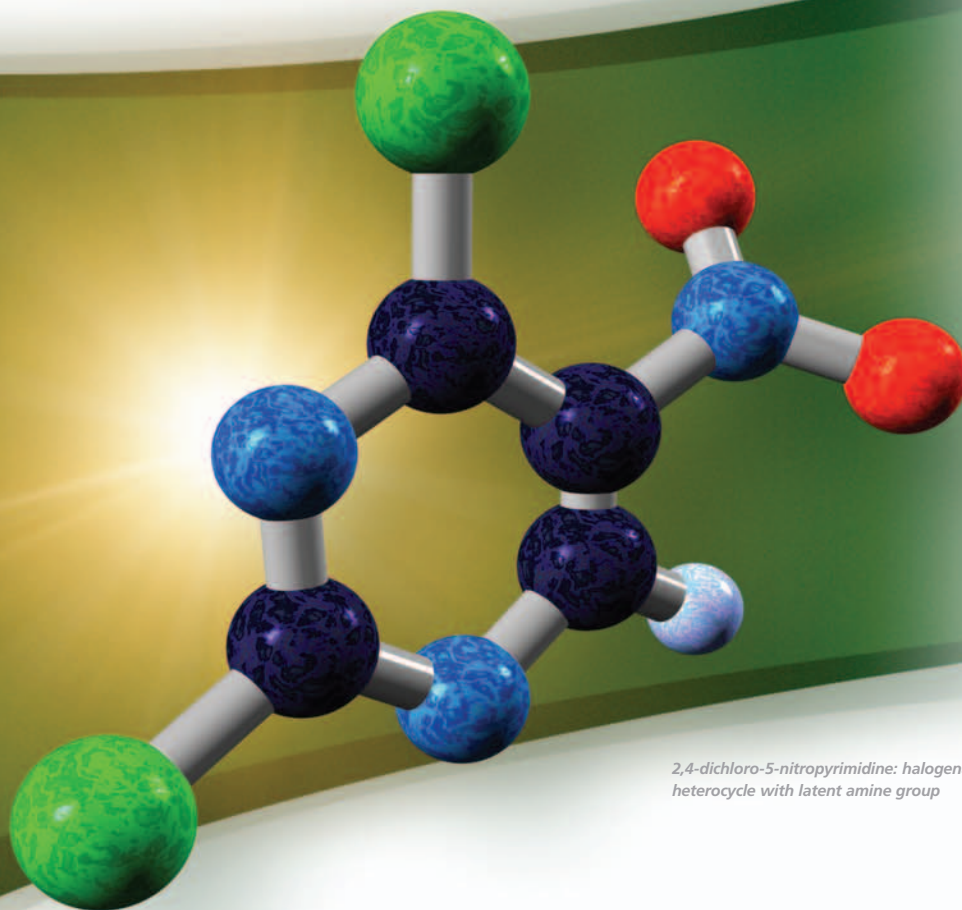


Organic Building Blocks



2,4-dichloro-5-nitropyrimidine: halogenated heterocycle with latent amine group

ALDEHYDES

ALKYNES

PIPERAZINES

PYRIDINES

HALOGENATED ARYL
AND HETEROARYL
SUBSTRATES

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About Our Cover

The cover graphic shows a rendering of the structure of 2,4-dichloro-5-nitropyrimidine. The chlorine atoms allow for its use as a substrate in Suzuki or Stille coupling protocols, and the nitro group can serve as a latent amino group for subsequent enhancement of the coupled product.



ChemFiles

Vol. 6 No. 6

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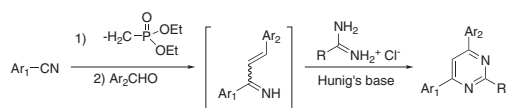
Aldehydes

Aldehydes are perennially attractive building blocks due to their ability to easily react with many nucleophiles. Recent work by Kiselyov describes a one-pot procedure to polysubstituted pyrimidines using various aldehydes (**Scheme 1**).¹

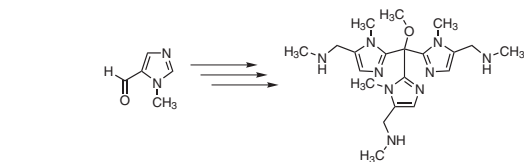
Collman has used 1-methylimidazole-5-carboxaldehyde in the synthesis of a functionalized tripodal ligand, which can serve as CuB site mimics of cytochrome c oxidase (**Scheme 2**).² More recently, 1-methylimidazole-5-carboxaldehyde has been used in the synthesis of a series of tetrahydroquinoline analogues that show potent antimalarial activity (**Scheme 3**).³ Smith has used 1-methylpyrazole-4-carboxaldehyde to synthesize a series of orally active inhibitors of lipoprotein-associated phospholipase A₂ (**Scheme 4**).⁴

Highly substituted 2-amino-4,6-dichloropyrimidine-5-carboxaldehyde has been of recent interest as well. One recent communication describes its use in the synthesis of an unnatural amino acid (ATPC) with promise in peptidomimetics.⁵ Another report uses 2-amino-4,6-dichloropyrimidine-5-carboxaldehyde as a key building block in the synthesis of a crucial tricyclic intermediate for a series of new A₃ adenosine antagonists (**Scheme 5**).⁶

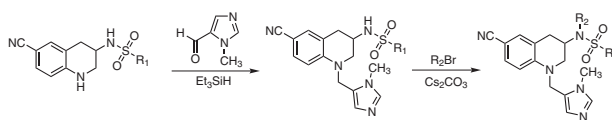
Sigma-Aldrich is pleased to add these and other new aldehydes to our expanding collection.



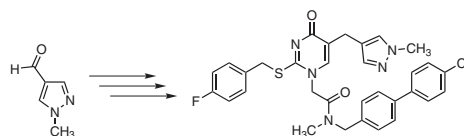
Scheme 1



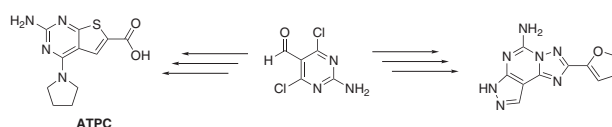
Scheme 2



Scheme 3



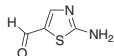
Scheme 4



Scheme 5

2-Aminothiazole-5-carboxaldehyde, 95% NEW

C₄H₄N₂OS
FW: 128.15
[1003-61-8]

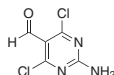


658111-1G

1 g

2-Amino-4,6-dichloropyrimidine-5-carboxaldehyde, 97% NEW

C₅H₃Cl₂N₃O
FW: 192.00
[5604-46-6]

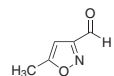


656720-1G

1 g

5-Methylisoxazole-3-carboxaldehyde, 95% NEW

C₅H₅NO₂
FW: 111.10
[62254-74-4]



644684-1G

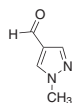
1 g

644684-5G

5 g

1-Methyl-1H-pyrazole-4-carboxaldehyde, 96% NEW

C₅H₆N₂O
110.11
[25016-11-9]



654043-1G

1 g

1-Methyl-5-imidazolecarboxaldehyde NEW

C₅H₆N₂O
FW: 110.11
[39021-62-0]



633569-1G

1 g

2-Fluoro-3-pyridinecarboxaldehyde, 97% NEW

C₆H₄FNO
FW: 125.10
[36404-90-7]



664111-5G

5 g

3,6-Dibromo-2-fluorobenzaldehyde NEW

C₇H₃Br₂FO
FW: 281.90
[870703-68-7]



652393-1G

1 g

652393-5G

5 g

2,5-Dibromobenzaldehyde, 97% NEW

C₇H₄Br₂O
FW: 263.91
[74553-29-0]



661899-1G

1 g

661899-5G

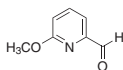
5 g

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6-Methoxy-2-pyridinecarboxaldehyde, 97%

NEW

C₇H₇NO₂
FW: 137.14
[54221-96-4]

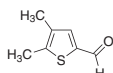


662933-1G	1 g
662933-5G	5 g

4,5-Dimethylthiophene-2-carboxaldehyde, 97%

NEW

C₇H₈OS
FW: 140.20
[5928-48-3]

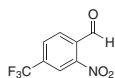


668354-1G	1 g
-----------	-----

2-Nitro-4-(trifluoromethyl)benzaldehyde, 97%

NEW

C₈H₄F₃NO₃
FW: 219.12
[109466-87-7]

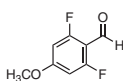


664952-1G	1 g
-----------	-----

2,6-Difluoro-4-methoxybenzaldehyde

NEW

C₈H₆F₂O₂
FW: 172.13
[256417-10-4]

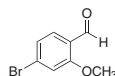


631809-1G	1 g
631809-5G	5 g

4-Bromo-2-methoxybenzaldehyde, 97%

NEW

C₈H₇BrO₂
FW: 215.04
[43192-33-2]

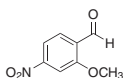


661880-1G	1 g
661880-5G	5 g

2-Methoxy-4-nitrobenzaldehyde, 97%

NEW

C₈H₇NO₄
FW: 181.15
[136507-15-8]

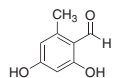


658324-1G	1 g
658324-5G	5 g

2,4-Dihydroxy-6-methylbenzaldehyde, 97%

NEW

C₈H₈O₃
FW: 152.15
[487-69-4]



657603-1G	1 g
657603-5G	5 g

2,4-Dimethoxy-6-methylbenzaldehyde, 97%

NEW

C₁₀H₁₂O₃
FW: 180.20
[7149-90-8]

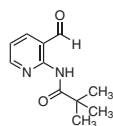


667749-5G	5 g
-----------	-----

N-(3-Formyl-2-pyridinyl)-2,2-dimethylpropanamide

NEW

C₁₁H₁₄N₂O₂
FW: 206.24
[86847-64-5]

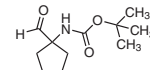


638226-1G	1 g
638226-5G	5 g

N-Boc-cycloleucinal

NEW

C₁₁H₁₉NO₃
FW: 213.27
[168539-99-9]

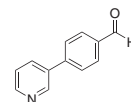


637580-1G	1 g
637580-5G	5 g

4-(Pyridin-3-yl)benzaldehyde, 98%

NEW

C₁₂H₉NO
FW: 183.21
[127406-55-7]

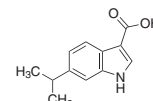


668303-1G	1 g
668303-5G	5 g

6-Isopropylindole-3-carboxaldehyde, 97%

NEW

C₁₂H₁₃NO
FW: 187.24
[870703-65-4]

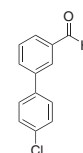


659800-1G	1 g
-----------	-----

3-(4-Chlorophenyl)benzaldehyde, 97%

NEW

C₁₃H₉ClO
FW: 216.66
[139502-80-0]

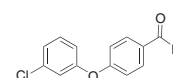


664804-250MG	250 mg
664804-1G	1 g

4-(3-Chlorophenoxy)benzaldehyde, 95%

NEW

C₁₃H₉ClO₂
FW: 232.66
[164522-90-1]

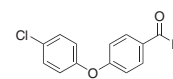


664812-1G	1 g
-----------	-----

4-(4-Chlorophenoxy)benzaldehyde, 97%

NEW

C₁₃H₉ClO₂
FW: 232.66
[61343-99-5]

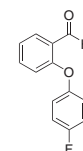


661309-1G	1 g
661309-5G	5 g

2-(4-Fluorophenoxy)benzaldehyde, 97%

NEW

C₁₃H₉FO₂
FW: 216.21
[320423-61-8]

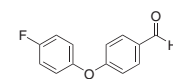


664189-1G	1 g
-----------	-----

4-(4-Fluorophenoxy)benzaldehyde, 97%

NEW

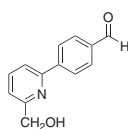
C₁₃H₉FO₂
FW: 216.21
[137736-06-2]



661287-1G	1 g
661287-5G	5 g

2-(4-Formylphenyl)-6-(hydroxymethyl)pyridine, purum, 97% NEW

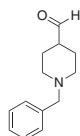
C₁₃H₁₁NO₂
FW: 213.23
[618092-18-5]



653055-1G	1 g
653055-5G	5 g

N-Benzylpiperidine-4-carboxaldehyde, 96% NEW

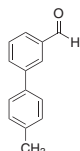
C₁₃H₁₇NO
FW: 203.28
[22065-85-6]



664081-1G	1 g
664081-5G	5 g

3-(4-Methylphenyl)benzaldehyde, 97% NEW

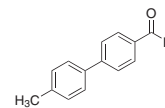
C₁₄H₁₂O
FW: 196.24
[116470-54-3]



664790-250MG	250 mg
664790-1G	1 g

4-(4-Methylphenyl)benzaldehyde, 97% NEW

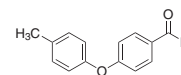
C₁₄H₁₂O
FW: 196.24
[36393-42-7]



664782-250MG	250 mg
664782-1G	1 g

4-(4-Methoxyphenoxy)benzaldehyde, 97% NEW

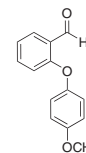
C₁₄H₁₂O₂
FW: 212.24
[61343-83-7]



661317-1G	1 g
661317-5G	5 g

2-(4-Methoxyphenoxy)benzaldehyde, 97% NEW

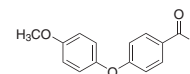
C₁₄H₁₂O₃
FW: 228.24
[19434-36-7]



664170-1G	1 g
-----------	-----

4-(4-Methoxyphenoxy)benzaldehyde, 97% NEW

C₁₄H₁₂O₃
FW: 228.24
[78725-47-0]



661260-1G	1 g
661260-5G	5 g

Encapsulated Os Catalysts

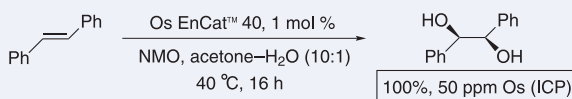
Os EnCat™ 40

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- Greater storage stability versus OsO₄
- Facile recovery of catalyst
- Low levels of Os metal in final product
- Catalyst can be recycled with no activity loss

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Ley, S. V. et al. Microencapsulation of Osmium Tetroxide in Polyurea. *Org. Lett.* **2003**, 5, 185.

For comprehensive application information on Os EnCat™ 40, please visit us at sigma-aldrich.com/osencat.

**Os EnCat™ 40, 0.3 mmol/g Os loading
Osmium tetroxide, microencapsulated**

OsO₄
FW: 254.23
[20816-12-0]

658685-500MG	500 mg
658685-1G	1 g
658685-5G	5 g

4-Methylmorpholine N-oxide, 97%

C₅H₁₁NO₂
FW: 117.15
[7529-22-8]

224286-5G	5 g
224286-25G	25 g
224286-100G	100 g

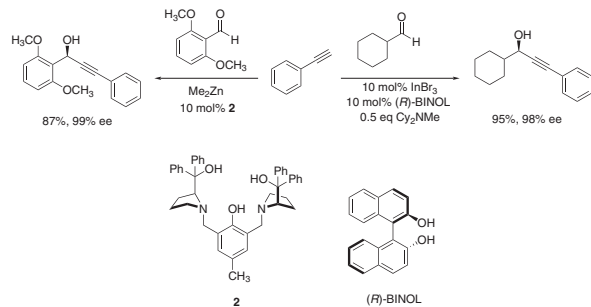
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Alkynes

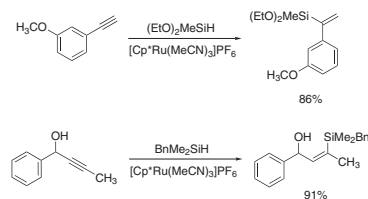
Alkynes have been used for many years in the Sonogashira coupling reaction⁷ and related Castro-Stephens reaction,⁸ and have recently gained considerable interest in the Huisgen 1,3-dipolar cycloaddition with organic azides.⁹

Recently, Walsh demonstrated the use of terminal alkynes in the asymmetric vinylation and dienylation of ketones (**Scheme 6**).¹⁰ In separate communications, Trost¹¹ and Shibasaki¹² have described the use of terminal alkynes in the asymmetric alkylation of aldehydes to obtain propargylic alcohols (**Scheme 7**). Additionally, Trost has used terminal and internal alkynes in a regioselective hydrosilylation to obtain α -vinyloxy and trisubstituted (*Z*)-vinyloxy, respectively (**Scheme 8**).¹³

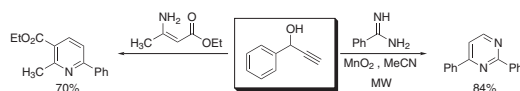
Not only can propargylic alcohols be hydrosilylated as in **Scheme 8**, they can also undergo aldol-type reactions to obtain enones,¹⁴ or be elaborated to obtain highly substituted chiral allenes via a stereoselective Saucy-Marbet rearrangement.¹⁵ They have been recently employed in the synthesis of pyrimidines or pyridines in a one-pot tandem oxidation-heteroannulation with amidines or enamines (**Scheme 9**).¹⁶ Brummond has used propargylic alcohols to synthesize allenic amino acids, which are further elaborated to obtain a series of structurally unique heterocycles (**Scheme 10**).¹⁷



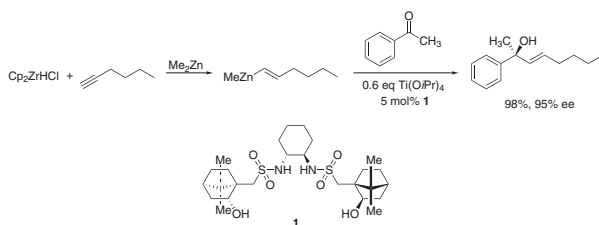
Scheme 7



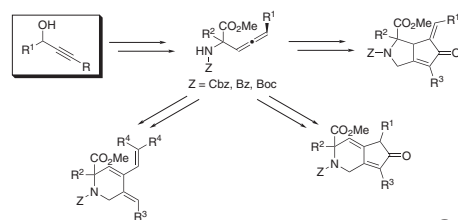
Scheme 8



Scheme 9



Scheme 6



Scheme 10

Cyclopropylacetylene, neat, 97%

C₅H₆

FW: 66.10

[6746-94-7]



663018-5G

5 g

663018-25G

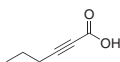
25 g

2-Hexynoic acid, 97%

C₆H₈O₂

FW: 112.13

[764-33-0]



662895-5G

5 g

662895-25G

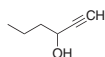
25 g

1-Hexyn-3-ol, 90%, technical grade

C₆H₁₀O

FW: 98.14

[105-31-7]



537764-5G

5 g

537764-25G

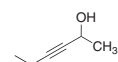
25 g

3-Hexyn-2-ol, 97%

C₆H₁₀O

FW: 98.14

[109-50-2]



669296-5G

5 g

669296-25G

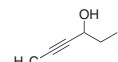
25 g

4-Hexyn-3-ol, 97%

C₆H₁₀O

FW: 98.14

[20739-59-7]



669318-1G

1 g

669318-10G

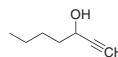
10 g

1-Heptyn-3-ol, 97%

C₇H₁₂O

FW: 112.17

[7383-19-9]



666963-1G

1 g

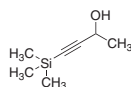
666963-10G

10 g

4-(Trimethylsilyl)-3-butyne-2-ol, 97%

NEW

C₇H₁₄OSi
FW: 142.27
[6999-19-5]

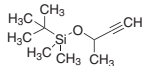


666955-5G	5 g
666955-25G	25 g

2-tert-Butyldimethylsilyloxybut-3-yne, 97%

NEW

C₁₀H₂₀OSi
FW: 184.35

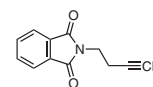


667579-1G	1 g
667579-10G	10 g

N-(3-Butynyl)phthalimide, 97%

NEW

C₁₂H₉NO₂
FW: 199.21
[14396-90-8]

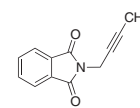


630861-5G	5 g
630861-25G	25 g

N-(2-Butynyl)phthalimide, 97%

NEW

C₁₂H₉NO₂
FW: 199.21
[113439-83-1]



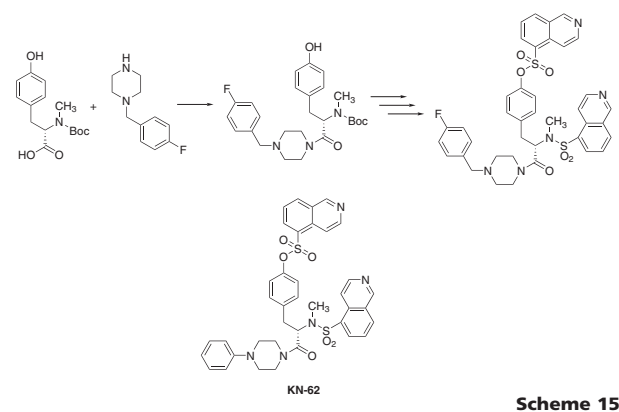
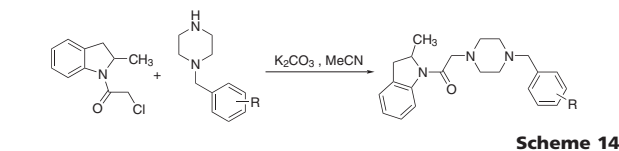
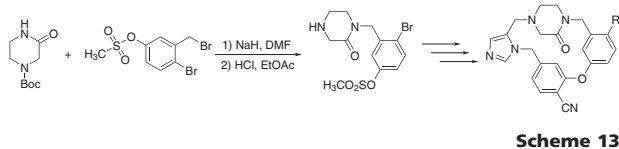
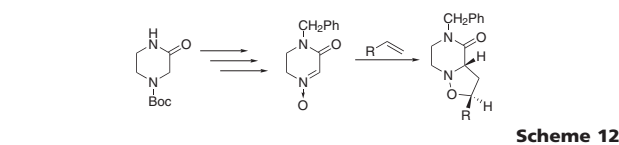
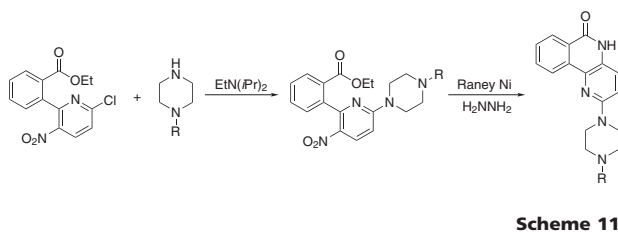
663034-5G	5 g
663034-25G	25 g

Piperazines

The piperazine scaffold is frequently found in biologically active compounds across a number of different therapeutic areas. As a result, medicinal chemists have been interested in piperazine building blocks in the construction of screening libraries. One recent report uses a series of different piperazines to create a series of aza-5[*H*]-phenanthridin-6-ones that exhibit significant protective effects in rat models of stroke and heart ischemia (**Scheme 11**).¹⁸

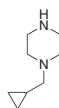
Recent work by Bernotas utilized 1-Boc-3-oxopiperazine to obtain isoxazolidines from a common nitron intermediate (**Scheme 12**).¹⁹ Boc-protected piperazinone has also been used to synthesize macrocyclic piperazinones that demonstrate dual farnesyltransferase (FPTase) and geranylgeranyltransferase-I (GGPTase-I) inhibitory activity (**Scheme 13**).²⁰

Substituted benzylpiperazines are also of increasing interest to medicinal chemists. Zhao and co-workers have reported the synthesis of a series of mixed D₂/D₄ receptor antagonists using benzylpiperazines as key building blocks (**Scheme 14**).²¹ In another report, a (4-fluorobenzyl)piperazine-modified analogue of KN-62 was prepared that showed greater antagonistic activity than the parent molecule, completely inhibiting the release of cytokine IL-1β (**Scheme 15**).²²

**1-(Cyclopropylmethyl)piperazine, 97%**

NEW

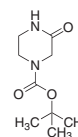
C₈H₁₆N₂
FW: 140.23
[57184-25-5]



658839-1G	1 g
-----------	-----

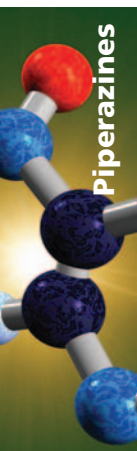
1-Boc-3-oxopiperazine, 98%

C₉H₁₆N₂O₃
FW: 200.23
[76003-29-7]



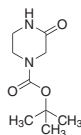
641057-1G	1 g
641057-5G	5 g

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**1-Boc-3-oxopiperazine, puriss., 98%**

NEW

$C_9H_{16}N_2O_3$
FW: 200.23
[76003-29-7]

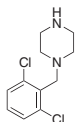


653039-1G	1 g
653039-5G	5 g

1-(2,6-Dichlorobenzyl)piperazine, 97%

NEW

$C_{11}H_{14}Cl_2N_2$
FW: 245.15
[102292-50-2]

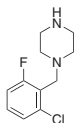


657832-1G	1 g
657832-5G	5 g

1-(2-Chloro-6-fluorobenzyl)piperazine, puriss., 98%

NEW

$C_{11}H_{14}ClFN_2$
FW: 228.69
[215655-20-2]

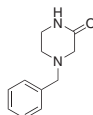


653012-1G	1 g
653012-10G	10 g

1-Benzyl-3-oxopiperazine, 95%

NEW

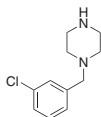
$C_{11}H_{14}N_2O$
FW: 190.24
[13754-41-1]



667633-1G	1 g
667633-5G	5 g

1-(3-Chlorobenzyl)piperazine, 98%

$C_{11}H_{15}ClN_2$
FW: 210.70
[23145-91-7]

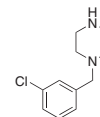


650269-1G	1 g
650269-10G	10 g

1-(3-Chlorobenzyl)piperazine, puriss., 98%

NEW

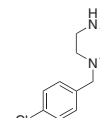
$C_{11}H_{15}ClN_2$
FW: 210.70
[23145-91-7]



652814-1G	1 g
652814-10G	10 g

1-(4-Chlorobenzyl)piperazine, 98%

$C_{11}H_{15}ClN_2$
FW: 210.70
[23145-88-2]

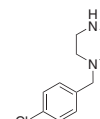


650218-1G	1 g
650218-5G	5 g

1-(4-Chlorobenzyl)piperazine, puriss., 98%

NEW

$C_{11}H_{15}ClN_2$
FW: 210.70
[23145-88-2]

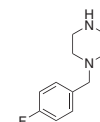


652822-1G	1 g
652822-5G	5 g

1-(4-Fluorobenzyl)piperazine

NEW

$C_{11}H_{15}FN_2$
FW: 194.25
[70931-28-1]



646164-1G	1 g
646164-5G	5 g

Monthly Chemistry E-Newsletter

Got ChemNews?

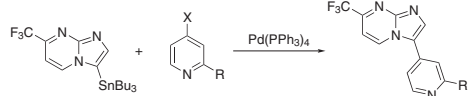
sigma-aldrich.com/chemnews

Pyridines

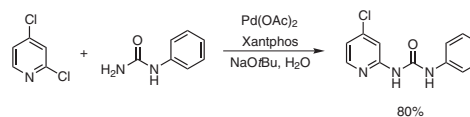
Pyridines have been of interest to scientists across a number of disciplines. The pyridine moiety is presented in countless molecules with applications as varied as catalysis, drug design, molecular recognition, and natural product synthesis.

Recently, Blackaby and co-workers reacted a series of different pyridines with a common imidazo[1,2-a]pyrimidine core to create functionally selective GABA_A ligands (Scheme 16).²³ Another report described the use of 2-chloropyridines in the regioselective preparation of pyridin-2-yl ureas (Scheme 17).²⁴

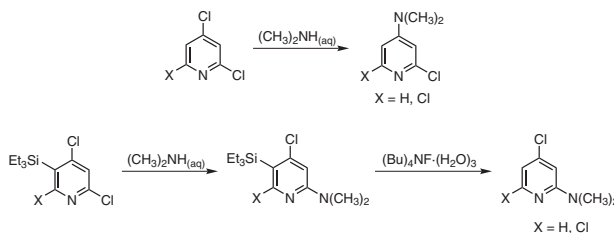
Schlösser has recently reported a method to reverse the selectivity of nucleophilic substitution on 2,4-substituted di-, tri-, and tetrahalopyridines by introducing a trialkylsilyl group in the 3- or 5-position. The bulky silyl group sterically blocks the 4-position, forcing substitution at the 2- or 6-position (Scheme 18).²⁵



Scheme 16



Scheme 17



Scheme 18

3-Bromo-5-fluoropyridine, 97%

NEW

C₅H₃BrFN
FW: 175.99
[407-20-5]



646296-1G 1 g
646296-5G 5 g

2-Fluoro-5-iodopyridine, 97%

NEW

C₅H₃FIN
FW: 222.99
[171197-80-1]

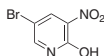


660043-1G 1 g
660043-10G 10 g

5-Bromo-2-hydroxy-3-nitropyridine, 98%

NEW

C₅H₃BrN₂O₃
FW: 218.99
[15862-34-7]



658448-5G 5 g
658448-25G 25 g

2-Amino-3-bromopyridine, 97%

NEW

C₅H₅BrN₂
FW: 173.01
[13534-99-1]



553719-5G 5 g
553719-25G 25 g

2,4-Dichloropyridine, 97%

NEW

C₅H₃Cl₂N
147.99
[26452-80-2]

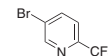


636584-1G 1 g
636584-5G 5 g

5-Bromo-2-(trifluoromethyl)pyridine, 97%

NEW

C₆H₃BrF₃N
FW: 225.99
[436799-32-5]



661104-500MG 500 mg

2-Chloro-5-fluoropyridine, 95%

NEW

C₅H₃ClFN
131.54
[31301-51-6]

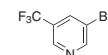


643556-1G 1 g
643556-5G 5 g

3-Bromo-5-(trifluoromethyl)pyridine, 97%

NEW

C₆H₃BrF₃N
FW: 225.99
[436799-33-6]



661112-500MG 500 mg

2-Chloro-4-iodopyridine

NEW

C₅H₃ClIN
FW: 239.44
[153034-86-7]

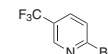


647403-1G 1 g
647403-5G 5 g

2-Bromo-5-(trifluoromethyl)pyridine, 97%

NEW

C₆H₃BrF₃N
FW: 225.99
[50488-42-1]



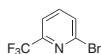
661120-1G 1 g

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2-Bromo-6-(trifluoromethyl)pyridine, 97%

NEW

$C_6H_3BrF_3N$
FW: 225.99
[189278-27-1]



661147-500MG 500 mg

2-Bromo-3-(trifluoromethyl)pyridine, 97%

NEW

$C_6H_3BrF_3N$
FW: 225.99
[175205-82-0]

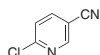


643548-1G 1 g
643548-5G 5 g

6-Chloro-3-pyridinecarbonitrile

NEW

$C_6H_3ClN_2$
FW: 138.55
[33252-28-7]

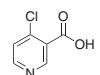


510734-5G 5 g

4-Chloronicotinic acid, 96%

NEW

$C_6H_4ClNO_2$
FW: 157.55
[10177-29-4]



660396-1G 1 g

2-(Trifluoromethyl)pyridine, 97%

NEW

$C_6H_4F_3N$
FW: 147.10
[368-48-9]

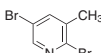


643572-1G 1 g
643572-5G 5 g

2,5-Dibromo-3-methylpyridine, puriss., 98%

NEW

$C_6H_5Br_2N$
FW: 250.92
[3430-18-0]



652865-1G 1 g
652865-5G 5 g

4-Methyl-3-nitropyridine, 97%

NEW

$C_6H_6N_2O_2$
FW: 138.12
[5832-44-0]

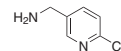


532592-1G 1 g
532592-5G 5 g

2-Chloro-5-aminomethylpyridine, 97%

NEW

$C_6H_7ClN_2$
FW: 142.59
[97004-04-1]

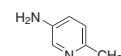


536008-5G 5 g
536008-25G 25 g

5-Amino-2-methylpyridine, 97%

NEW

$C_6H_8N_2$
FW: 108.14
[3430-14-6]

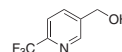


662704-250MG 250 mg
662704-1G 1 g

6-(Trifluoromethyl)pyridine-3-methanol

NEW

$C_7H_6F_3NO$
FW: 177.12
[386704-04-7]



640050-1G 1 g
640050-5G 5 g

4-Methylpyridine-3-carboxylic acid, 97%

NEW

$C_7H_7NO_2$
FW: 137.14
[3222-50-2]

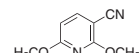


656410-1G 1 g

2,6-Dimethoxyipyridine-3-carbonitrile, 97%

NEW

$C_8H_8N_2O_2$
FW: 164.16
[721643-45-6]



659266-1G 1 g
659266-5G 5 g

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2-Iodoimidazole

NEW

$C_3H_3IN_2$
FW: 193.97
[3034-62-6]

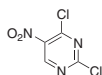


641081-1G	1 g
641081-5G	5 g

2,4-Dichloro-5-nitropyrimidine, 97%

NEW

$C_4HCl_2N_2O_2$
FW: 193.98
[49845-33-2]



658340-1G	1 g
658340-10G	10 g

5-Fluoro-2-hydroxypyrimidine, 97%

NEW

$C_4H_3FN_2O$
FW: 114.08
[2022-78-8]

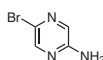


656445-1G	1 g
-----------	-----

2-Amino-5-bromopyrazine, 97%

NEW

$C_4H_4BrN_3$
FW: 174.00
[59489-71-3]

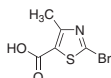


636320-1G	1 g
-----------	-----

2-Bromo-4-methylthiazole-5-carboxylic acid, 96%

NEW

$C_5H_4BrNO_2S$
FW: 222.06
[40003-41-6]

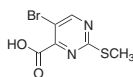


646008-1G	1 g
646008-5G	5 g

5-Bromo-2-(methylthio)pyrimidine-4-carboxylic acid, 97%

NEW

$C_6H_5BrN_2O_2S$
FW: 249.09
[50593-92-5]

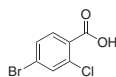


656739-1G	1 g
-----------	-----

4-Bromo-2-chlorobenzoic acid, 97%

NEW

$C_7H_4BrClO_2$
FW: 235.46
[59748-90-2]

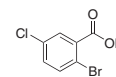


664014-5G	5 g
664014-25G	25 g

2-Bromo-5-chlorobenzoic acid, 96%

NEW

$C_7H_4BrClO_2$
FW: 235.46
[21739-93-5]

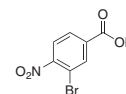


664022-5G	5 g
664022-25G	25 g

3-Bromo-4-nitrobenzoic acid, 97%

NEW

$C_7H_4BrNO_4$
FW: 246.01
[101420-81-9]

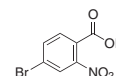


659304-1G	1 g
659304-5G	5 g

4-Bromo-2-nitrobenzoic acid, 97%

NEW

$C_7H_4BrNO_4$
FW: 246.01
[99277-71-1]

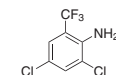


664855-1G	1 g
664855-5G	5 g

2,4-Dichloro-6-(trifluoromethyl)aniline, 97%

NEW

$C_7H_4Cl_2F_3N$
FW: 230.01
[62593-17-3]

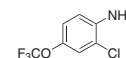


656011-1G	1 g
656011-5G	5 g

2-Chloro-4-(trifluoromethoxy)aniline, 97%

NEW

$C_7H_5ClF_3NO$
FW: 211.57
[69695-61-0]

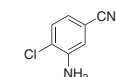


655929-1G	1 g
655929-5G	5 g

3-Amino-4-chlorobenzonitrile, 96%

NEW

$C_7H_5ClN_2$
FW: 152.58
[53312-79-1]

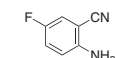


653837-1G	1 g
653837-10G	10 g

2-Amino-5-fluorobenzonitrile, 97%

NEW

$C_7H_5FN_2$
FW: 136.13
[61272-77-3]

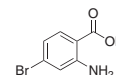


642924-1G	1 g
642924-10G	10 g

2-Amino-4-bromobenzoic acid, 97%

NEW

$C_7H_6BrNO_2$
FW: 216.03
[20776-50-5]

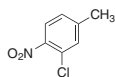


664863-1G	1 g
-----------	-----

3-Chloro-4-nitrotoluene, 97%

NEW

C₇H₆ClNO₂
FW: 171.58
[38939-88-7]



643963-5G	5 g
643963-25G	25 g

4-Fluoro-2-iodotoluene

NEW

C₇H₆FI
FW: 236.03
[13194-67-7]

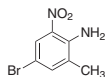


643068-5G	5 g
643068-25G	25 g

4-Bromo-2-methyl-6-nitroaniline, 97%

NEW

C₇H₇BrN₂O₂
FW: 231.05
[77811-44-0]

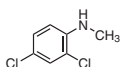


655988-1G	1 g
655988-5G	5 g

2,4-Dichloro-N-methylaniline, 97%

NEW

C₇H₇Cl₂N
FW: 176.04
[35113-88-3]

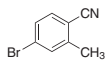


630950-1G	1 g
630950-5G	5 g

4-Bromo-2-methylbenzonitrile, 97%

NEW

C₈H₆BrN
FW: 196.04
[67832-11-5]

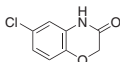


665320-5G	5 g
665320-25G	25 g

6-Chloro-2H-1,4-benzoxazin-3(4H)-one, 97%

NEW

C₈H₆ClNO₂
FW: 183.59
[7652-29-1]

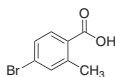


658278-5G	5 g
658278-25G	25 g

4-Bromo-2-methylbenzoic acid, 97%

NEW

C₈H₇BrO₂
FW: 215.04
[68837-59-2]



665126-5G	5 g
665126-25G	25 g

3-Bromophenethyl bromide, 97%

NEW

C₈H₈Br₂
FW: 263.96
[40422-70-6]

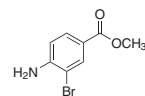


653802-1G	1 g
653802-10G	10 g

Methyl 4-amino-3-bromobenzoate, 97%

NEW

C₈H₈BrNO₂
FW: 230.06
[106896-49-5]

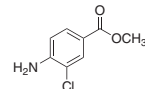


655910-1G	1 g
655910-5G	5 g

Methyl 4-amino-3-chlorobenzoate, 97%

NEW

C₈H₈ClNO₂
FW: 185.61
[84228-44-4]



655902-1G	1 g
655902-5G	5 g

6-Fluoro-1-indanone, 96%

NEW

C₉H₇FO
FW: 150.15
[1481-32-9]

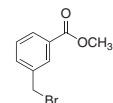


663123-1G	1 g
663123-5G	5 g

Methyl 3-(bromomethyl)benzoate

NEW

C₉H₉BrO₂
FW: 229.07
[1129-28-8]

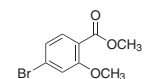


648116-5G	5 g
648116-25G	25 g

Methyl 4-bromo-2-methoxybenzoate, puriss., 98%

NEW

C₉H₉BrO₃
FW: 245.07
[139102-34-4]

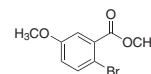


653098-1G	1 g
653098-10G	10 g

Methyl 2-bromo-5-methoxybenzoate, 97%

NEW

C₉H₉BrO₃
FW: 245.07
[35450-36-3]

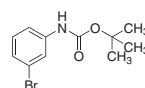


659290-5G	5 g
659290-25G	25 g

N-(tert-Butoxycarbonyl)-3-bromoaniline, 97%

NEW

C₁₁H₁₄BrNO₂
FW: 272.14
[25216-74-4]

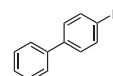


528706-1G	1 g
528706-5G	5 g

4-Iodobiphenyl, 97%

NEW

C₁₂H₉I
FW: 280.10
[1591-31-7]



637769-5G	5 g
637769-25G	25 g

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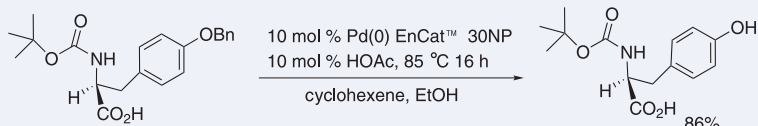
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(1) Bremeyer, N.; Ley, S. V.; Ramarao, C.; Shirley, I. M.; Smith, S. C. *Synlett* **2002**, 1843. (2)(a) Yu, J.-Q.; Wu, H.-C.; Ramarao, C.; Spencer, J. B.; Ley, S. V. *Chem. Commun.* **2003**, 678. (b) Ley, S. V.; Mitchell, C.; Pears, D.; Ramarao, C.; Yu, J.-Q.; Zhou, W. *Org. Lett.* **2003**, 5, 4665.

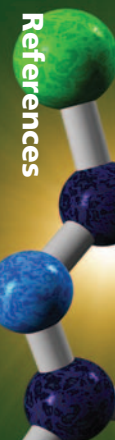
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653667-1G	1 g
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653667-100G	100 g

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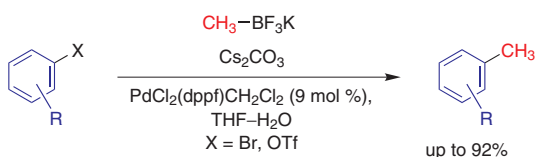
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Reference

(1) Molander, G. A. et al. *J. Org. Chem.* **2003**, 68, 5534.



Potassium methyltrifluoroborate

NEW

CH₃BF₃K
FW: 121.94
[13862-28-7]



637890-1G	1 g
637890-5G	5 g

Potassium cyclopentyltrifluoroborate, 97%

NEW

C₅H₉BF₃K
FW: 176.03

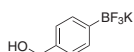


666017-1G	1 g
666017-5G	5 g

Potassium 4-(hydroxymethyl)phenyltrifluoroborate, 97%

NEW

C₇H₇BF₃KO
FW: 214.03

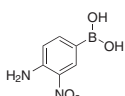


659762-1G	1 g
659762-5G	5 g

4-Amino-3-nitrophenylboronic acid, tech.

NEW

C₆H₇BN₂O₄
FW: 181.94
[89466-07-9]



651621-1G	1 g
651621-5G	5 g

3,6-Dibromo-2-fluorophenylboronic acid

NEW

C₆H₄BBr₂FO₂
FW: 297.71
[870778-92-0]

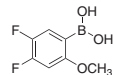


651087-2G	2 g
651087-10G	10 g

4,5-Difluoro-2-methoxyphenylboronic acid

NEW

C₇H₇BF₂O₃
FW: 187.94
[870777-32-5]

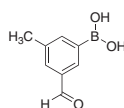


645184-1G	1 g
645184-5G	5 g

3-Formyl-5-methylphenylboronic acid

NEW

C₈H₉BO₃
FW: 163.97
[870777-33-6]

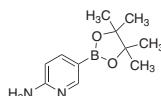


645338-1G	1 g
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2-Aminopyridine-5-boronic acid pinacol ester

NEW

C₁₁H₁₇BN₂O₂
FW: 220.08
[827614-64-2]

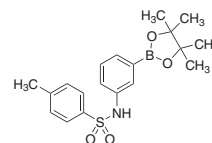


640379-1G	1 g
640379-5G	5 g

3-(p-Toluenesulfonylamino)phenylboronic acid pinacol ester, 97%

NEW

C₁₉H₂₄BNO₄S
FW: 373.27
[796061-08-0]

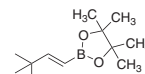


636312-1G	1 g
636312-5G	5 g

trans-(3,3-Dimethylbutenyl)boronic acid pinacol ester, 97%

NEW

C₁₂H₂₃BO₂
FW: 210.12

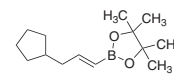


667277-1G	1 g
667277-5G	5 g

trans-3-(Cyclopentyl)propenylboronic acid pinacol ester, 97%

NEW

C₁₄H₂₅BO₂
FW: 236.16

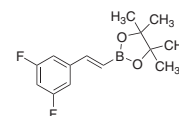


667013-1G	1 g
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trans-2-(3,5-Difluorophenyl)vinyl boronic acid pinacol ester, 97%

NEW

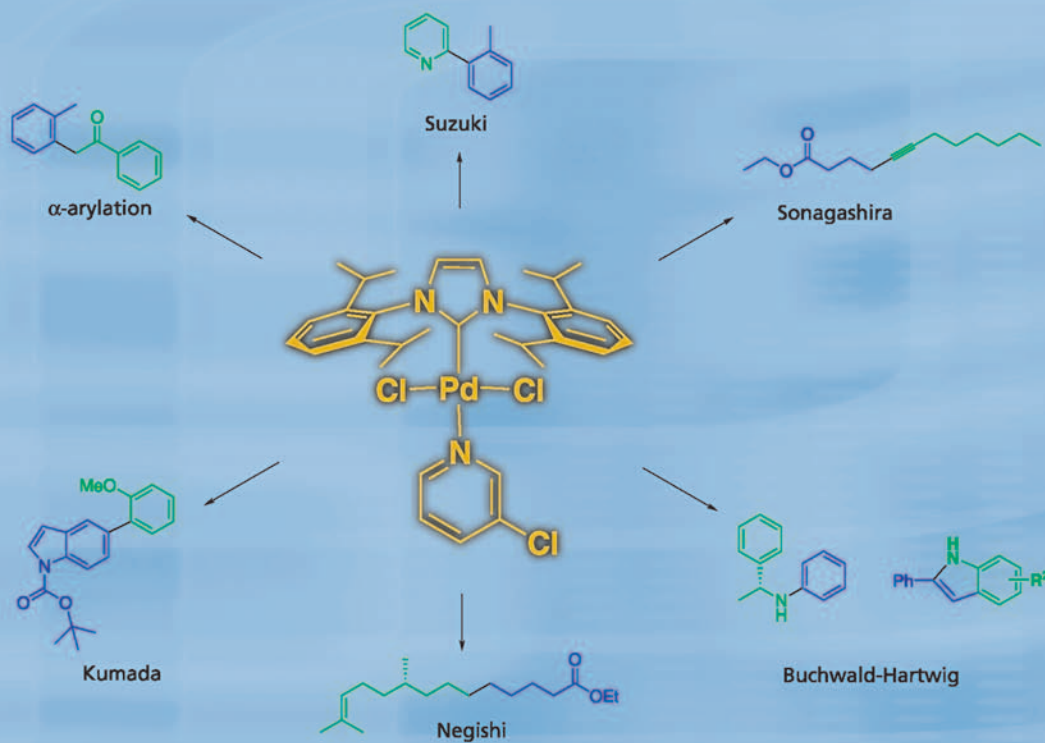
C₁₄H₁₇BF₂O₂
FW: 266.09



669199-1G	1 g
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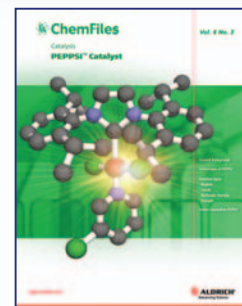


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