

**Catalytic And Regioselective Synthesis Of Gem- Or
Trans-Alpha,Beta-Unsaturated Amides By Carbonylation Of
Alkyl Alkynes
With Aniline Derivatives By Palladium(II) And Phosphine**

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Summary

The reaction of carbonylative addition of alkyl alkynes to aniline derivatives has been successfully achieved by a catalytic system formed of Pd(OAc)₂ and a suitable bidentate phosphine ligand. The reaction led mainly to gem-alpha,beta-unsaturated amides (3) with Pd(OAc)₂/1,3-bis(diphenylphosphino)propane/p-toluenesulfonic acid/CO as the catalytic system. However, the reaction catalyzed by Pd(OAc)₂/1,4-bis(diphenylphosphino)butane/H₂/CO in CH₂Cl₂ as a solvent affords trans-alpha,beta-unsaturated amides (4) as the major product. Copyright (C) 2003 John Wiley Sons, Ltd.

References:

1. AKAO M, 2000, J MOL CATAL A-CHEM, V157, P117
2. ALPER H, 1988, J MOL CATAL, V49, L27
3. BIRD CW, 1962, CHEM REV, V62, P283
4. COLQUHOUN HM, 1991, CARBONYLATION DIRECT
5. DAVIES IW, 1996, CHEM COMMUN 0807, P1753
6. DRENT E, 1994, J ORGANOMET CHEM, V475, P57
7. ELALI B, 1991, J MOL CATAL, V67, P29
8. ELALI B, 1998, HYDROCARBOXYLATION H, P47
9. ELALI B, 2000, TETRAHEDRON LETT, V41, P5761
10. ELALI B, 2001, TETRAHEDRON LETT, V42, P1567
11. ELALI B, 2001, TETRAHEDRON LETT, V42, P2385
12. ELALI B, 2002, J MOL CATAL A-CHEM, V187, P17

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13. HOSOKAWA T, 1990, ACCOUNTS CHEM RES, V23, P49
14. IMADA Y, 1996, J ORG CHEM, V61, P6799
15. IMADA Y, 1996, J ORG CHEM, V61, P7982
16. JAMES DE, 1976, J AM CHEM SOC, V98, P1890
17. KAWABATA Y, 1979, J CHEM SOC CHEM COMM, P462
18. KNIFTON JF, 1977, J MOL CATAL, V2, P293
19. KONISHI M, 1979, TETRAHEDRON LETT, V21, P1871
20. MURAHASHI S, 1994, TETRAHEDRON, V50, P2453
21. MYAGCHENKOV VA, 1991, POLYM-PLAST TECHNOL, V30, P109
22. PETER D, 1991, J CHEM SOC DA, P1519
23. REPPE W, 1953, LIEBIGS ANN CHEM, V1, P582
24. SEAYAD A, 2000, J MOL CATAL A-CHEM, V151, P47
25. SELIGSON AL, 1991, INORG CHEM, V30, P3371
26. SHIOHARA K, 1998, POLYM J, V30, P249
27. TORII S, 1991, CHEM LETT OCT, P1673
28. YAMADA S, 1973, TETRAHEDRON LETT, V18, P1595
29. YAMOMATO K, 1994, CHEM LETT, P189
30. ZABICKY J, 1970, CHEM AMIDES
31. ZARGARIAN D, 1993, ORGANOMETALLICS, V12, P712

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