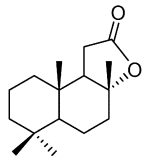
Kiran B. Upar, Sanjay J. Mishra, Shrikant P. Nalawade, Soni A. Singh, Reena P. Khandare, Sujata V. Bhat *

Tetrahedron: Asymmetry *20 (2009) 1637*



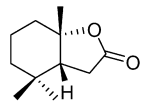
$C_{16}H_{26}O_2$

(3a*R*,5a*S*,9a*S*,9b*R*)-1,2,3a,4,5,5a,6,7,8,9,9a,9b-Dodecahydro-3a,6,6,9a-tetramethylnaptho[2,1-*b*]furan-2-one

Ee = 87.9%
$[\alpha]_D^{25} = +42.6$ (*c* 0.5 $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (3a*R*,5a*S*,9a*S*,9b*R*)

Kiran B. Upar, Sanjay J. Mishra, Shrikant P. Nalawade, Soni A. Singh, Reena P. Khandare, Sujata V. Bhat *

Tetrahedron: Asymmetry *20 (2009) 1637*



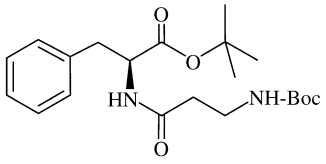
$C_{11}H_{18}O_2$

(3a*R*,7a*S*)-Octahydro-4,4,7a-trimethyl-benzofuran-2-one

Ee = 89.9%
$[\alpha]_D^{25} = +64$ (*c* 1, hexane)
Source of chirality: asymmetric synthesis
Absolute configuration: (3a*R*,7a*R*)

Paola D'Arrigo *, Liisa T. Kanerva, Xiang-Guo Li, Caterina Saraceno, Stefano Servi, Davide Tessaro

Tetrahedron: Asymmetry *20 (2009) 1641*



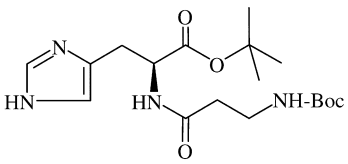
$C_{21}H_{32}N_2O_5$

N-Boc-β-alanyl-L-phenylalanine *t*-butyl ester

$[\alpha]_D^{24} = -25.9$ (*c* 9.70, $CHCl_3$)
Source of chirality: L-phenylalanine
Absolute configuration: (2*S*)

Paola D'Arrigo *, Liisa T. Kanerva, Xiang-Guo Li, Caterina Saraceno, Stefano Servi, Davide Tessaro

Tetrahedron: Asymmetry *20 (2009) 1641*



$C_{18}H_{32}N_4O_5$

N-Boc-β-alanyl-L-histidine *t*-butyl ester

$[\alpha]_D^{24} = -6.1$ (*c* 10.5, $CHCl_3$)
Source of chirality: L-histidine
Absolute configuration: (2*S*)

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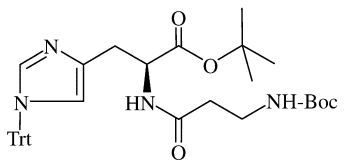
Tetrahedron: Asymmetry *20 (2009) 1641*



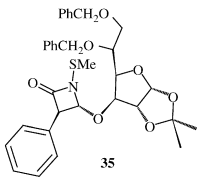
$C_{37}H_{46}N_4O_5$

N-Boc-β-alanyl-L-Trt-histidine *t*-butyl ester

$[\alpha]_D^{24} = +9.6$ (*c* 14.6, $CHCl_3$)
Source of chirality: L-histidine
Absolute configuration: (2*S*)

Iván Pérez Sánchez, Edward Turos *

Tetrahedron: Asymmetry *20 (2009) 1646*



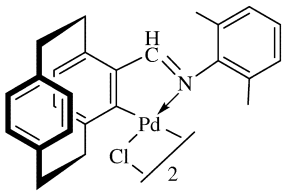
$C_{33}H_{37}NO_7S$

(3*S*,4*R*)-4-((3a*R*,5*R*,6*S*,6a*R*)-5-((*R*)-1,2-bis(benzyloxy)ethyl)-tetrahydro-2,2-dimethylfuro[2,3-d][1,3]dioxol-6-yloxy)-1-(methylthio)-3-phenylazetidin-2-one

$[\alpha]_D^{18} = -7.6$ (*c* 0.5, CH_2Cl_2)

Valery V. Dunina *, Eugeniya I. Turubanova, Michail V. Livantsov, Konstantin A. Lyssenko, Natalia V. Vorontsova, Dmitrii Yu. Antonov, Yuri K. Grishin *

Tetrahedron: Asymmetry *20 (2009) 1661*



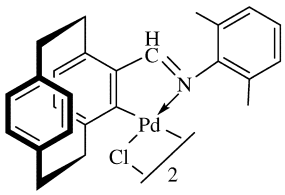
$C_{50}H_{48}Cl_2N_2Pd_2$

(R_{pl},R_{pl})-Di-μ-chlorobis{4-(*N*-2,6-dimethylphenyl)iminomethyl[2.2]paracyclophan-5-yl-*C*,*N*}dipalladium(II)

Ee = >98%
$[\alpha]_D^{24} = +559$ (*c* 0.247, CH_2Cl_2)
Source of chirality: resolution of starting carbaldehyde
Absolute configuration: (R_{pl})

Valery V. Dunina *, Eugeniya I. Turubanova, Michail V. Livantsov, Konstantin A. Lyssenko, Natalia V. Vorontsova, Dmitrii Yu. Antonov, Yuri K. Grishin *

Tetrahedron: Asymmetry *20 (2009) 1661*



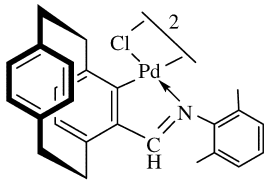
$C_{50}H_{48}Cl_2N_2Pd_2$

(R_{pl},R_{pl})-Di-μ-chlorobis{4-(*N*-2,6-dimethylphenyl)iminomethyl[2.2]paracyclophan-5-yl-*C*,*N*}dipalladium(II)

Ee = >98%
$[\alpha]_D^{22} = +551$ (*c* 0.247, CH_2Cl_2)
Source of chirality: diastereoselective decoordination of auxiliary ligand from (R_C)-valinate derivative on silica gel
Absolute configuration: (R_{pl})

Valery V. Dunina *, Eugeniya I. Turubanova, Michail V. Livantsov, Konstantin A. Lyssenko, Natalia V. Vorontsova, Dmitrii Yu. Antonov, Yuri K. Grishin *

Tetrahedron: Asymmetry *20 (2009) 1661*



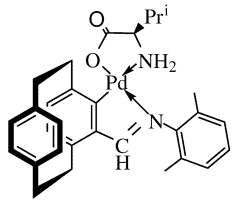
$C_{50}H_{48}C_{l2}N_2Pd_2$

Ee = >98%
$[\alpha]_D^{22} = -549$ (*c* 0.253, CH_2Cl_2)
Source of chirality: diastereoselective decoordination of auxiliary ligand from (R_C)-valinate derivative on silica gel
Absolute configuration: (S_{pl})

(S_{pl},S_{pl})-Di-μ-chlorobis{4-(*N*-2,6-dimethylphenyl)iminomethyl[2.2]paracyclophan-5-yl-*C*,*N*}dipalladium(II)

Valery V. Dunina *, Eugeniya I. Turubanova, Michail V. Livantsov, Konstantin A. Lyssenko, Natalia V. Vorontsova, Dmitrii Yu. Antonov, Yuri K. Grishin *

Tetrahedron: Asymmetry *20 (2009) 1661*



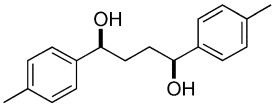
$C_{30}H_{34}N_2O_2Pd$

Ee = >98%
$[\alpha]_D^{24} = -589$ (*c* 0.367, CH_2Cl_2)
Source of chirality: diastereoselective decoordination of auxiliary ligand from (R_C)-valinate derivative on silica gel
Absolute configuration: (S_{pl},R_C)

(S_{pl},R_C)-{4-(*N*-2,6-Dimethylphenyl)iminomethyl[2.2]paracyclophan-5-yl-*C*,*N*}(valinato-*N*,*O*)-palladium(II)

Hongfeng Chen, James A. Sweet, Kin-Chung Lam, Arnold L. Rheingold, Dominic V. McGrath *

Tetrahedron: Asymmetry *20 (2009) 1672*



$C_{18}H_{22}O_2$

Ee 99.5%
$[\alpha]_D^{25} = -47.0$ (*c* 0.65, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (1*S*,4*S*)

(1*S*,4*S*)-1,4-Di(4-methylphenyl)-1,4-butandiol

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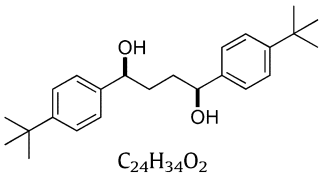
Tetrahedron: Asymmetry *20 (2009) 1672*



$C_{24}H_{34}O_2$

Ee >95%
$[\alpha]_D^{25} = -31.3$ (*c* 1.14, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (1*S*,4*S*)

(1*S*,4*S*)-1,4-Di(4-*tert*-butylphenyl)-1,4-butandiol

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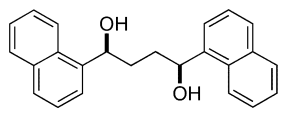
Tetrahedron: Asymmetry *20 (2009) 1672*



$C_{24}H_{22}O_2$

(1*S*,4*S*)-1,4-Di(naphth-1-yl)-1,4-butandiol

Ee 99.3%
$[\alpha]_D^{25} = -68.0$ (*c* 1.1, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (1*S*,4*S*)

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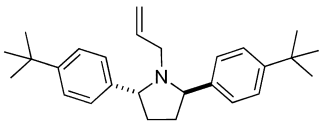
Tetrahedron: Asymmetry *20 (2009) 1672*



$C_{27}H_{37}N$

(2*R*,5*R*)-1-Allyl-2,5-di-(4-*tert*-butylphenyl)pyrrolidine

$[\alpha]_D^{25} = +111.5$ (*c* 1.1, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*R*,5*R*)

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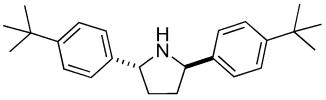
Tetrahedron: Asymmetry *20 (2009) 1672*



$C_{24}H_{33}N$

(2*R*,5*R*)-2,5-Di-(4-*tert*-butylphenyl)pyrrolidine

Ee >99%
$[\alpha]_D^{25} = +106.5$ (*c* 1.13, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*R*,5*R*)

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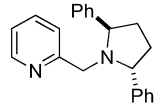
Tetrahedron: Asymmetry *20 (2009) 1672*



$C_{23}H_{25}N_2$

2-[(2*R*,5*R*)-2,5-Diphenylpyrrolidin-1-yl]methylpyridine

Ee >99%
$[\alpha]_D^{25} = +131.6$ (*c* 0.08, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*R*,5*R*)

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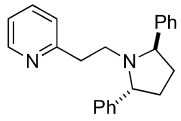
Tetrahedron: Asymmetry *20 (2009) 1672*



$C_{23}H_{25}N_2$

2-[(2*R*,5*R*)-2,5-Diphenylpyrrolidin-1-yl]ethylpyridine

$[\alpha]_D^{25} = +116.2$ (*c* 0.9, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*R*,5*R*)

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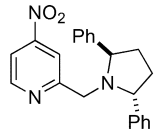
Tetrahedron: Asymmetry *20 (2009) 1672*



$C_{22}H_{22}N_3O_2$

2-[(2*R*,5*R*)-2,5-Diphenylpyrrolidin-1-yl]methyl-4-nitropyridine

Ee >98%
$[\alpha]_D^{23} = +61.5$ (*c* 1.3, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*R*,5*R*)

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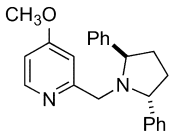
Tetrahedron: Asymmetry *20 (2009) 1672*



$C_{23}H_{25}N_2O$

2-[(2*R*,5*R*)-2,5-Diphenylpyrrolidin-1-yl]methyl-4-methoxypyridine

Ee >98%
$[\alpha]_D^{23} = +81.7$ (*c* 1.0, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*R*,5*R*)

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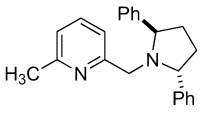
Tetrahedron: Asymmetry *20 (2009) 1672*



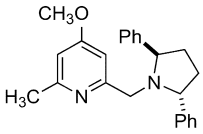
$C_{18}H_{22}O_2$

2-[(2*R*,5*R*)-2,5-Diphenylpyrrolidin-1-ylmethyl]-6-methylpyridine

Ee >98%
$[\alpha]_D^{23} = +132$ (*c* 1.15, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*R*,5*R*)

Hongfeng Chen, James A. Sweet, Kin-Chung Lam, Arnold L. Rheingold, Dominic V. McGrath *

Tetrahedron: Asymmetry *20 (2009) 1672*



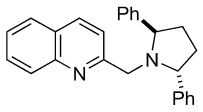
$C_{24}H_{26}N_2O$

2-[(2*R*,5*R*)-2,5-Diphenylpyrrolidin-1-ylmethyl]-4-methoxy-6-methylpyridine

Ee >98%
$[\alpha]_D^{23} = +94.7$ (*c* 1.28, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*R*,5*R*)

Hongfeng Chen, James A. Sweet, Kin-Chung Lam, Arnold L. Rheingold, Dominic V. McGrath *

Tetrahedron: Asymmetry *20 (2009) 1672*



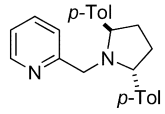
$C_{26}H_{25}N_2$

2-[(2*R*,5*R*)-(2,5-Diphenylpyrrolidin-1-ylmethyl)]quinoline

Ee >98%
$[\alpha]_D^{28} = +141.2$ (*c* 1.8, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*R*,5*R*)

Hongfeng Chen, James A. Sweet, Kin-Chung Lam, Arnold L. Rheingold, Dominic V. McGrath *

Tetrahedron: Asymmetry *20 (2009) 1672*



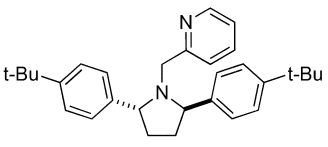
$C_{24}H_{26}N_2$

2-[(2*R*,5*R*)-2,5-Bis(4-methylphenyl)pyrrolidin-1-ylmethyl]pyridine

Ee >99%
$[\alpha]_D^{23} = +159.7$ (*c* 0.96, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*R*,5*R*)

Hongfeng Chen, James A. Sweet, Kin-Chung Lam, Arnold L. Rheingold, Dominic V. McGrath *

Tetrahedron: Asymmetry *20 (2009) 1672*



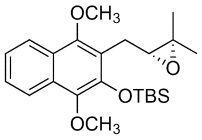
$C_{18}H_{22}O_2$

2-[2,5-Bis-(4-*tert*-butylphenyl)pyrrolidin-1-ylmethyl]pyridine

Ee >98%
$[\alpha]_D^{23} = +125.4$ (*c* 1.15, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*R*,5*R*)

Tetsutaro Kimachi *, Eri Torii, Rina Ishimoto, Ayako Sakue, Motoharu Ju-ichi

Tetrahedron: Asymmetry *20 (2009) 1683*



(*R*)-9

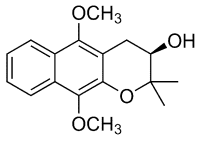
Ee = 83%
$[\alpha]_D^{24} = -10.8$ (*c* 1.0, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (*R*)

$C_{23}H_{34}O_4Si$

2-*tert*-Butyldimethylsilyloxy-1,4-dimethoxy-3-((3,3-dimethyloxiran-2-yl)methyl)naphthalene

Tetsutaro Kimachi *, Eri Torii, Rina Ishimoto, Ayako Sakue, Motoharu Ju-ichi

Tetrahedron: Asymmetry *20 (2009) 1683*



(*R*)-12

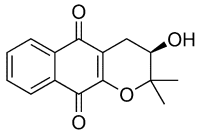
Ee = 83%
$[\alpha]_D^{24} = -6.1$ (*c* 1.0, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (*R*)

$C_{17}H_{20}O_4$

(*R*)-3,4-Dihydro-3-hydroxy-5,10-dimethoxy-2,2-dimethyl-2*H*-naphtho[2,3-*b*]pyran

Tetsutaro Kimachi *, Eri Torii, Rina Ishimoto, Ayako Sakue, Motoharu Ju-ichi

Tetrahedron: Asymmetry *20 (2009) 1683*



1

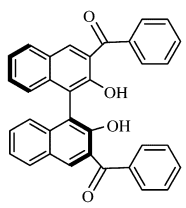
Ee = 82%
$[\alpha]_D^{24} = -14.0$ (*c* 1.0, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (*R*)

$C_{15}H_{14}O_4$

(*R*)-3,4-Dihydro-3-hydroxy-5,10-2,2-dimethyl-2*H*-naphtho[2,3-*b*]pyran-5,10-dione (rhinacanthin A)

Kuo-xi Xu, Zhen Qiu, Jin-Jin Zhao, Jin Zhao, Chao-jie Wang *

Tetrahedron: Asymmetry *20 (2009) 1690*



$[\alpha]_D^{20} = -94.2$ (*c* 1.00, $CHCl_3$)
Absolute configuration: (*S*)
Source of chirality: (*S*)-1,1′-bi-2-naphthol

$C_{34}H_{22}O_4$

(*S*)-3,3′-Bis-benzoyl-2,2′-bis-dihydroxy-1,1′-binaphthyl

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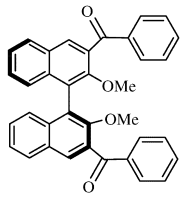

$C_{36}H_{26}O_4$

(*S*)-3,3′-Bis-benzoyl-2,2′-dimethoxy-1,1′-binaphthyl

$[\alpha]_D^{20} = -93.6$ (*c* 1.00, $CHCl_3$)
Absolute configuration: (*S*)
Source of chirality: (*S*)-1,1′-bi-2-naphthol

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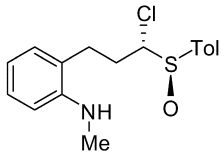

$C_{17}H_{20}ClNOS$

(S,R_S)-*N*-{2-[3-Chloro-3-(toluene-4-sulfinyl)propyl]phenyl}-*N*-methylamine

$[\alpha]_D^{29} = -158$ (*c* 1.35, $CHCl_3$)
Source of chirality: (*R*)-(−)-chloromethyl *p*-tolyl sulfoxide
Absolute configuration: (S,R_S)

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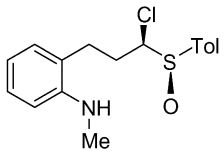
Tetrahedron: Asymmetry *20 (2009) 1697*



$C_{17}H_{20}ClNOS$

(R,R_S)-*N*-{2-[3-Chloro-3-(toluene-4-sulfinyl)propyl]phenyl}-*N*-methylamine

$[\alpha]_D^{25} = -80.8$ (*c* 0.45, ethanol)
Source of chirality: (*R*)-(−)-chloromethyl *p*-tolyl sulfoxide
Absolute configuration: (R,R_S)

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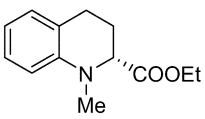

$C_{13}H_{17}NO_2$

(*R*)-1-Methyl-1,2,3,4-tetrahydroquinoline-2-carboxylic acid ethyl ester

$[\alpha]_D^{26} = -32.1$ (*c* 0.5, EtOH)
Source of chirality: (*R*)-(−)-chloromethyl *p*-tolyl sulfoxide
Absolute configuration: (*R*)