gt;99%

 $[\alpha]_D^{25} = -6$  (*c* 1.0, CH<sub>3</sub>OH)

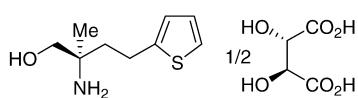
Source of chirality: chemoenzymatic synthesis

Absolute configuration: (1*S*,3*S*)

Ee &gt;99%

 $[\alpha]_D^{25} = +560$  (*c* 1.0, CHCl<sub>3</sub>)

Source of chirality: chemoenzymatic synthesis

Absolute configuration: (1*S*,2*S*) $C_{19}H_{16}N_2O_2$ 

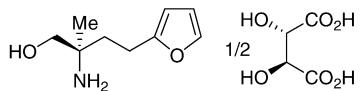
$C_9H_{15}NOS \cdot 0.5C_4H_6O_6$   
(2*R*)-Amino-2-methyl-4-(thiophen-2-yl)butan-1-ol 1/2 D-(-)-tartrate

Ee = &gt;99%

 $[\alpha]_D^{24} = -14.0$  (*c* 1.0, H<sub>2</sub>O)

Source of chirality: enzymatic desymmetrization

Absolute configuration: 2*R*



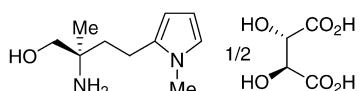
Ee = >99%

[ $\alpha$ ]<sub>D</sub><sup>24</sup> = -11.9 (c 1.0, H<sub>2</sub>O)

Source of chirality: enzymatic desymmetrization

Absolute configuration: 2*R*

C<sub>9</sub>H<sub>15</sub>NO<sub>2</sub>·0.5C<sub>4</sub>H<sub>6</sub>O<sub>6</sub>  
(2*R*)-Amino-2-methyl-4-(furan-2-yl)butan-1-ol 1/2 D-(-)-tartrate



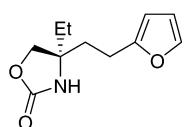
Ee = >99%

[ $\alpha$ ]<sub>D</sub><sup>24</sup> = -13.3 (c 1.0, H<sub>2</sub>O)

Source of chirality: enzymatic desymmetrization

Absolute configuration: 2*R*

C<sub>10</sub>H<sub>18</sub>N<sub>2</sub>O·0.5C<sub>4</sub>H<sub>6</sub>O<sub>6</sub>  
(2*R*)-Amino-2-methyl-4-(1-methylpyrrol-2-yl)butan-1-ol 1/2 D-(-)-tartrate



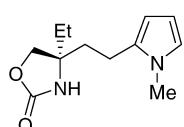
Ee = 93%

[ $\alpha$ ]<sub>D</sub><sup>24</sup> = +13.9 (c 3.1, CHCl<sub>3</sub>)

Source of chirality: enzymatic desymmetrization

Absolute configuration: 4*R*

C<sub>11</sub>H<sub>15</sub>NO<sub>3</sub>  
(4*R*)-Ethyl-4-[2-(furan-2-yl)ethyl]-1,3-oxazolidin-2-one



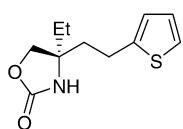
Ee = 94%

[ $\alpha$ ]<sub>D</sub><sup>24</sup> = +10.3 (c 1.0, CHCl<sub>3</sub>)

Source of chirality: enzymatic desymmetrization

Absolute configuration: 4*R*

C<sub>12</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub>  
(4*R*)-Ethyl-4-[2-(1-methylpyrrol-2-yl)ethyl]-1,3-oxazolidin-2-one



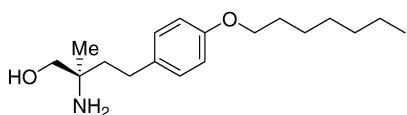
Ee = 93%

$[\alpha]_D^{24} = +11.9$  (*c* 1.0, CHCl<sub>3</sub>)

Source of chirality: enzymatic desymmetrization

Absolute configuration: 4*R*

C<sub>11</sub>H<sub>15</sub>NO<sub>2</sub>S  
(4*R*)-Ethyl-4-[2-(thiophen-2-yl)ethyl]-1,3-oxazolidin-2-one



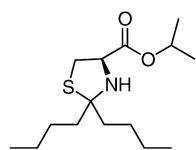
Ee = >99%

$[\alpha]_D^{24} = -5.6$  (*c* 0.21, CHCl<sub>3</sub>)

Source of chirality: enzymatic desymmetrization

Absolute configuration: 2*R*

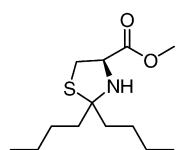
C<sub>18</sub>H<sub>31</sub>NO<sub>2</sub>  
(2*R*)-Amino-4-[4-(heptyloxy)phenyl]-2-methylbutan-1-ol



Calculated: 288.19918; Found: 288.1991

$[\alpha]_D^{20} = -17$  (*c* 1.0, dichloromethane)

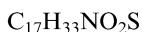
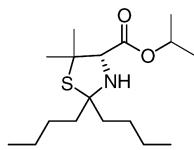
C<sub>15</sub>H<sub>29</sub>NO<sub>2</sub>S  
(*R*)-Isopropyl 2,2-dibutylthiazolidine-4-carboxylate



Calculated: 260.16788; Found: 260.16787

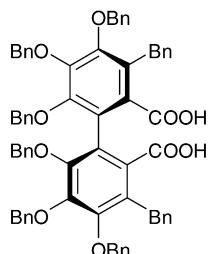
$[\alpha]_D^{20} = -88$  (*c* 1.0, dichloromethane)

C<sub>13</sub>H<sub>25</sub>NO<sub>2</sub>S  
(*R*)-Methyl 2,2-dibutylthiazolidine-4-carboxylate



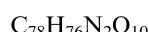
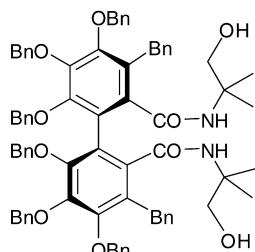
(*S*)-Isopropyl 2,2-dibutyl-5,5-dimethylthiazolidine-4-carboxylate

Calculated: 316.23048; Found: 316.23047  
 $[\alpha]_D^{20} = +26$  (*c* 1.0, dichloromethane)



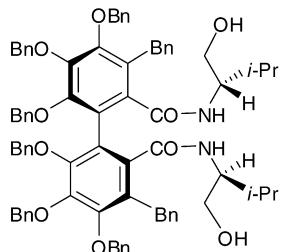
(*aR*)-2,2',3,3',4,4'-Hexabenzylxyloxy-5,5'-dibenzyl-6,6'-diphenic acid

$[\alpha]_D = -66$  (*c* 1 g/100 ml,  $CHCl_3$ )  
 Absolute configuration: (*aR*)



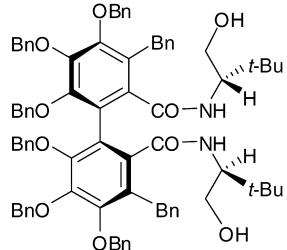
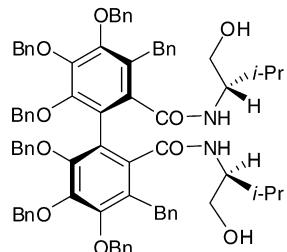
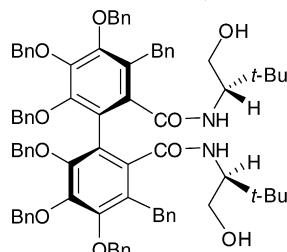
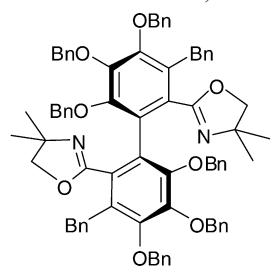
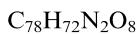
(*aR*)-2,2',3,3',4,4'-Hexabenzylxyloxy-5,5'-dibenzyl-6,6'-bis[*N*-(1,1-dimethyl-2-hydroxyethyl)carboxamido]-1,1'-biphenyl

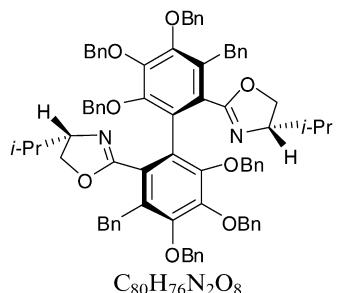
$[\alpha]_D = -19.6$  (*c* 1 g/100 ml,  $CHCl_3$ )  
 Absolute configuration: (*aR*)



(*aS*)-2,2',3,3',4,4'-Hexabenzylxyloxy-5,5'-dibenzyl-6,6'-bis[*N*-(1*S*)-(1-*iso*-propyl-2-hydroxyethyl)carboxamido]-1,1'-biphenyl

$[\alpha]_D = +1.5$  (*c* 1 g/100 ml,  $CHCl_3$ )  
 Absolute configuration: (*aS,S,S*)

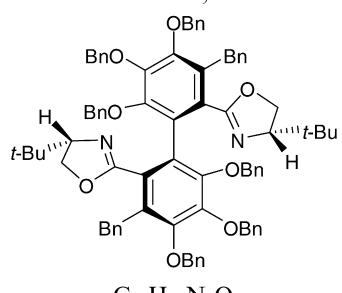

 $[\alpha]_D = +16.5$  (*c* 1 g/100 ml, CHCl<sub>3</sub>)
Absolute configuration: (a*S,S,S*)(a*S*)-2,2',3,3',4,4'-Hexabenzylxyloxy-5,5'-dibenzyl-6,6'-bis[N-(1*S*)-(1-*tert*-butyl-2-hydroxyethyl)carboxamido]-1,1'-biphenyl
 $[\alpha]_D = -45.8$  (*c* 1 g/100 ml, CHCl<sub>3</sub>)
Absolute configuration: (a*R,S,S*)(a*R*)-2,2',3,3',4,4'-Hexabenzylxyloxy-5,5'-dibenzyl-6,6'-bis[N-(1*S*)-(1-*iso*-propyl-2-hydroxyethyl)carboxamido]-1,1'-biphenyl
 $[\alpha]_D = -57$  (*c* 1 g/100 ml, CHCl<sub>3</sub>)
Absolute configuration: (a*R,S,S*)(a*R*)-2,2',3,3',4,4'-Hexabenzylxyloxy-5,5'-dibenzyl-6,6'-bis[N-(1*S*)-(1-*tert*-butyl-2-hydroxyethyl)carboxamido]-1,1'-biphenyl
 $[\alpha]_D = +21.7$  (*c* 1 g/100 ml, CHCl<sub>3</sub>)
Absolute configuration: (a*R*)(a*R*)-2,2',3,3',4,4'-Hexabenzylxyloxy-5,5'-dibenzyl-6,6'-bis(4,4-dimethyloxazolin-2-yl)-1,1'-biphenyl **9**



(aS)-2,2',3,3',4,4'-Hexabenzyl-6,6'-bis[(4S)-(iso-propyloxazolin-2-yl)]-1,1'-biphenyl

 $[\alpha]_D = -51$  (*c* 1 g/100 ml, CHCl<sub>3</sub>)

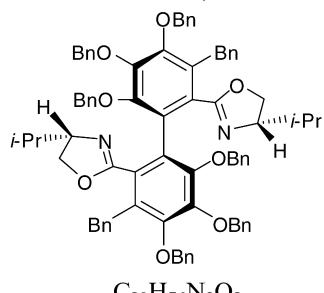
Absolute configuration: (aS,S,S)



(aS)-2,2',3,3',4,4'-Hexabenzyl-6,6'-bis[(4S)-(tert-butyloxazolin-2-yl)]-1,1'-biphenyl

 $[\alpha]_D = -58$  (*c* 1 g/100 ml, CHCl<sub>3</sub>)

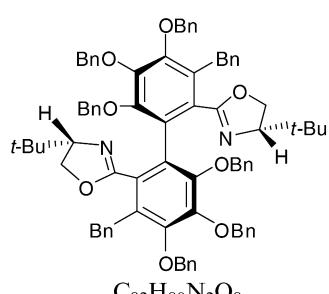
Absolute configuration: (aS,S,S)



(aR)-2,2',3,3',4,4'-Hexabenzyl-6,6'-bis[(4S)-(iso-propyloxazolin-2-yl)]-1,1'-biphenyl

 $[\alpha]_D = +35.5$  (*c* 1 g/100 ml, CHCl<sub>3</sub>)

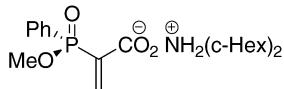
Absolute configuration: (aR,S,S)



(aR)-2,2',3,3',4,4'-Hexabenzyl-6,6'-bis[(4S)-(tert-butyloxazolin-2-yl)]-1,1'-biphenyl

 $[\alpha]_D = +36.5$  (*c* 1 g/100 ml, CHCl<sub>3</sub>)

Absolute configuration: (aR,S,S)



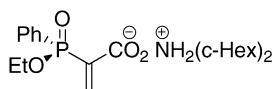
Ee = 99%

 $[\alpha]_D = -14.1$  (*c* 0.57, CHCl<sub>3</sub>)

Source of chirality: optical resolution

Absolute configuration: (*R*)

(R)-2-[Methoxy(phenyl)phosphoryl]acrylic acid, dicyclohexylammonium salt



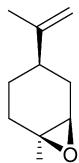
Ee = 99%

 $[\alpha]_D = -14.4$  (*c* 1.06, CHCl<sub>3</sub>)

Source of chirality: optical resolution

Absolute configuration: (*R*)

(R)-2-[Ethoxy(phenyl)phosphoryl]acrylic acid, dicyclohexylammonium salt

(+)-*trans*-Limonene oxide

Ee 98%

 $[\alpha]_D = +78$  (neat)

Source of chirality: kinetic separation of commercially available diastereoisomers

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