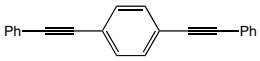
# Alkynes

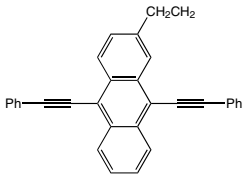
Alkynes are highly reactive and the triple bond can exert remarkable effects on the rest of the molecule through a combination of characteristic properties. A number of new alkynes derivatives are now available through Alfa Aesar. Many have already been extensively cited in the scientific literature; here are just a few examples of their use.

6-Heptynoic acid (H53519) has been used in many studies including in fatty acid amide hydrolase inhibitors[1], alkynyl-substituted spirocyclic sulfamides for the treatment of alzheimer's disease[2], catalytic cyclizations to form ε-lactones[3], and the selective fluorescence labelling of lipids in living cells.[4] Hua and coworkers have optimised palladium-catalyzed transfer semihydrogenation of internal alkynes (H30395) affording cis-alkenes in good to high yields with excellent chemo- and stereoselectivity.[5] Yusubov et al. were able to selectively oxidize one triple bonds in the same compound to afford a 1,2-diketones.[6]

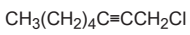
The alkyene (H51897) was employed in a multi-step supramolecular chemistry reaction, which terminated with cobalt-catalyzed cyclotrimerization reaction, to yield an extended hexagonal molecule, as a highly symmetrical ligand.[7] The group led by Bureš has studied H51914 and other similar moieties as push-pull molecules with a systematically extended π-conjugated system featuring 4,5-dicyanoimidazole.[8] Alfa Aesar has extended its comprehensive range of heterocyclic compounds with the following alkynes.



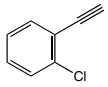

**H30395**
1,4-Bis(phenylethynyl) benzene, 97%
[1849-27-0]



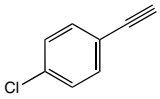

**H53470**
9,10-Bis(phenylethynyl)-2-ethylanthracene, 98%
[53158-83-1]



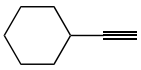

**H53452**
1-Chloro-2-octyne, 98%
[51575-83-8]



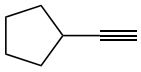

**H53441**
2-Chlorophenylacetylene, 98%
[873-31-4]



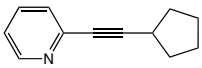

**H51058**
4-Chlorophenylacetylene, 98%
[873-73-4]



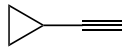
**H53418**
Cyclohexylacetylene, 98%
[931-48-6]



**H53483**
Cyclopentylacetylene, 97%
[930-51-8]

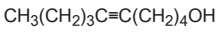



**H53463**
2-(Cyclopentylethynyl)pyridine, 95%
[865173-44-0]

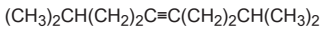


**H53440**
Cyclopropylacetylene, 97%
[6746-94-7]


**H53467**
4,6-Decadiyne, 97%
[16387-71-6]




**H53400**
5-Decyn-1-ol, 97%
[68274-97-5]




**H53414**
2,9-Dimethyl-5-decyne, 96%
[19550-56-2]

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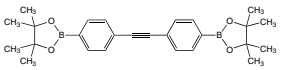


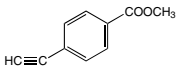
**H51897**
Diphenylacetylene-4,4'-diboronic acid bis(pinacol) ester, 95%
[849681-64-7]

$CH_3(CH_2)_2C{\equiv}CCH_2CH_3$

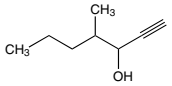
**H53504**
3-Heptyne, 97%
[2586-89-2]

$HC{\equiv}C(CH_2)_4CO_2H$

**H53519**
6-Heptynoic acid, 95%
[30964-00-2]



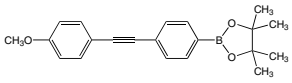
**H53419**
Methyl 4-ethynylbenzoate, 97%
[3034-86-4]



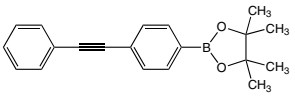
**H53372**
4-Methyl-1-heptyn-3-ol, 97%
[87777-46-6]

$HC{\equiv}C(CH_2)_8CO_2CH_3$

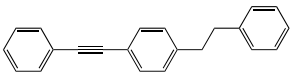
**H53453**
Methyl 10-undecynoate, 96%
[2777-66-4]



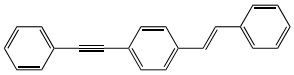
**H51914**
4-(4-Methoxyphenylethynyl) benzeneboronic acid pinacol ester, 95%



**H51699**
4-(Phenylethynyl)benzene-boronic acid pinacol ester, 97%



**H30058**
1-(2-Phenylethyl)-4-(phenylethynyl)benzene, 97%
[906650-60-0]



**H30638**
1-(trans-2-Phenylethenyl)-4-(phenylethynyl)benzene, 97%
[21850-30-6]


[1] D. L. Boger, *et al., J. Med. Chem.*, 2005, **48**, 1849.
[2] Merck Sharp & Dohme Ltd, Patent: WO2003/93253 A1, 2003.
[3] H. Imagawa, *et al., Synlett*, 2006, 639.
[4] A. B. Neef, & C. Schultz, *Angewandte Chemie, Int. Ed.*, 2009, **48**, 1498.
[5] J. Li, R. Hua & T. Liu, *J. Org. Chem.*, 2010, **75**, 2966.
[6] S. Y. Mehman, V. D. Filimonov, V. P. Vasilyeva, K.-W. Chi, *Synthesis*, 1995, **10**, 1234.
[7] M. Takase, A. Nakajima, T. Takeuchi, *Tetrahedron Letters*, 2005, **46**, 1739.
[8] J. Kulhanek, F. Bureš, O. Pytela, T. Mikysek, J. Ludvik, A. Ruzicka, *Dyes & Pigments*, 2010, **85**, 57.