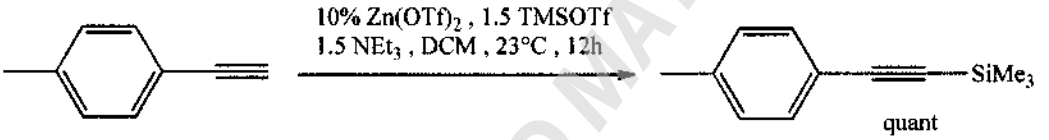
CHAPTER 1

PREPARATION OF ALKYNES

SECTION 1: ALKYNES FROM ALKYNES



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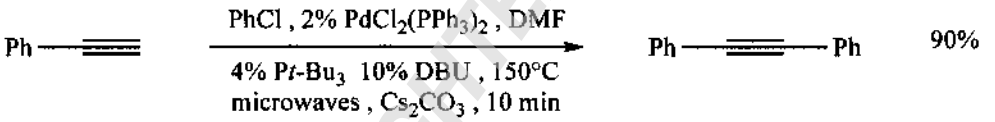

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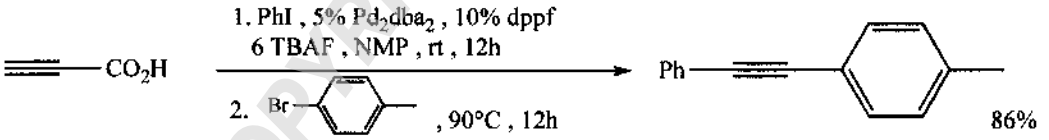

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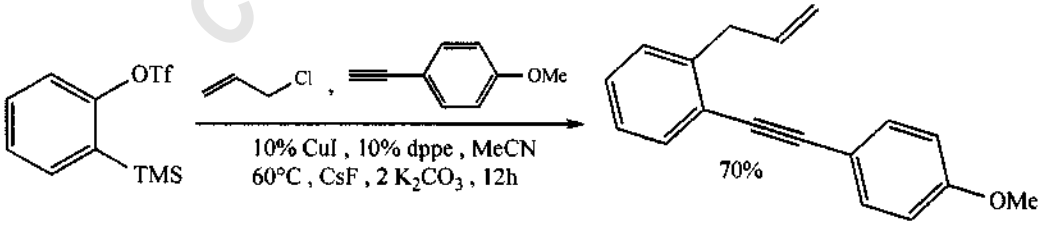

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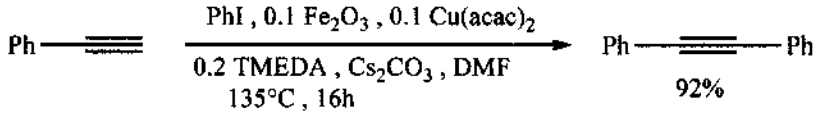

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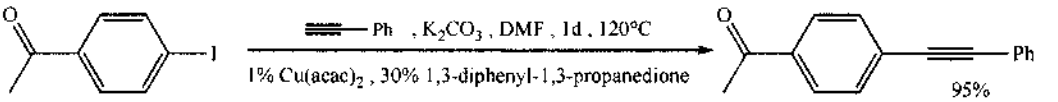
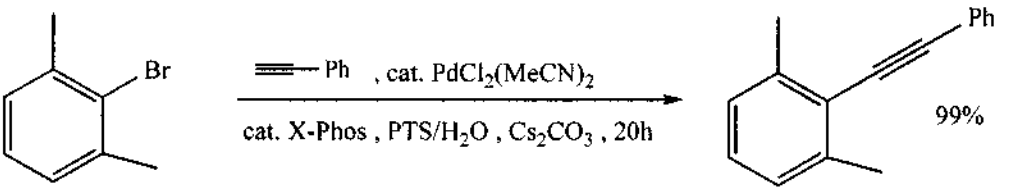
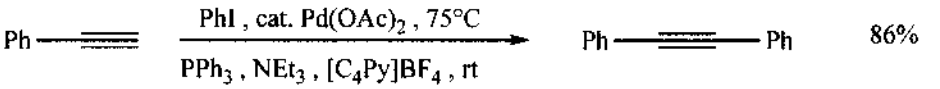


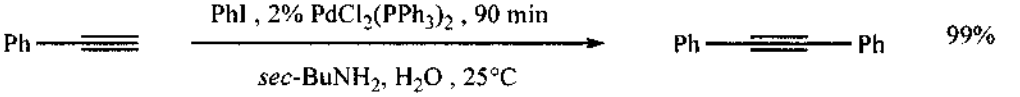
Monnier, F.; Turtaut, F.; Duroure, L.; Taillefer, M. *Org. Lett.* ***2008****, 10,* 3203.



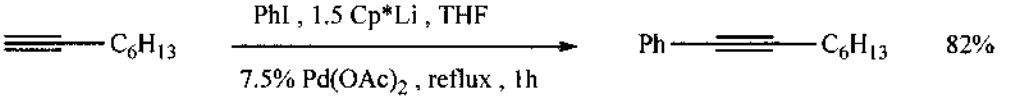
Lipshutz, B.H.; Chung, D.W.; Rich, B. *Org. Lett.* ***2008****, 10,* 3793.



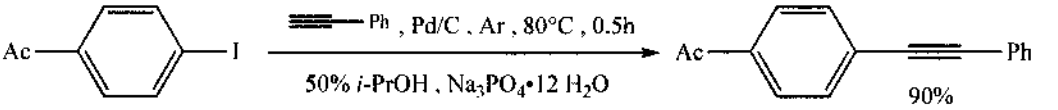
de Lima, P.G.; Antunes, O.A.C. *Tetrahedron Lett.* ***2008****, 49,* 2506.



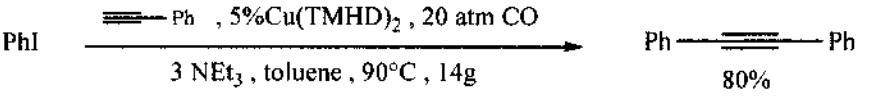
Komáromi, A.; Tolnai, G.L.; Novák, Z. *Tetrahedron Lett.* ***2008****, 49,* 7294.



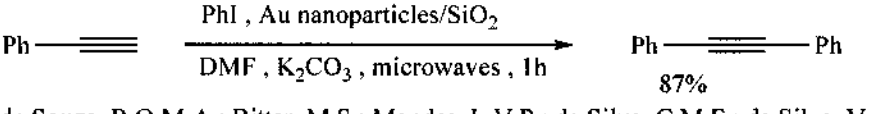
Uemura, M.; Yorimitsu, H.; Oshima, K. *Tetrahedron* ***2008****, 64,* 1829.



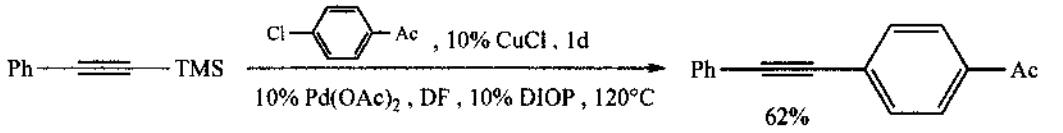
Mori, S.; Yanase, T.; Aoyagi, S.; Monguchi, Y.; Maegawa, T.; Sajiki, H. *Chemistry: European J.* ***2008****, 14,* 6994.



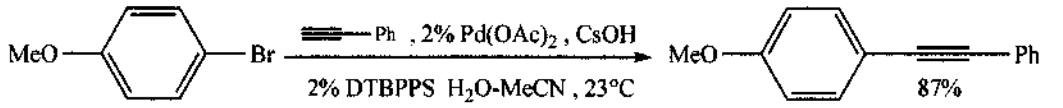
Tambade, P.J.; Patil, Y.P.; Nandurkar, N.S.; Bhanage, B.M. *Synlett* ***2008****,* 886.



de Souza, R.O.M.A.; Bittar, M.S.; Mendes, L.V.P.; da Silva, C.M.F.; da Silva, V.T.; Antunes, O.A.C. *Synlett* ***2008****,* 1777.

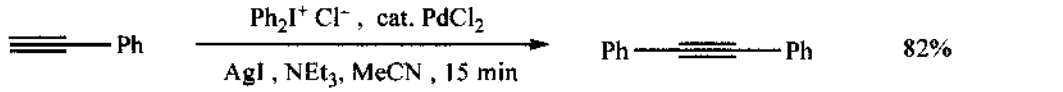


Nishihara, Y.; Inoue, E.; Okada, Y.; Takagi, K. *Synlett* ***2008***, 3041.



DTBPPS = 3-(di-*tert*-butylphosphonium)propane

Brown, W.S.; Boykin, D'A.D.; Sonnier, Jr., M.Q.; Clark, W.D.; Brown, F.V.; Shaughnessy, K.H. *Synthesis* ***2008***, 1965.



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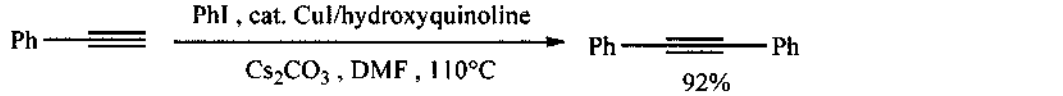

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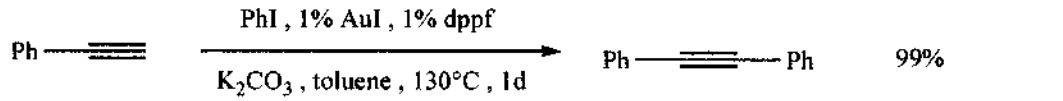

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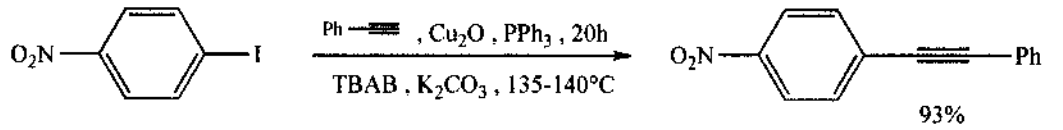
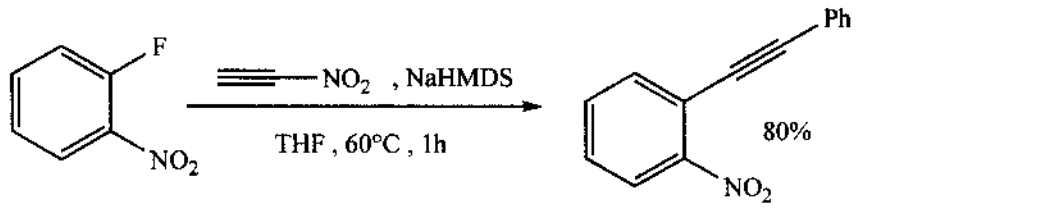


Tang, B.-X.; Wang, F.; Li, J.-H.; Xie, Y.-X.; Zhang, M.-B. *J. Org. Chem.* ***2007***, *72*, 6294.



DeRoy, P.L.; Surprenant, S.; Bertrand-Laperle, M.; Yoakim, C. *Org. Lett.* ***2007***, *9*, 2741.

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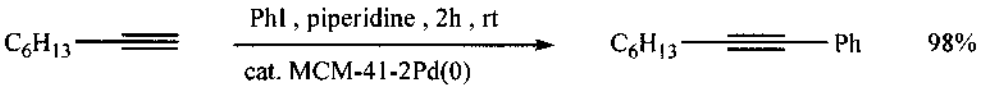
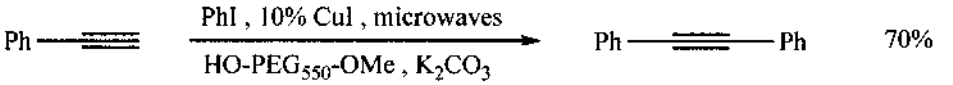


Cai, M.; Sha, J.; Xu, Q. *Tetrahedron* ***2007***, *63*, 4642.



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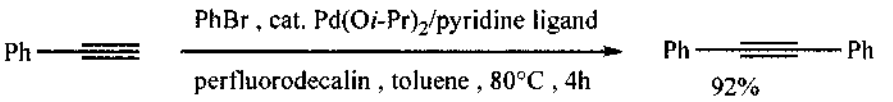

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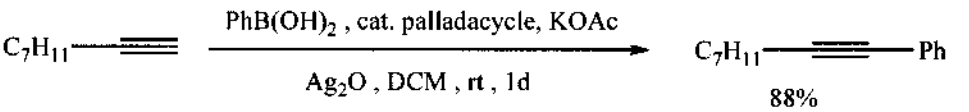

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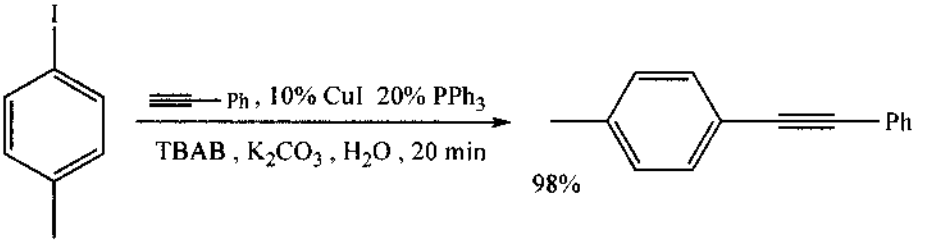

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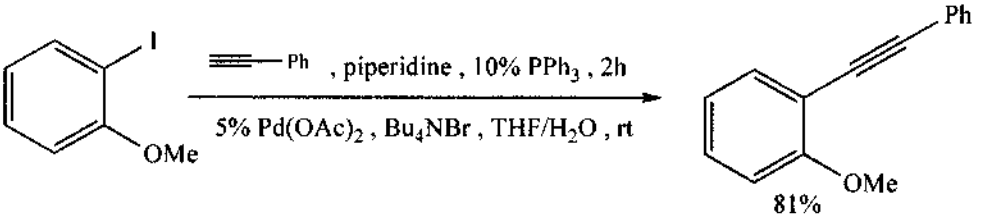

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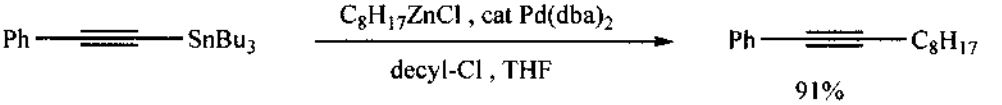
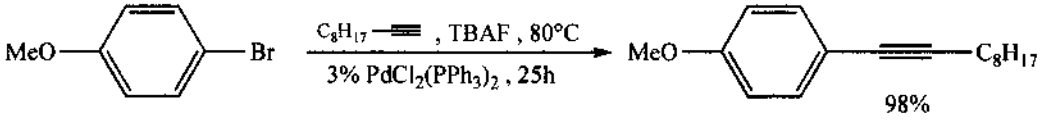


Zhao, Y.; Wang, H.; Hou, X.; Hu, Y.; Lei, A.; Zhang, H; Zhu, L. *J. Am. Chem. Soc.* ***2006***, *128*, 15048.



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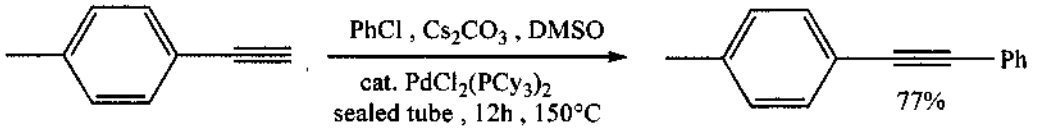

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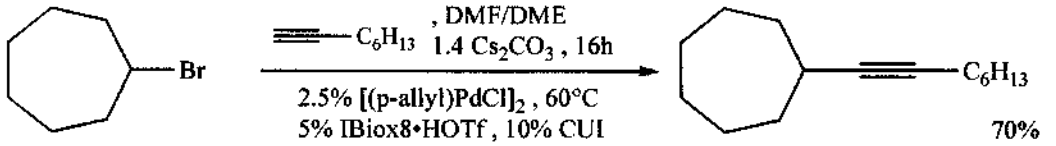

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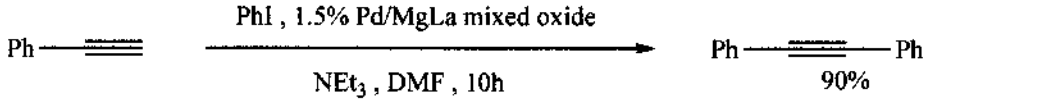

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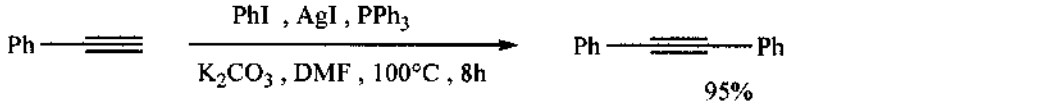

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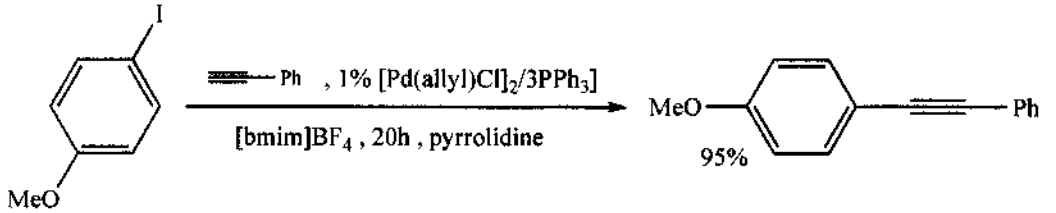

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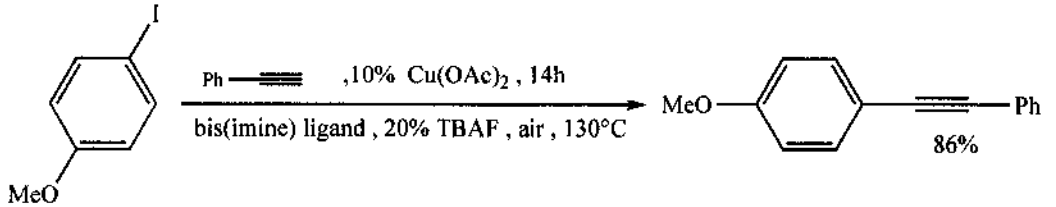

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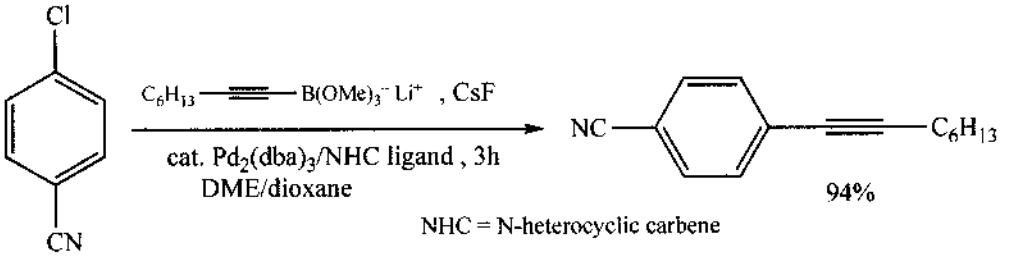

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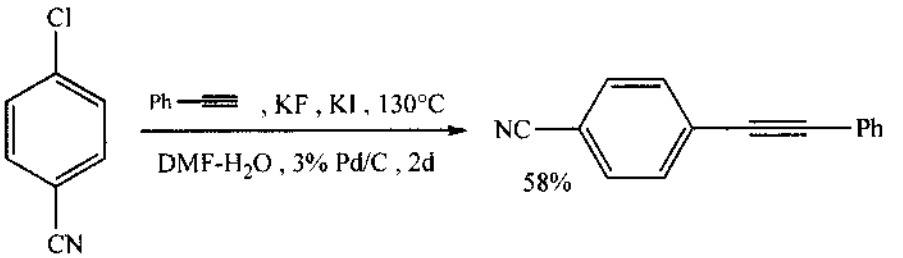

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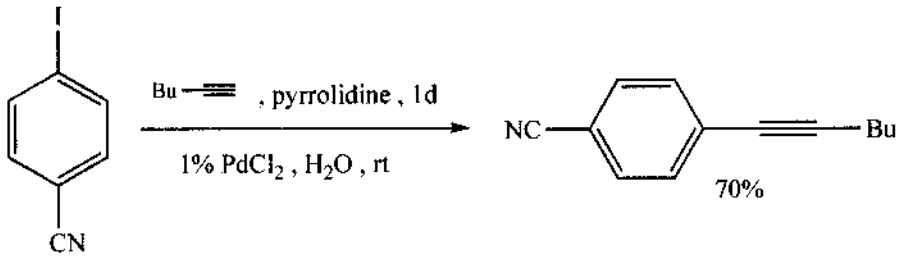
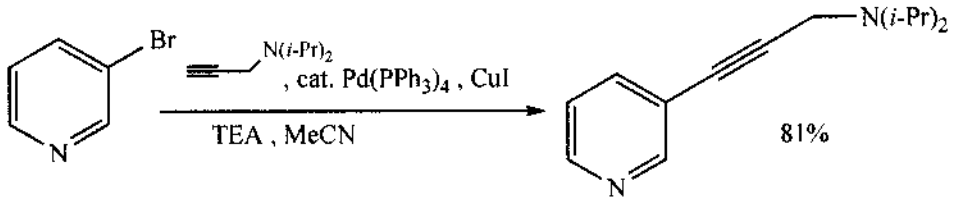


Liang, B.; Dai, M.; Chen, J.; Yang, Z. *J. Org. Chem.* ***2005,*** *70,* 391.



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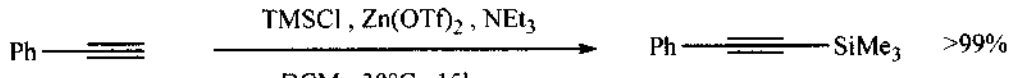
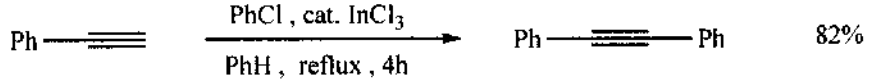
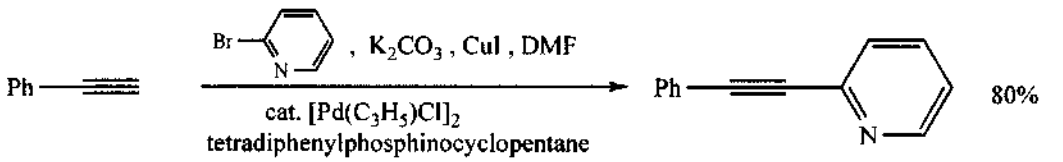


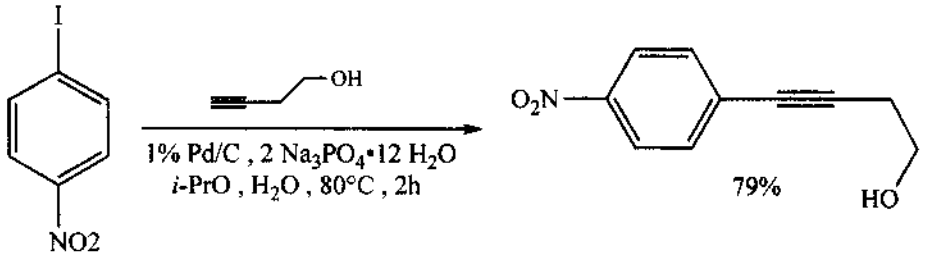
Jiang, H.; Zhu, S. *Tetrahedron Lett.* ***2005,*** *46,* 517.



Borah, H.N.; Prajapati, D.; Boruah, R.C. *Synlett* ***2005,*** 2823.



Feuerstein, M.; Doucet, H.; Santelli, M. *Tetrahedron Lett.* ***2005****, 46,* 1717.



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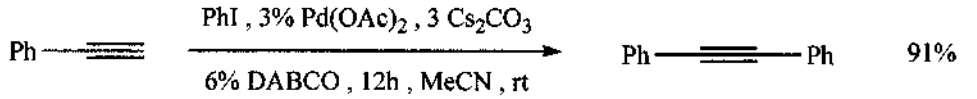
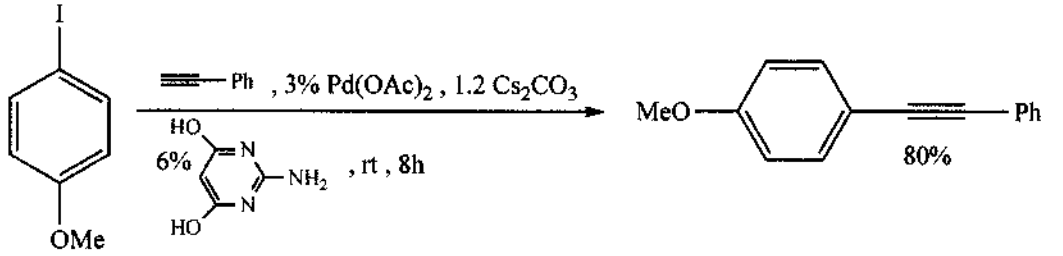


Li, J.-H.; Zhang, X.-D.; Xie, Y.-X. *Synthesis* ***2005****,* 804.

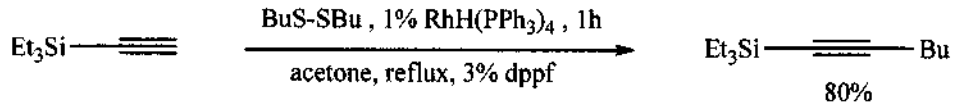


Li, J.-H.; Zhang, X.-D.; Xie, Y.-X. *Eur. J. Org. Chem.* ***2005****,* 4256.

REVIEWS

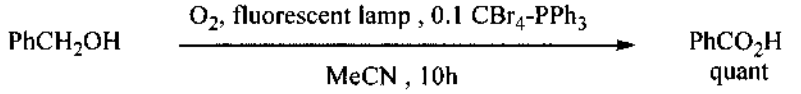
"Alkyne Metathesis" Fürstner, A.; Davies, P.W. *Chem. Commun.* ***2005****,* 2307.

SECTION 2: ALKYNES FROM ACID DERIVATIVES

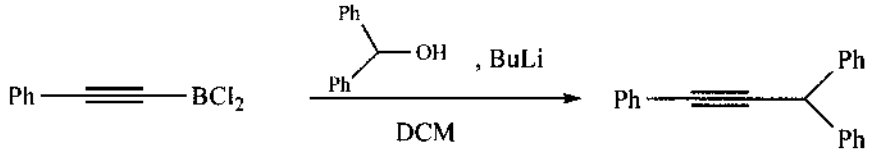


Arisawa, M.; Fujimoto, K.; Morinaka, S.; Yamaguchi, M. *J. Am. Chem. Soc.* ***2005****, 127,* 12226.

SECTION 3: ALKYNES FROM ALCOHOLS AND THIOLS



Sugai, T.; Itoh, A. *Tetrahedron Lett.* ***2007****, 48,* 9096.



Kabalka, G.W.; Yao, M.-L.; Borella, S. *Org. Lett.* ***2006****, 8,* 879.

SECTION 4: ALKYNES FROM ALDEHYDES

NO ADDITIONAL EXAMPLES

SECTION 5: ALKYNES FROM ALKYLS, METHYLENES, AND ARYLS

NO ADDITIONAL EXAMPLES

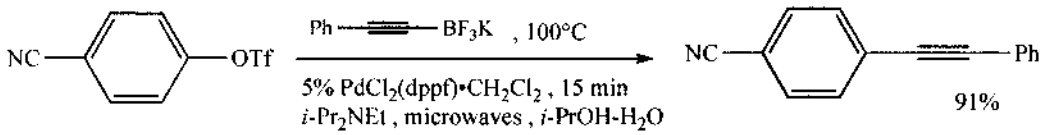
SECTION 6: ALKYNES FROM AMIDES

NO ADDITIONAL EXAMPLES

SECTION 7: ALKYNES FROM AMINES

NO ADDITIONAL EXAMPLES

SECTION 8: ALKYNES FROM ESTERS

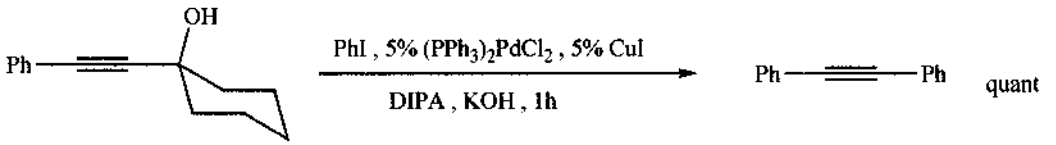


Kabalka, G.W.; Naravane, A.; Zhao, L.L. *Tetrahedron Lett.* ***2007****, 48,* 7091.

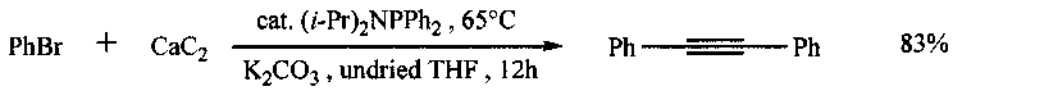
SECTION 9: ALKYNES FROM ETHERS, EPOXIDES, AND THIOETHERS

NO ADDITIONAL EXAMPLES

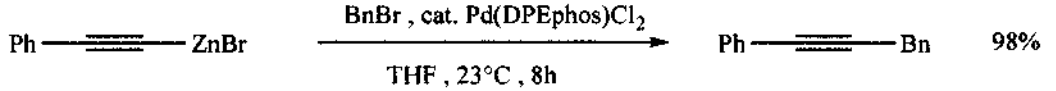
SECTION 10: ALKYNES FROM HALIDES AND SULFONATES



Csékei, M.; Novák, Z.; Kotschy, A. *Tetrahedron* ***2008****, 64,* 975.

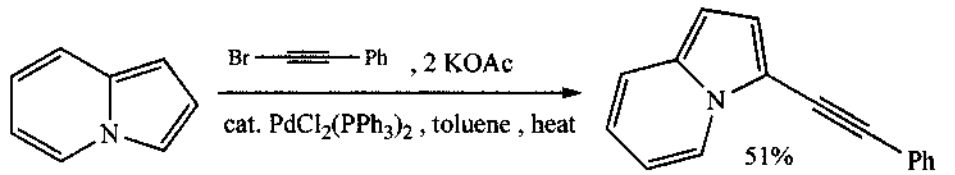


Zhang, W.; Wu, H.; Liu, Z.; Zhong, P.; Zhang, L.; Huang, X.; Cheng, J. *Chem. Commun.* ***2006,*** 4826.



Qian, M.; Negishi, E.-i. *Tetrahedron Lett.* ***2005, 46,*** 2927.

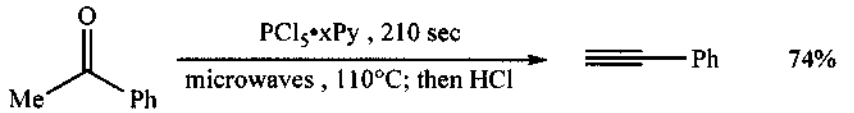
SECTION 11: ALKYNES FROM HYDRIDES



Seregin, I.V.; Ryabova, V.; Gevorgyan, V. *J. Am. Chem. Soc.* ***2007, 129,*** 7742.

For examples of the reaction RC≡CH → RC≡C-C≡CR[1], see Section 300 (Alkyne-Alkyne).

SECTION 12: ALKYNES FROM KETONES

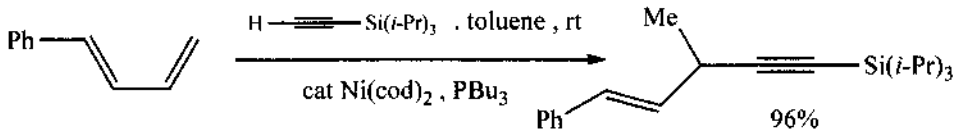


Ghaffarzadeh, M.; Bolourtchian, M.; Fard, Z.H.; Halvagar, M.R.; Mohsenzadeh, F. *Synth. Commun.* ***2006, 36,*** 1973.

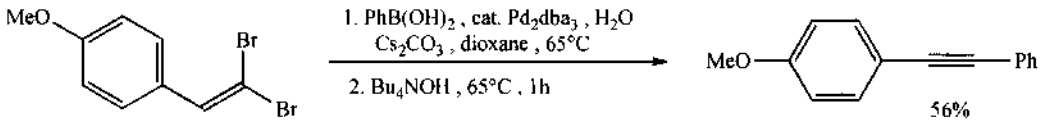
SECTION 13: ALKYNES FROM NITRILES

NO ADDITIONAL EXAMPLES

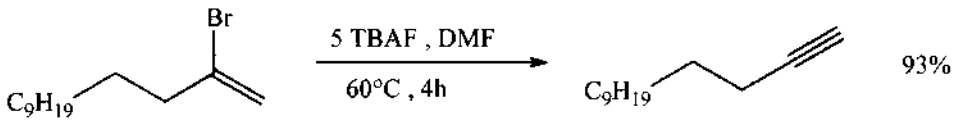
SECTION 14: ALKYNES FROM ALKENES



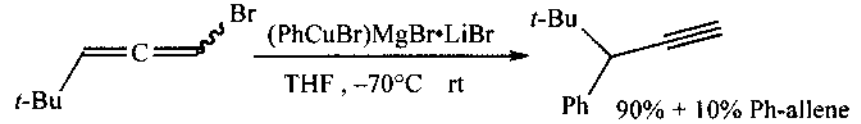
Shirakura, M.; Suginome, M. *J. Am. Chem. Soc.* ***2008****, 130,* 5410.



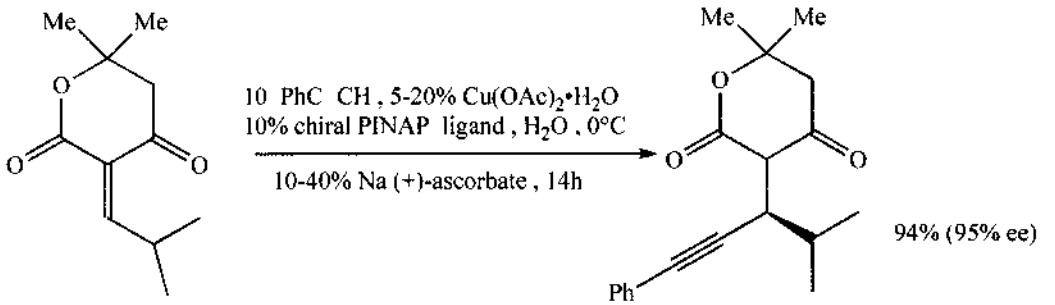
Chelucci, G.; Capitta, F.; Baldino, S.; Pinn, G.A. *Tetrahedron Lett.* ***2007****, 48,* 6514.



Okutani, M.; Mori, Y. *Tetrahedron Lett.* ***2007****, 48,* 6856.



Caporusso, A.M.; Zampieri, A.; Aronica, L.A.; Banti, D. *J. Org. Chem.* ***2006****, 71,* 1902.

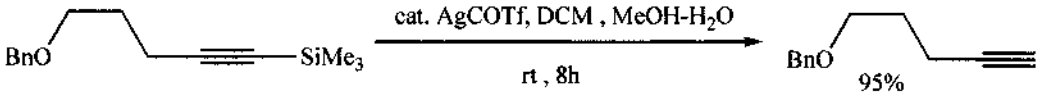


Knöpfel, T.F.; Zarotti, P.; Ichikawa, T.; Carreira, E.M. *J. Am. Chem. Soc.* ***2005****, 127,* 9682.

SECTION 15: ALKYNES FROM MISCELLANEOUS COMPOUNDS

NO ADDITIONAL EXAMPLES

SECTION 15A: PROTECTION OF ALKYNES



Orsini, A.; Vitérisi, A.; Bodlenner, A.; Weibel, J.-M.; Pale, P. *Tetrahedron Lett.* ***2005****, 46,* 259.