CAS SciFinder

Task History

Initiating Search

February 23, 2025, 7:52 PM

Substances:

Filtered By:

Structure Match: **As Drawn**

Search Tasks

Task	Search Type	View
Returned Substance Results + Filters (2,302)	Substances	View Results
Exported: Retrieved Related Reaction Results + Filters (76)	Reactions	View Results

Filtered By:

Substance Role:	**Reagent**
Catalyst:	**[[(4*R*,4'*R*)-2,2'-[(2,5-Pyrrolidinediylidene-κ*N*)dimethylidyne]bis[4,5-dihydro-4-phenyloxazolato-κN^3]](1-)]nickel, (η^6-Benzene)[1,3-bis[2,6-bis(1-methylethyl)phenyl]-2-imidazolidinylidene]nickel, Bis(1,5-cyclooctadiene)nickel, Iron, compd. with nickel (3:1), Methanesulfonic acid, 1,1,1-trifluoro-, nickel(2+) salt (2:1), Nickel, Nickel acetate, Nickel acetate tetrahydrate, Nickel hydroxide, Nickel(II) perchlorate, Nickel iodide (NiI_2), Nickel, [μ-[*N*^{2}-[[bis(1-methylethyl)phosphino-κ*P*]methyl]-*N*^{1},*N*^{1}-bis[2-[[[bis(1-methylethyl)phosphino-κ*P*]methyl]amino-κ*N*]phenyl]-1,2-benzenediaminato(3-)-κ*N*^{1},κ*N*^{2}]](gallium)-, (*Ga*-*Ni*), Nickel nitrate, (*SP*-4-2)-Bis(acetato-κ*O*)[(2*S*,2'*S*,5*S*,5'*S*)-1,1'-(1,2-phenylene)bis[2,5-dimethylphospholane-κ*P*]]nickel**
Document Type:	**Journal**
Language:	**English**

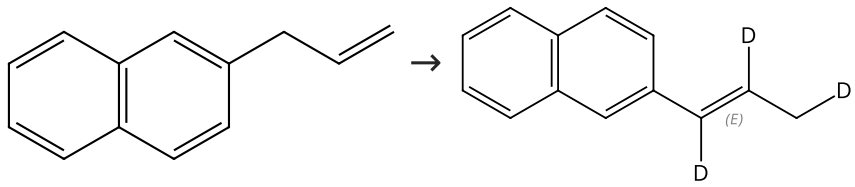
CAS SciFinder

Reactions (17)

View in CAS SciFinder

Scheme 1 (1 Reaction)

Steps: **1** Yield: **68%**



Suppliers (37)

Double bond geometry shown

31-116-CAS-21446144

Steps: **1** Yield: **68%**

1.1 **Catalysts:** 1,1-Bis(diphenylphosphino)ferrocene, Nickel iodide (NiI_2)
Solvents: 1,4-Dioxane; rt; 2 min, rt

1.2 **Reagents:** Deuterium; 16 h, 20 bar, 100 °C

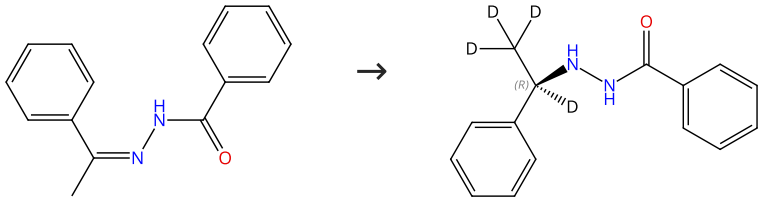
A Simple Nickel Catalyst Enabling an E-Selective Alkyne Semihydrogenation

By: Thiel, Niklas O.; et al

Chemistry - A European Journal (2020), 26(7), 1597-1603.

Scheme 2 (1 Reaction)

Steps: **1**



Suppliers (8)

Absolute stereochemistry shown

31-116-CAS-23725248

Steps: **1**

1.1 **Reagents:** Deuterium
Catalysts: Nickel acetate, 2,3-Bis[(*R*)-(1,1-dimethylethyl) methylphosphino]quinoxaline
Solvents: Acetic acid-*d*, 2,2,2-Trifluoroethanol-*d*; 24 h, 20 bar, 50 °C

Experimental Protocols

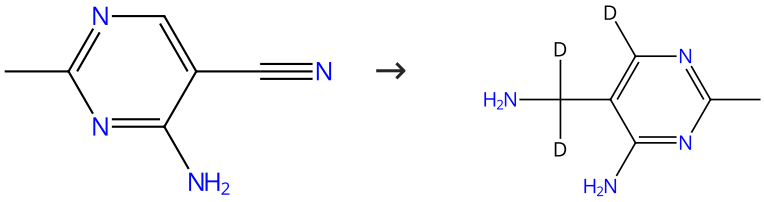
Nickel-Catalyzed Asymmetric Hydrogenation of Hydrazones

By: Li, Bowen; et al

European Journal of Organic Chemistry (2021), 2021(23), 3421-3425.

Scheme 3 (1 Reaction)

Steps: **1**



Suppliers (79)

31-116-CAS-1734643 Steps: **1**

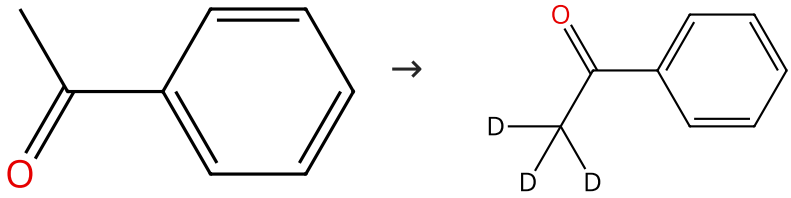
1.1 **Reagents:** Deuterium
Catalysts: Nickel

Secondary deuterium kinetic isotope effects in the cleavage of thiamin and N-methylthiaminium ion: first evidence to identify the rate-limiting step

By: Uray, Georg; et al

Journal of Organic Chemistry (1989), 54(16), 3941-5.

Scheme 4 (1 Reaction) Steps: **1**



Suppliers (109) Suppliers (41)

31-116-CAS-21897931 Steps: **1**

1.1 **Catalysts:** Bis(1,5-cyclooctadiene)nickel, 1,3-Dihydro-1,3-bis(2,4,6-trimethylphenyl)-2*H*-imidazol-2-ylidene
Solvents: Cyclopentyl methyl ether; 5 min, rt

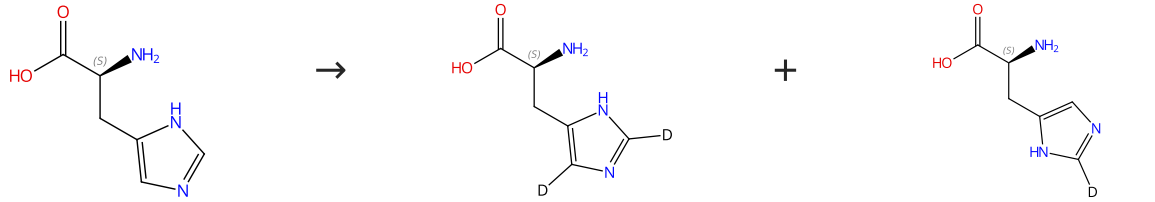
1.2 **Reagents:** Deuterium
Solvents: Tetrahydrofuran; 0.5 h, 130 °C

Water-Accelerated Nickel-Catalyzed α-Crotylation of Simple Ketones with 1,3-Butadiene under pH and Redox-Neutral Conditions

By: Chen, Tiantian; et al

ACS Catalysis (2020), 10(7), 4238-4243.

Scheme 5 (1 Reaction) Steps: **1** Yield: **99%**



Absolute stereochemistry shown, Rotation (-)

Absolute stereochemistry shown

Absolute stereochemistry shown

Suppliers (158)

31-614-CAS-39077233 Steps: **1** Yield: **99%**

1.1 **Reagents:** Deuterium
Catalysts: Nickel (complexes with N-heterocyclic carbenes), Palladium (complexes with N-heterocyclic carbenes), 2135813-04-4 (Palladium nanoparticle, Nickle nanoparticle, and bimetallic Palladium/...)
Solvents: Water-d_2; 48 h, pH 8 - 9, 2 bar, 55 °C

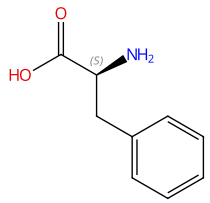
Experimental Protocols

Water-soluble NHC Pd/Ni bimetallic nanoparticles for H/D exchange in aromatic amino-acids

By: Suarez-Riano, Oscar; et al

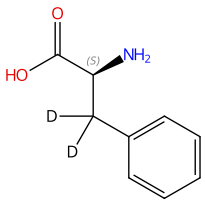
Chemical Communications (Cambridge, United Kingdom) (2023), 59(8), 1062-1065.

Scheme 6 (1 Reaction) Steps: **1** Yield: **97%**



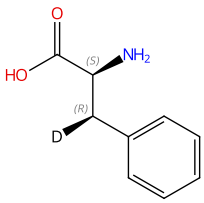
Absolute stereochemistry shown, Rotation (-)

Suppliers (205)



Absolute stereochemistry shown

Suppliers (34)



Absolute stereochemistry shown

Supplier (1)

31-614-CAS-39077232 Steps: **1** Yield: **97%**

1.1 **Reagents:** Deuterium
Catalysts: Nickel (complexes with N-heterocyclic carbenes), Palladium (complexes with N-heterocyclic carbenes), 2135813-04-4 (Palladium nanoparticle, Nickle nanoparticle, and bimetallic Palladium/...)
Solvents: Water-d_2; 48 h, pH 8 - 9, 2 atm, 55 °C

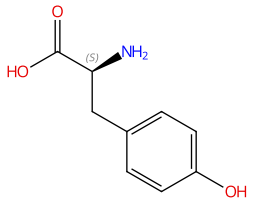
Experimental Protocols

Water-soluble NHC Pd/Ni bimetallic nanoparticles for H/D exchange in aromatic amino-acids

By: Suarez-Riano, Oscar; et al

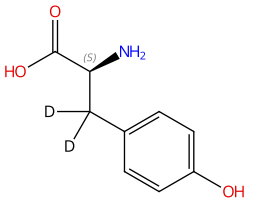
Chemical Communications (Cambridge, United Kingdom) (2023), 59(8), 1062-1065.

Scheme 7 (1 Reaction) Steps: **1** Yield: **21%**



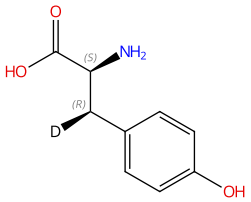
Absolute stereochemistry shown, Rotation (-)

Suppliers (177)



Absolute stereochemistry shown

Suppliers (32)



Absolute stereochemistry shown

Supplier (1)

31-614-CAS-39077236 Steps: **1** Yield: **21%**

1.1 **Reagents:** Deuterium
Catalysts: Nickel (complexes with N-heterocyclic carbenes), Palladium (complexes with N-heterocyclic carbenes), 2135813-04-4 (Palladium nanoparticle, Nickle nanoparticle, and bimetallic Palladium/...)
Solvents: Water-d_2; 48 h, pH 11 - 12, 2 bar, 55 °C

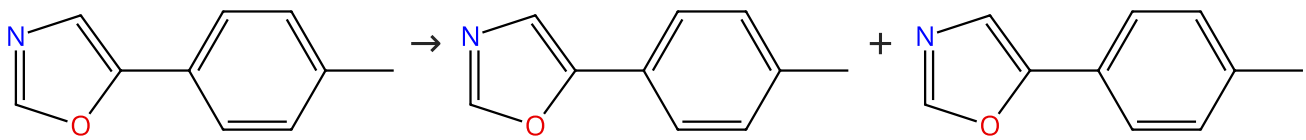
Experimental Protocols

Water-soluble NHC Pd/Ni bimetallic nanoparticles for H/D exchange in aromatic amino-acids

By: Suarez-Riano, Oscar; et al

Chemical Communications (Cambridge, United Kingdom) (2023), 59(8), 1062-1065.

Scheme 8 (1 Reaction) Steps: **1**



Suppliers (58)

31-614-CAS-29371776 Steps: **1**

1.1 **Reagents:** Deuterium
Catalysts: Nickel (N-heterocycliccarbene-supported), 1,3-Dihydro-1,3-bis(2,4,6-trimethylphenyl)-2*H*-imidazol-2-ylidene (nickel nanoparticles stabilized)
Solvents: Tetrahydrofuran; 24 h, 2 bar, 55 °C

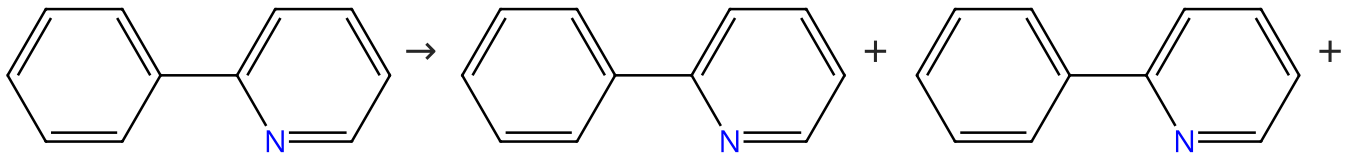
Experimental Protocols

Chemoselective H/D exchange catalyzed by nickel nanoparticles stabilized by N-heterocyclic carbene ligands

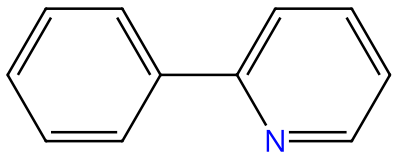
By: Bouzouita, Donia; et al

Nanoscale (2020), 12(29), 15736-15742.

Scheme 9 (1 Reaction) Steps: **1**



Suppliers (93)



31-614-CAS-26284916 Steps: **1**

1.1 **Reagents:** Deuterium
Catalysts: Nickel (N-heterocycliccarbene-supported), 1*H*-Imidazolium, 1,3-dicyclohexyl-, chloride (1:1) (nickel nanoparticles stabilized)
Solvents: Tetrahydrofuran; 24 h, 2 bar, 55 °C

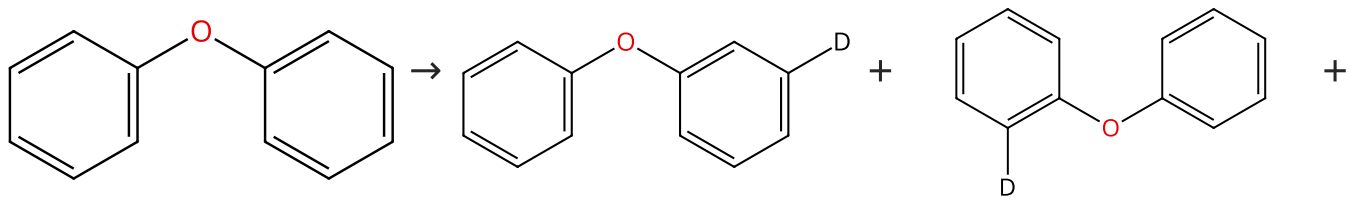
Experimental Protocols

Chemoselective H/D exchange catalyzed by nickel nanoparticles stabilized by N-heterocyclic carbene ligands

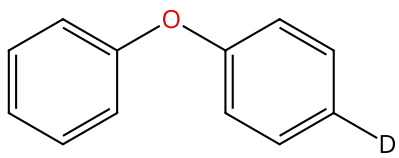
By: Bouzouita, Donia; et al

Nanoscale (2020), 12(29), 15736-15742.

Scheme 10 (1 Reaction) Steps: **1**



Suppliers (109) Supplier (1) Supplier (1)



Suppliers (3)

31-116-CAS-20887395 Steps: 1

1.1 **Reagents:** Deuterium
Catalysts: Nickel, Silica
Solvents: Decalin; 7 h, 6.2 bar, 150 °C

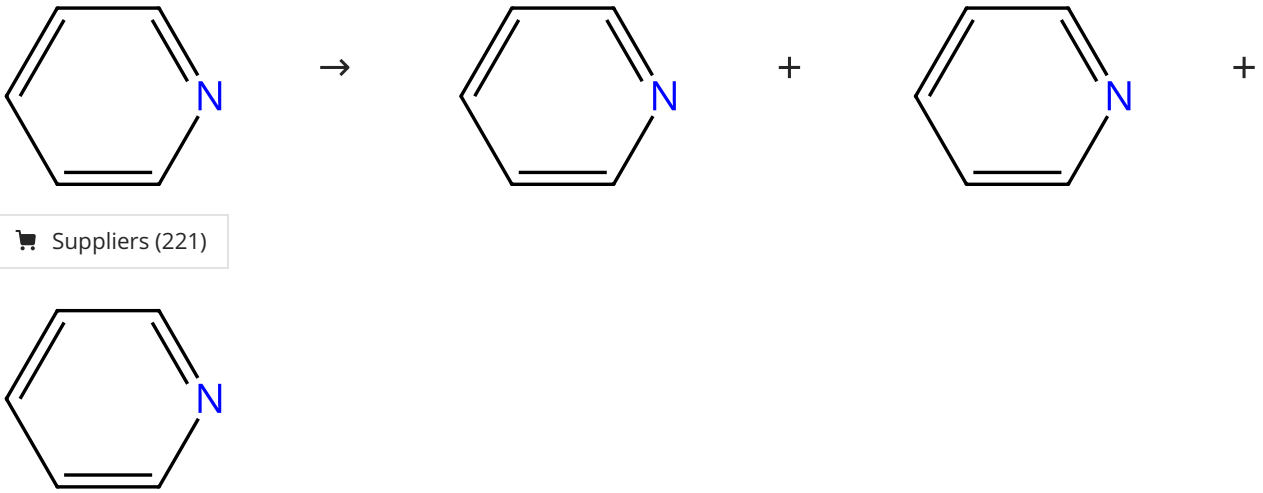
Experimental Protocols

The Critical Role of Reductive Steps in the Nickel-Catalyzed Hydrogenolysis and Hydrolysis of Aryl Ether C-O Bonds

By: Wang, Meng; et al

Angewandte Chemie, International Edition (2020), 59(4), 1445-1449.

Scheme 11 (1 Reaction) Steps: **1**



Suppliers (221)

31-614-CAS-30305539 Steps: 1

1.1 **Reagents:** Deuterium
Catalysts: Nickel (N-heterocycliccarbene-supported), 1,3-Dihydro-1,3-bis(2,4,6-trimethylphenyl)-2*H*-imidazol-2-ylidene (nickel nanoparticles stabilized)
Solvents: Tetrahydrofuran; 24 h, 2 bar, 55 °C

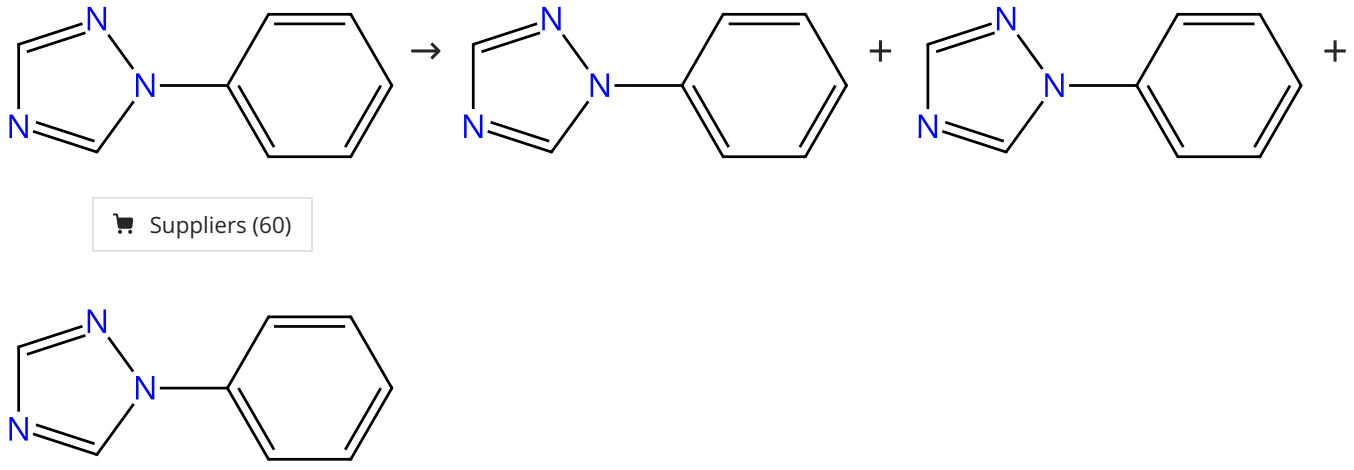
Experimental Protocols

Chemoselective H/D exchange catalyzed by nickel nanoparticles stabilized by N-heterocyclic carbene ligands

By: Bouzouita, Donia; et al

Nanoscale (2020), 12(29), 15736-15742.

Scheme 12 (1 Reaction) Steps: **1**



Suppliers (60)

31-614-CAS-28569489 Steps: 1

1.1 **Reagents:** Deuterium
Catalysts: Nickel (N-heterocycliccarbene-supported), 1*H*-Imidazolium, 1,3-dicyclohexyl-, chloride (1:1) (nickel nanoparticles stabilized)
Solvents: Tetrahydrofuran; 24 h, 2 bar, 55 °C

Experimental Protocols

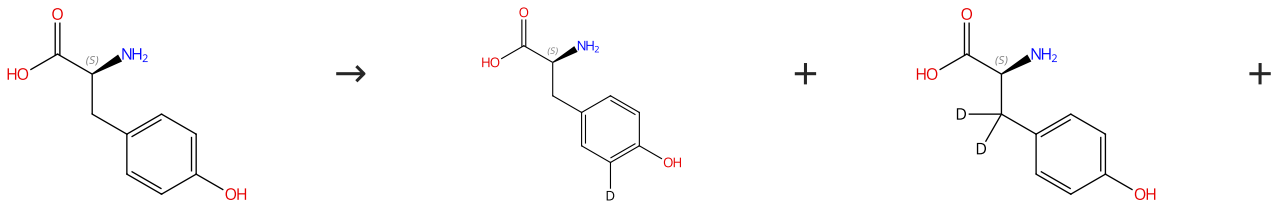
Chemoselective H/D exchange catalyzed by nickel nanoparticles stabilized by N-heterocyclic carbene ligands

By: Bouzouita, Donia; et al

Nanoscale (2020), 12(29), 15736-15742.

Scheme 13 (1 Reaction)

Steps: **1** Yield: **5%**



Absolute stereochemistry shown, Rotation (-)

Suppliers (177)

Absolute stereochemistry shown

Absolute stereochemistry shown

Suppliers (32)

Absolute stereochemistry shown

Supplier (1)

Absolute stereochemistry shown

Suppliers (38)

31-614-CAS-39077230

Steps: **1** Yield: **5%**

1.1 **Reagents:** Deuterium
Catalysts: Nickel (complexes with N-heterocyclic carbenes), Palladium (complexes with N-heterocyclic carbenes), 2135813-04-4 (Palladium nanoparticle, Nickle nanoparticle, and bimetallic Palladium/...)
Solvents: Water-d_2; 48 h, p H 11 - 12, 2 bar, 120 °C

Experimental Protocols

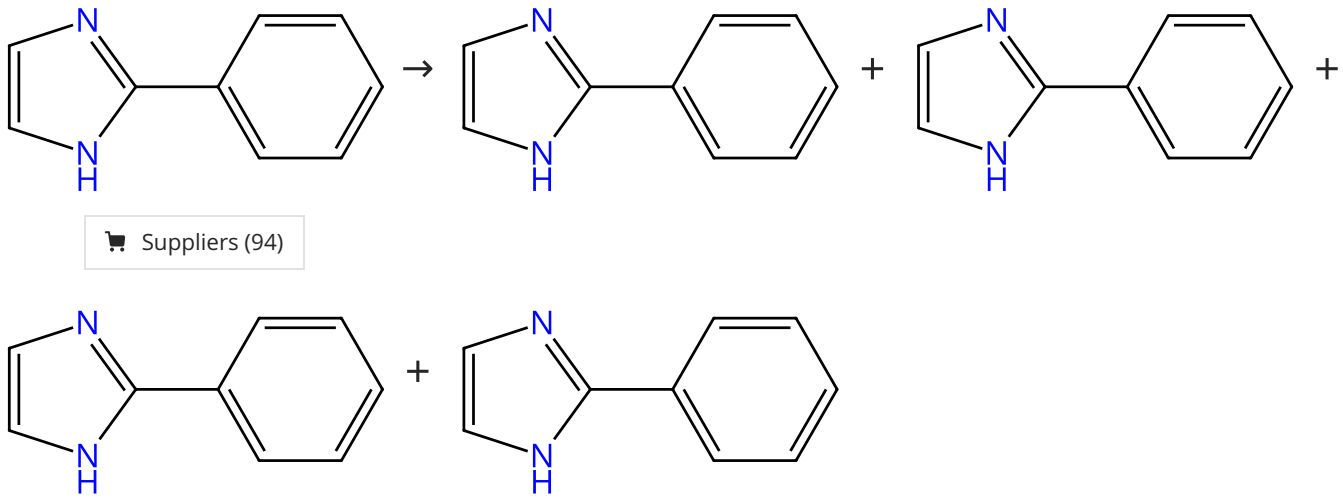
Water-soluble NHC Pd/Ni bimetallic nanoparticles for H/D exchange in aromatic amino-acids

By: Suarez-Riano, Oscar; et al

Chemical Communications (Cambridge, United Kingdom) (2023), 59(8), 1062-1065.

Scheme 14 (1 Reaction)

Steps: **1**



Suppliers (94)

31-614-CAS-26178971

Steps: **1**

1.1 **Reagents:** Deuterium
Catalysts: Nickel (N-heterocycliccarbene-supported), 1,3-Dihydro-1,3-bis(2,4,6-trimethylphenyl)-2*H*-imidazol-2-ylidene (nickel nanoparticles stabilized)
Solvents: Tetrahydrofuran; 24 h, 2 bar, 55 °C

Experimental Protocols

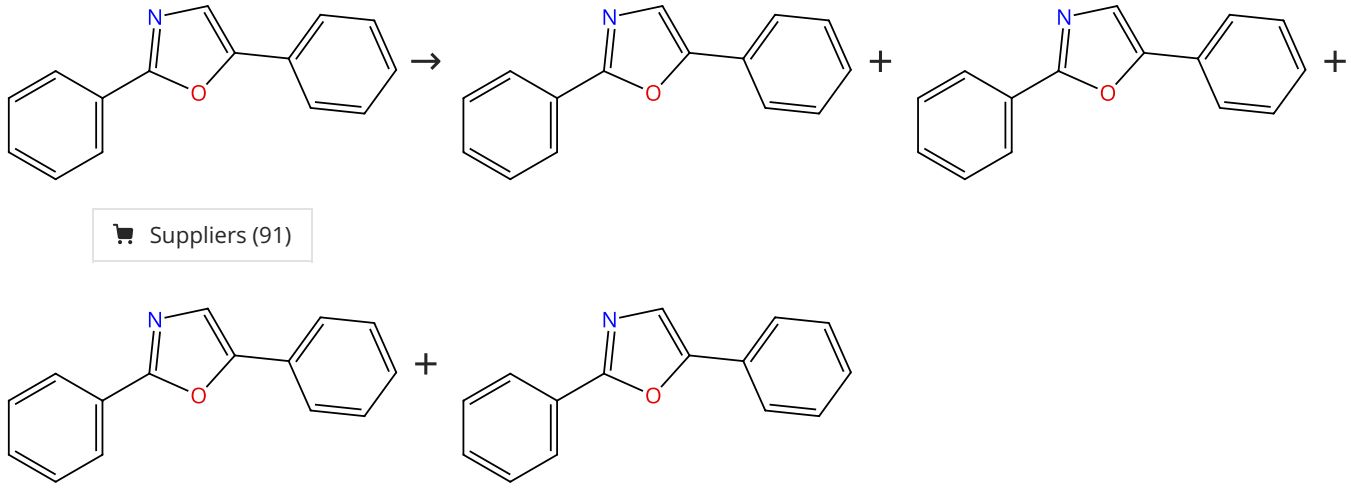
Chemoselective H/D exchange catalyzed by nickel nanopar ticles stabilized by N-heterocyclic carbene ligands

By: Bouzouita, Donia; et al

Nanoscale (2020), 12(29), 15736-15742.

Scheme 15 (1 Reaction)

Steps: **1**



Suppliers (91)

31-614-CAS-30491616

Steps: **1**

1.1 **Reagents:** Deuterium
Catalysts: Nickel (N-heterocycliccarbene-supported), 1,3-Dihydro-1,3-bis(2,4,6-trimethylphenyl)-2*H*-imidazol-2-ylidene (nickel nanoparticles stabilized)
Solvents: Tetrahydrofuran; 24 h, 2 bar, 55 °C

Experimental Protocols

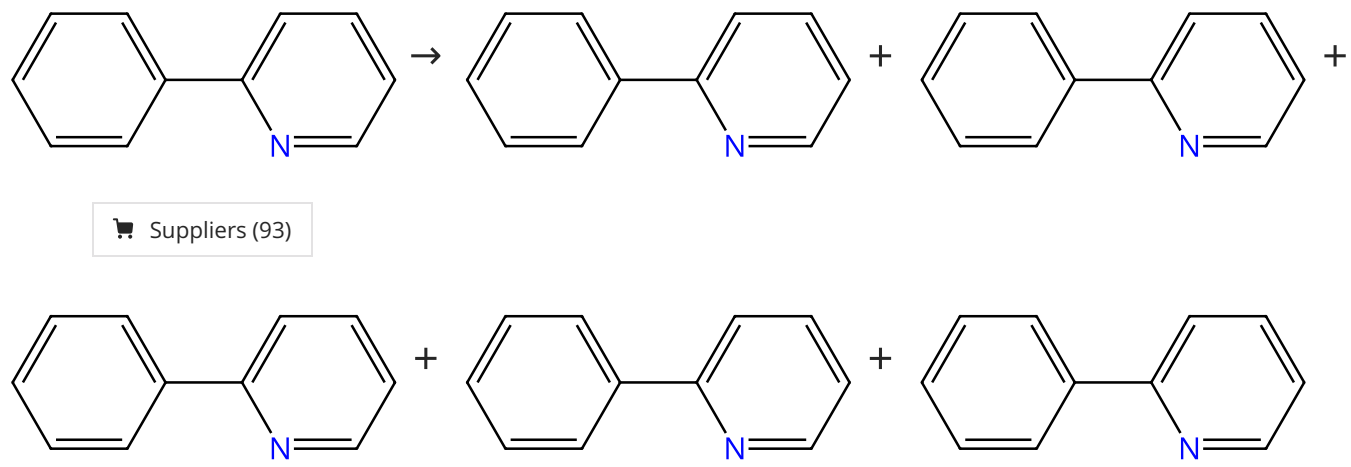
Chemoselective H/D exchange catalyzed by nickel nanoparticles stabilized by N-heterocyclic carbene ligands

By: Bouzouita, Donia; et al

Nanoscale (2020), 12(29), 15736-15742.

Scheme 16 (1 Reaction)

Steps: **1**



Suppliers (93)

31-614-CAS-27900655

Steps: **1**

1.1 **Reagents:** Deuterium
Catalysts: Nickel (N-heterocycliccarbene-supported), 1,3-Dihydro-1,3-bis(2,4,6-trimethylphenyl)-2*H*-imidazol-2-ylidene (nickel nanoparticles stabilized)
Solvents: Tetrahydrofuran; 24 h, 2 bar, 55 °C

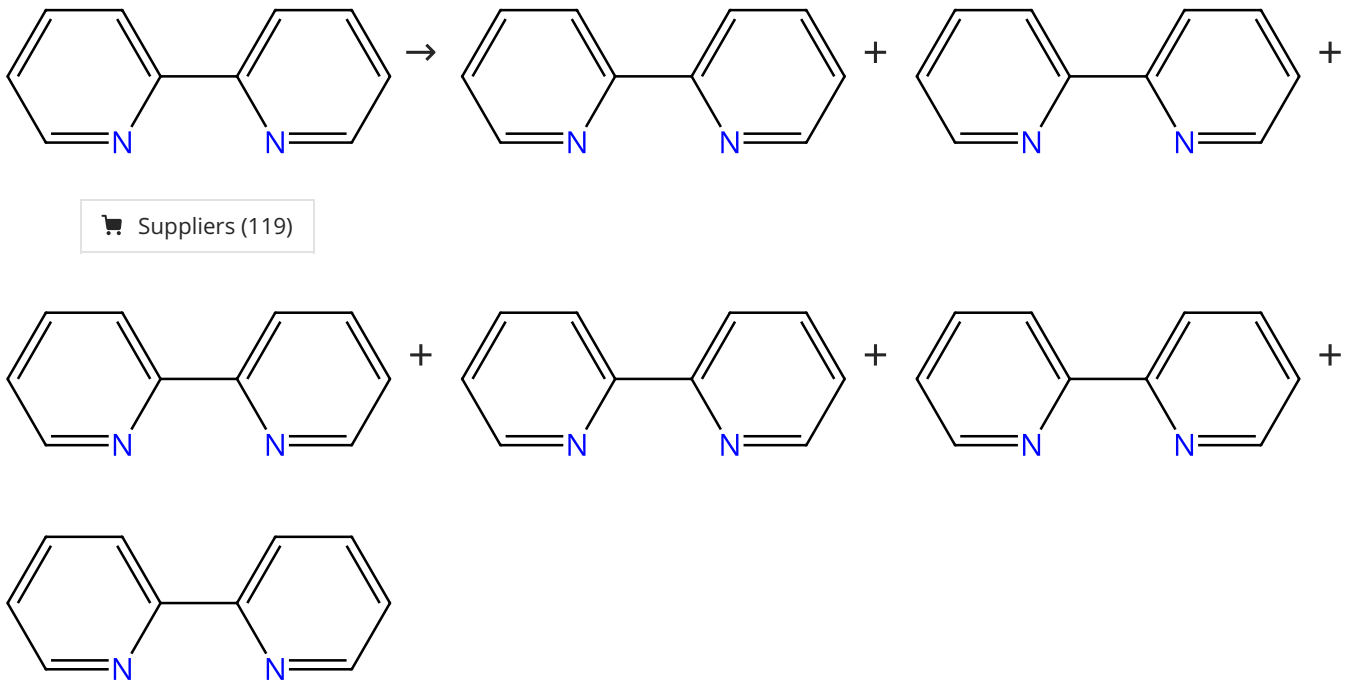
Chemoselective H/D exchange catalyzed by nickel nanoparticles stabilized by N-heterocyclic carbene ligands

By: Bouzouita, Donia; et al

Nanoscale (2020), 12(29), 15736-15742.

Scheme 17 (1 Reaction)

Steps: **1**



Suppliers (119)

31-614-CAS-29608547	Steps: **1**	**Chemoselective H/D exchange catalyzed by nickel nanoparticles stabilized by N-heterocyclic carbene ligands**
1.1	**Reagents:** Deuterium **Catalysts:** Nickel (N-heterocycliccarbene-supported), 1,3-Dihydro-1,3-bis(2,4,6-trimethylphenyl)-2*H*-imidazol-2-ylidene (nickel nanoparticles stabilized) **Solvents:** Tetrahydrofuran; 24 h, 2 bar, 55 °C	By: Bouzouita, Donia; et al Nanoscale (2020), 12(29), 15736-15742.
Experimental Protocols		