

Some Unexpected Reactions of the Phenyldimethylsilyllithium Reagent

Ian Fleming

Department of Chemistry, Lensfield Road, Cambridge CB2 1EW, UK

Rick Roberts (England)

The silyllithium reagent itself and the reduction of acyloin silyl ethers

Hiriyakkanavar Ila (India)

Jens Frackenpohl (Germany)

Cleavage of sulfonamides

Monica Solay (Spain)

Frederik Stolwijk (The Netherlands)

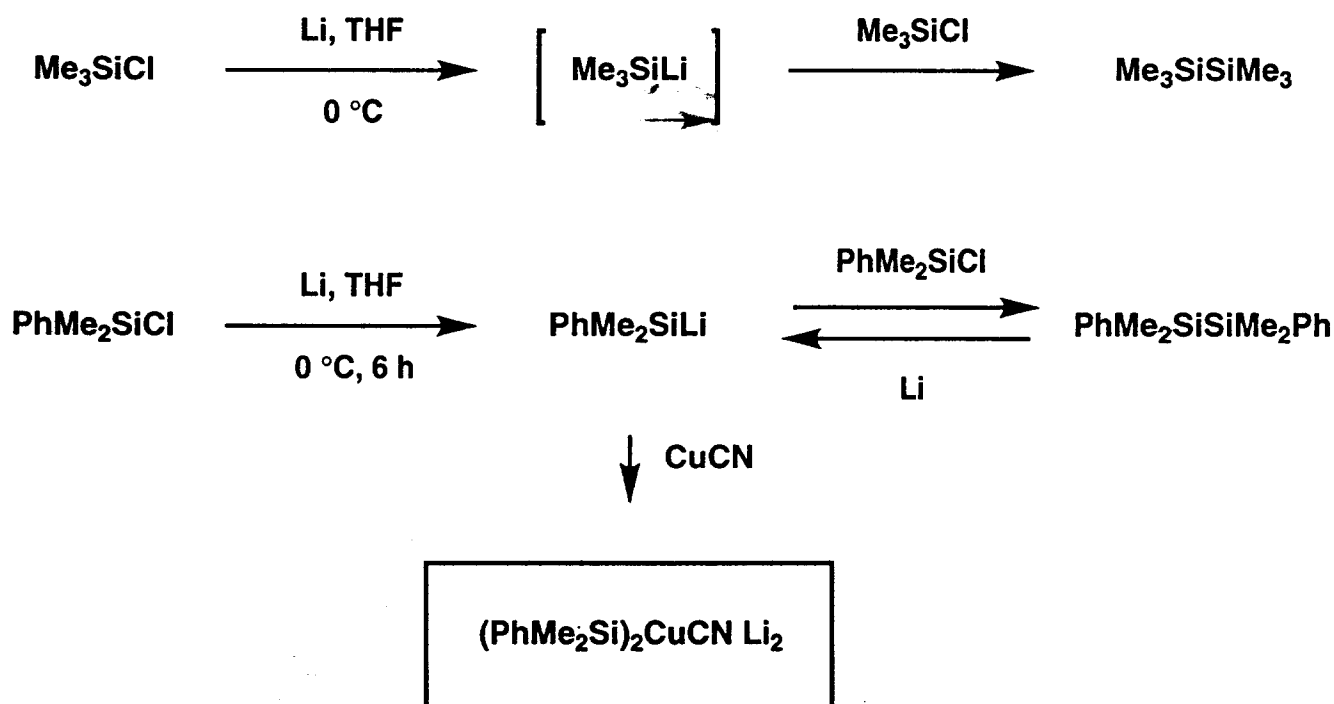
Reactions with nitriles

Usha Ghosh (India)

Synthesis of acylsilanes

Stephen Mack (England)

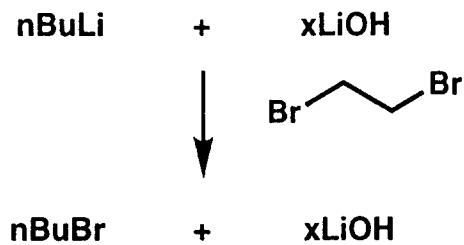
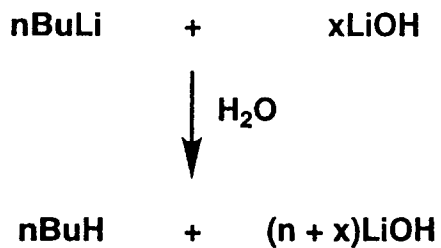
The mysterious formation of enediamines and α -silylamines



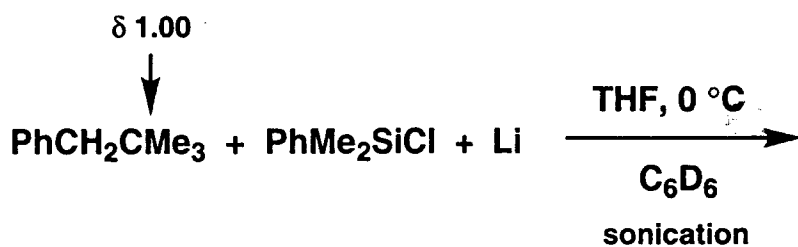
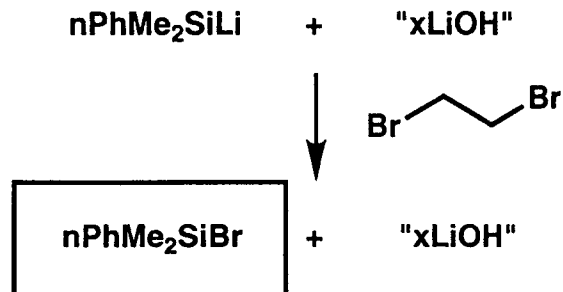
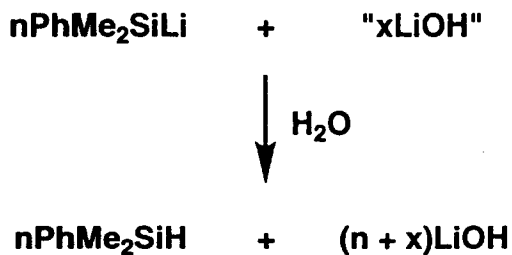
M. V. George, D. J. Peterson and H. Gilman, *J. Am. Chem. Soc.*, 1960, 82, 403.

I. Fleming, Synthetic Applications of Silylcuprates and Stannylcuprates, in *Organocopper Reagents: A Practical Approach*, ed. R. J. K. Taylor, OUP, Oxford, 1995, Chapter 12, pp. 257.

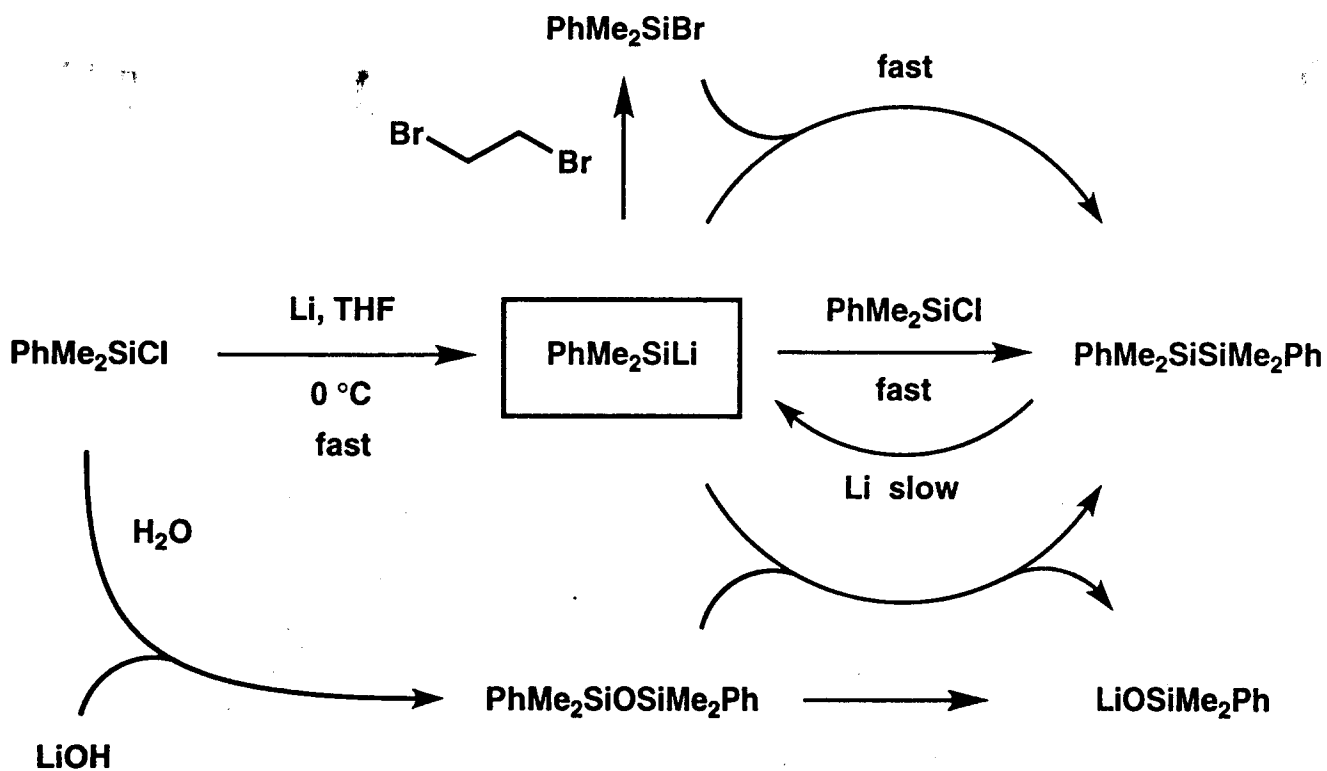
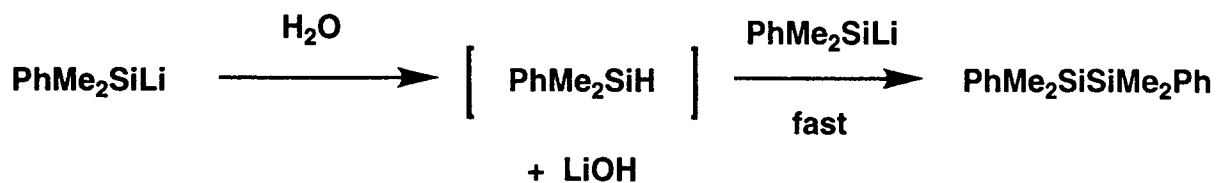
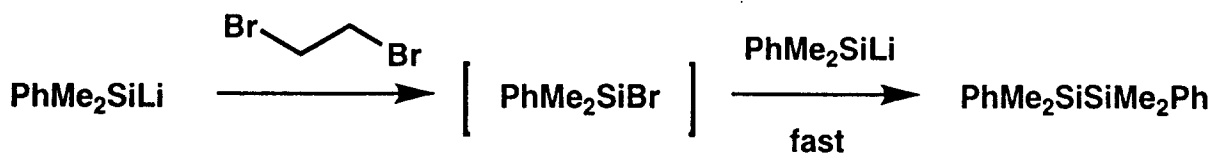
BuLi

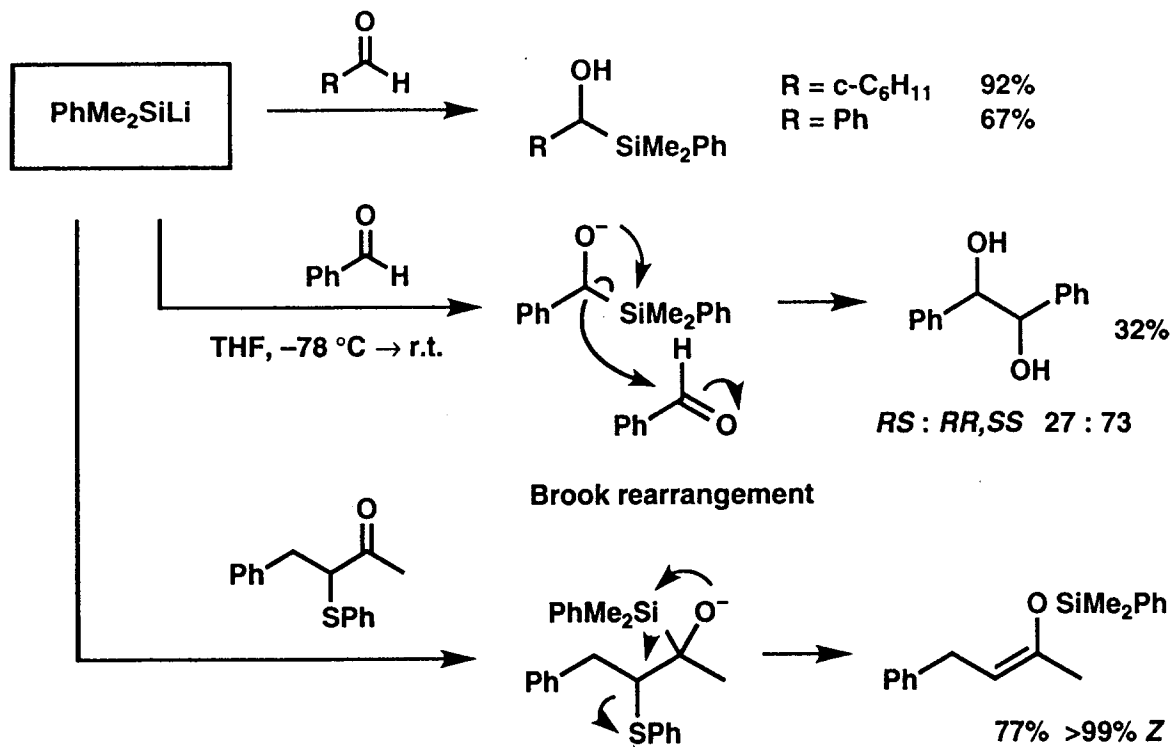


PhMe₂SiLi

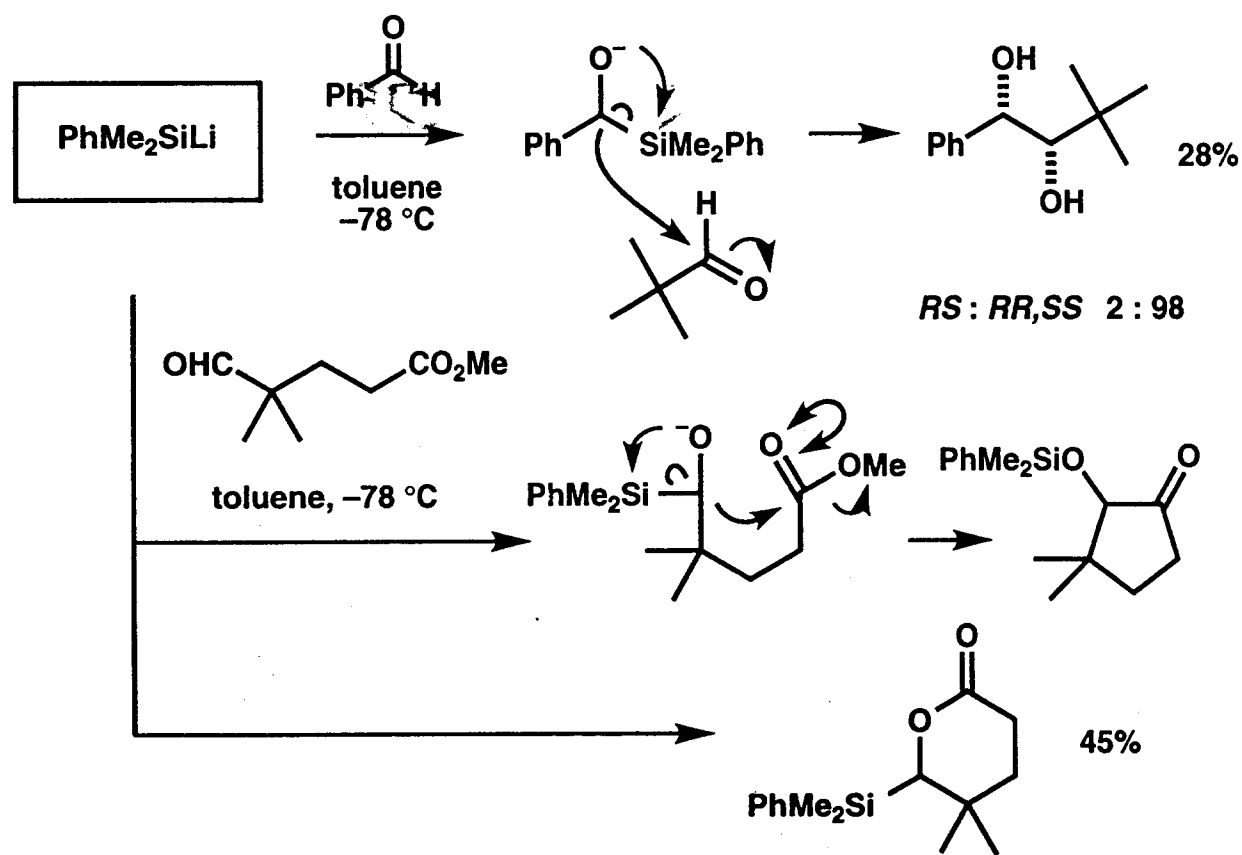


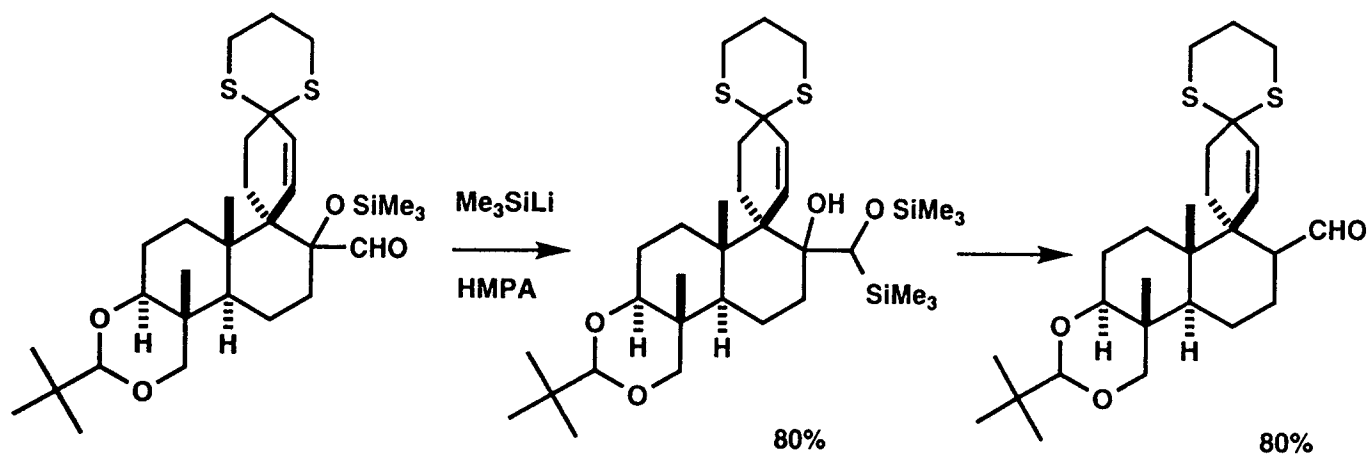
	PhMe ₂ SiCl	PhMe ₂ SiOSiMe ₂ Ph	PhMe ₂ SiSiMe ₂ Ph	PhMe ₂ SiOLi	PhMe ₂ SiLi
¹ H NMR (SiMe ₂)	0.76	0.43	0.42	0.32	0.24
0 min	[84]	[16]			
12 min	8	[16]	[76]		
37 min	1	0	56	7	26
117 min			11	7	69
64 h				7	75



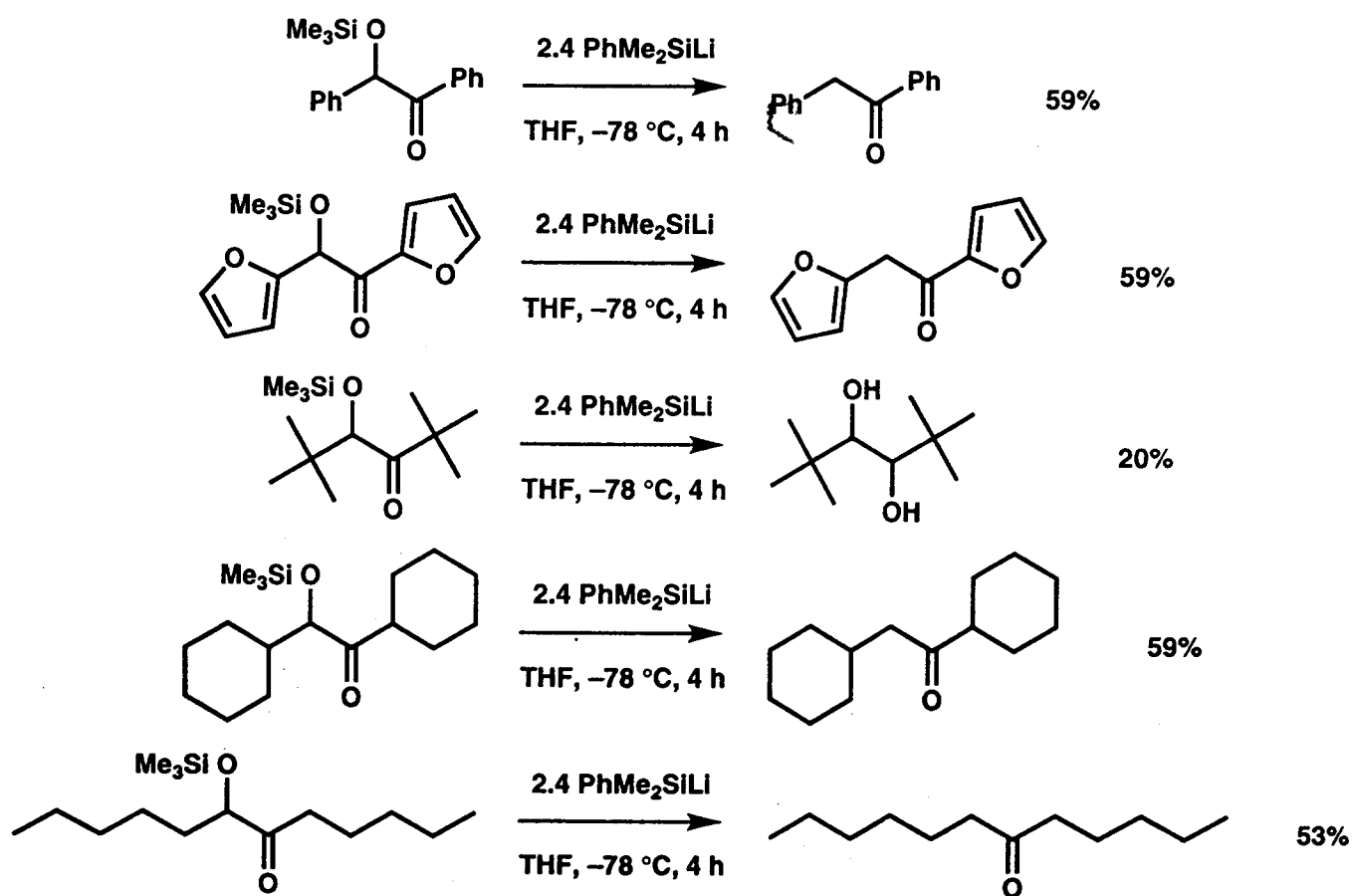


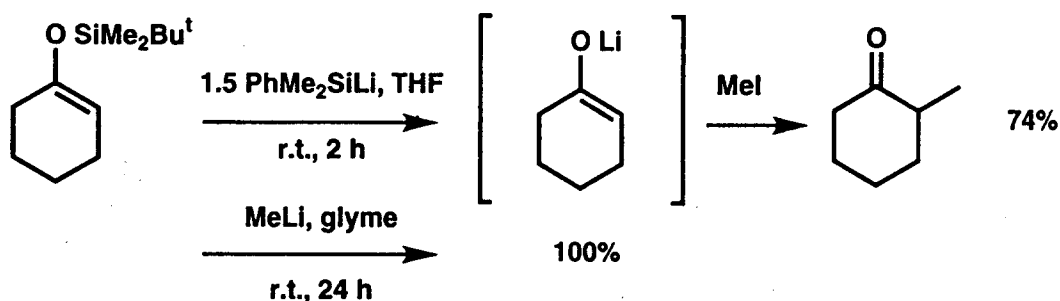
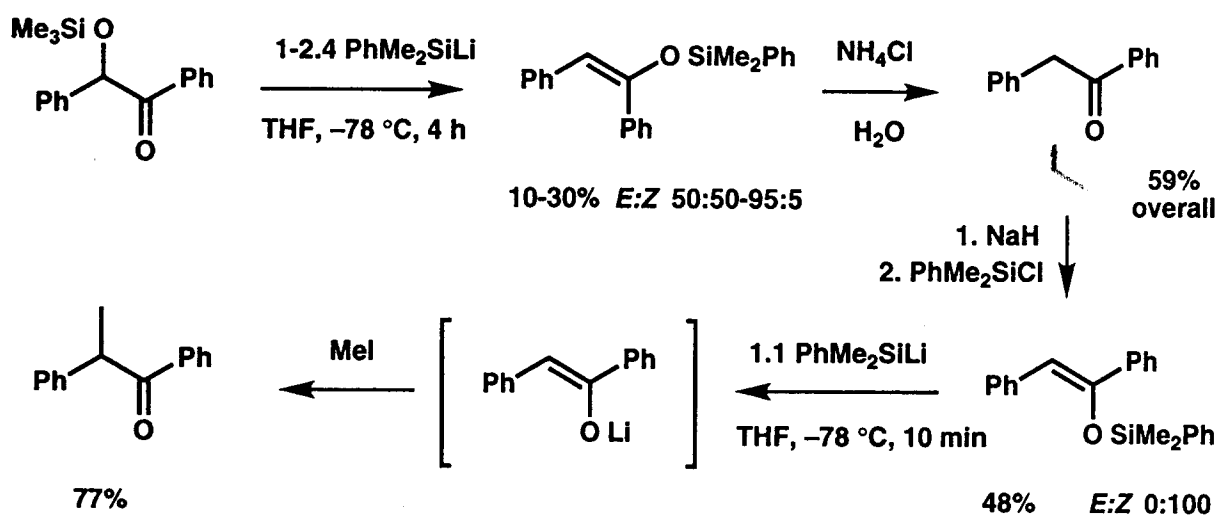
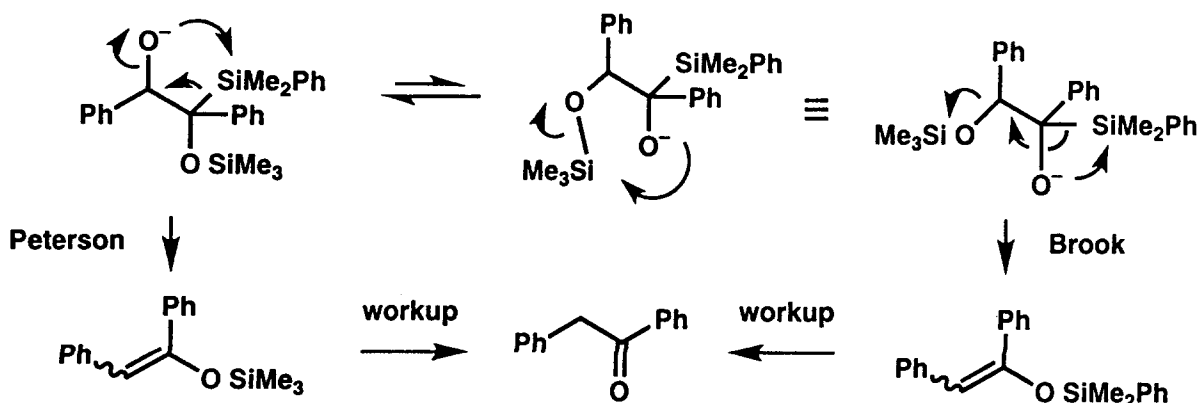
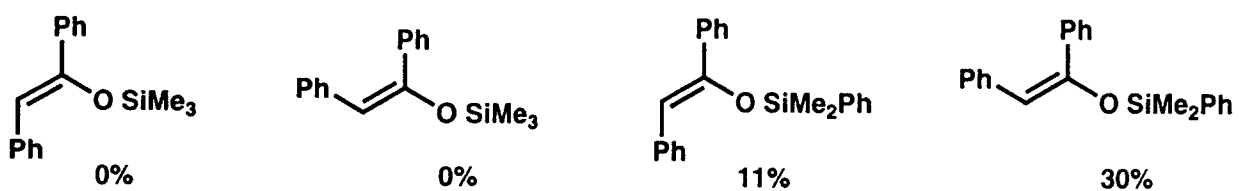
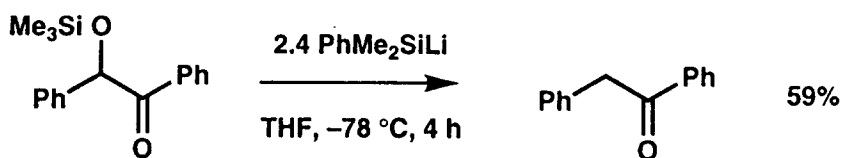
G. A. Krafft and P. T. Meinke, *J. Am. Chem. Soc.*, 1988, **110**, 8671. A. G. M. Barrett, J. M. Hill and E. W. Wallace, *J. Org. Chem.* 1992, **57**, 386.
 D. Wittenberg, T. C. Wu and H. Gilman, *J. Org. Chem.*, 1959, **24**, 1349. R. S. Roberts, unpublished.
 E. Vedejs, M. J. Arnost, J. M. Eustache and G. A. Krafft, *J. Org. Chem.*, 1982, **47**, 4384. H. J. Reich, R. C. Holtan, and C. Bolm, *J. Am. Chem. Soc.*, 1990, **112**, 5609.



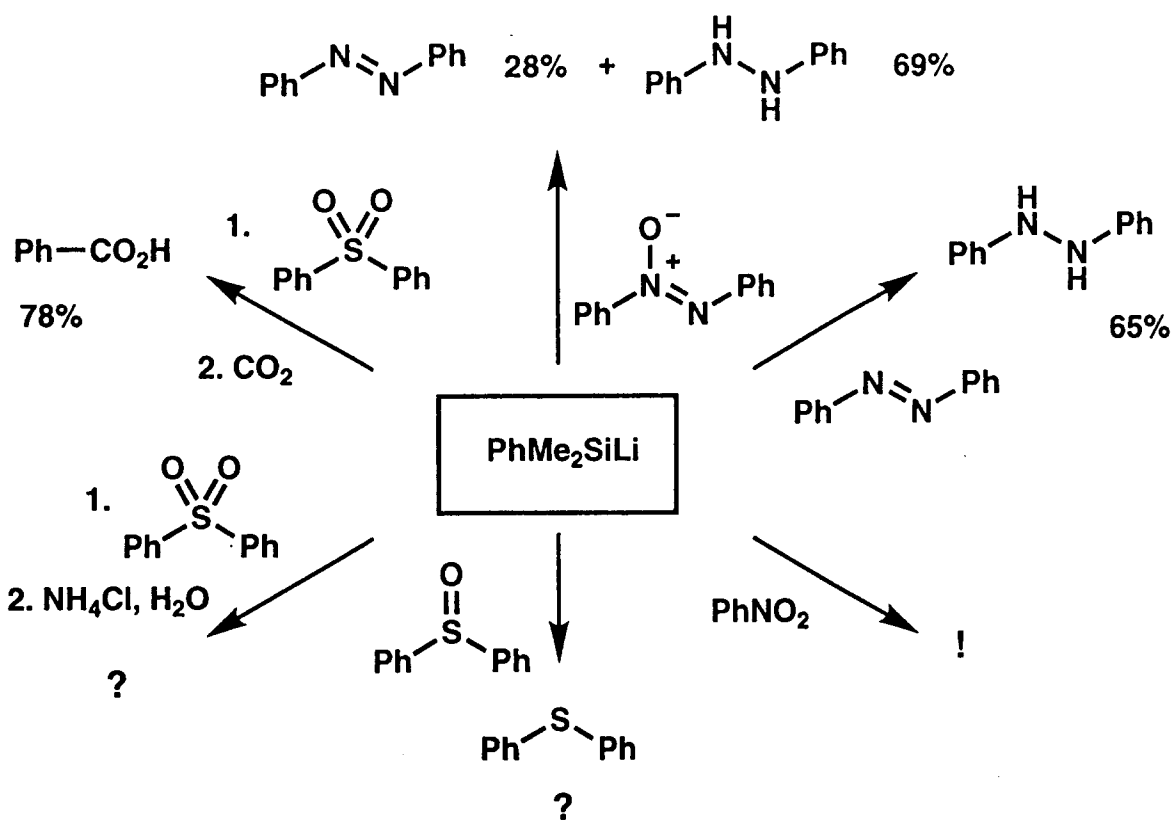


E. J. Corey, M. A. Tius and J. Das, *J. Am. Chem. Soc.*, 1980, **102**, 1743.

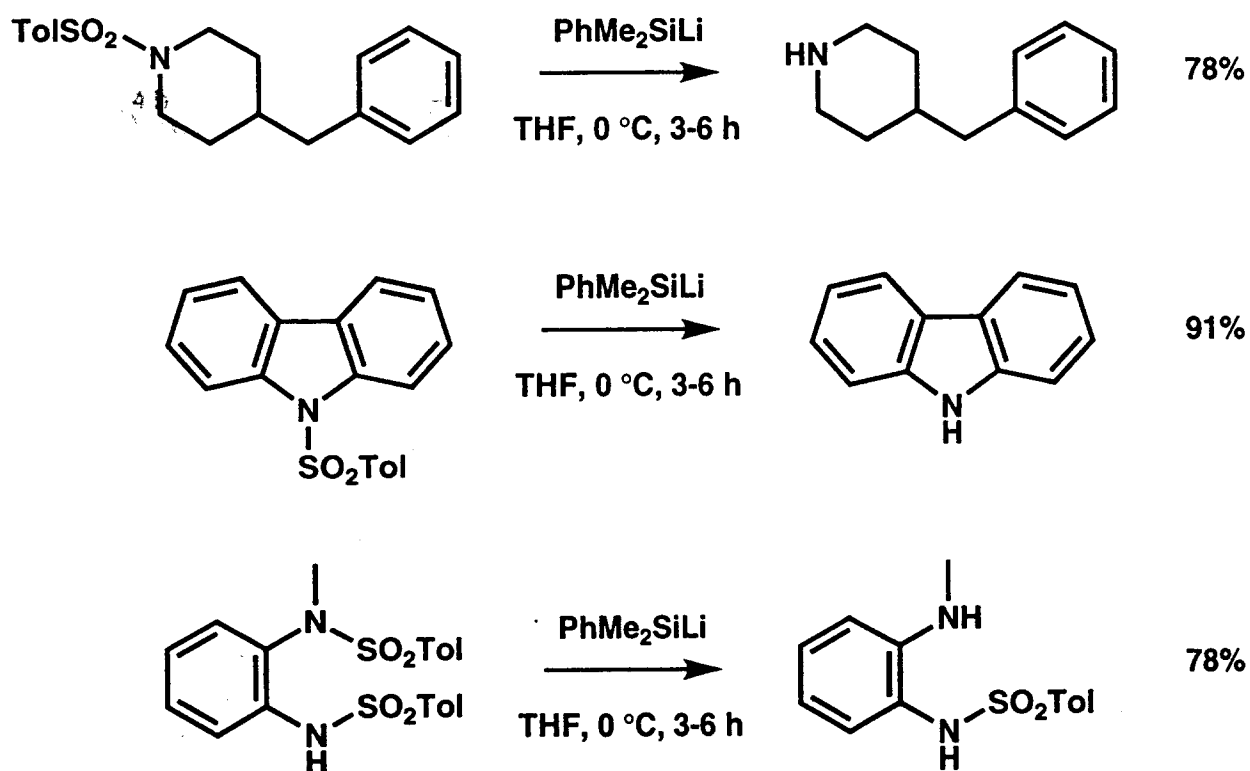


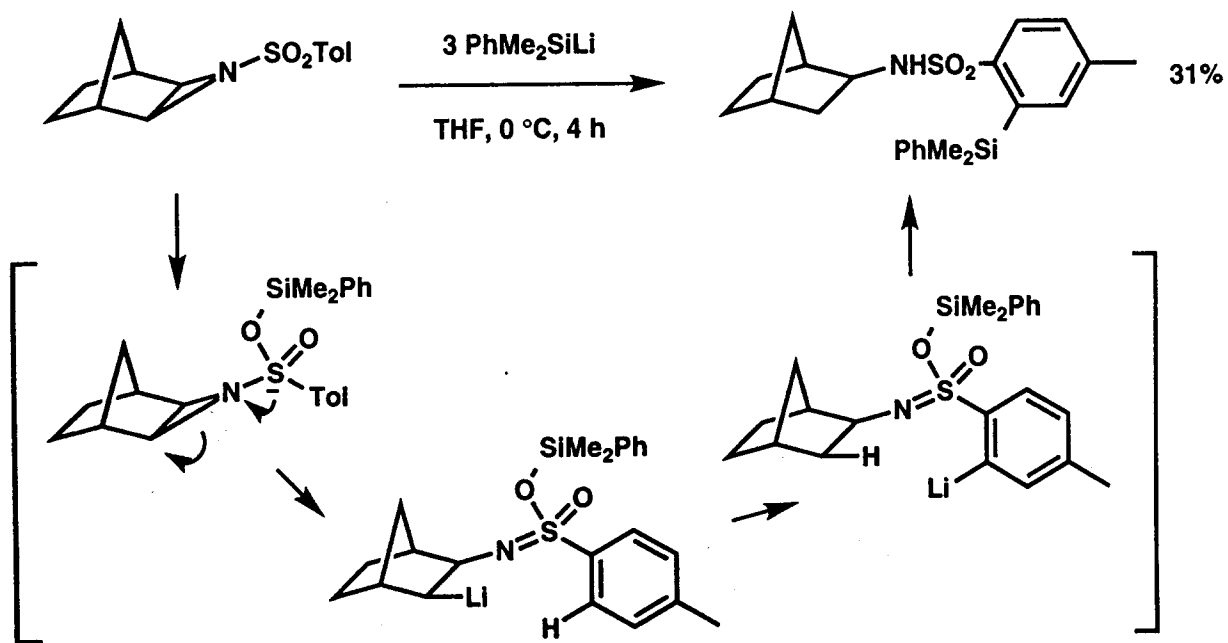
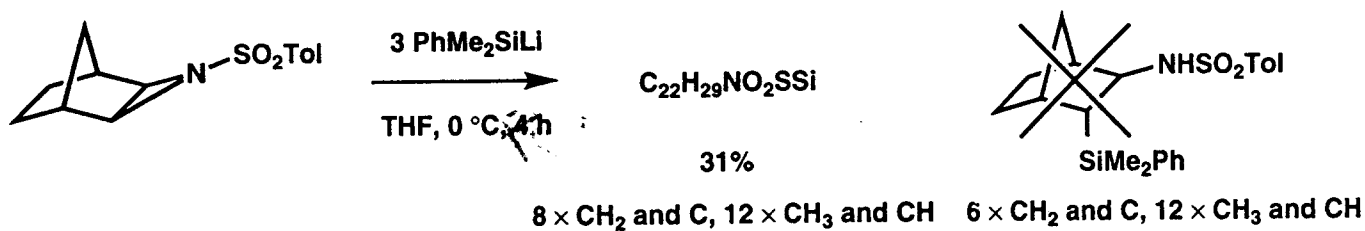
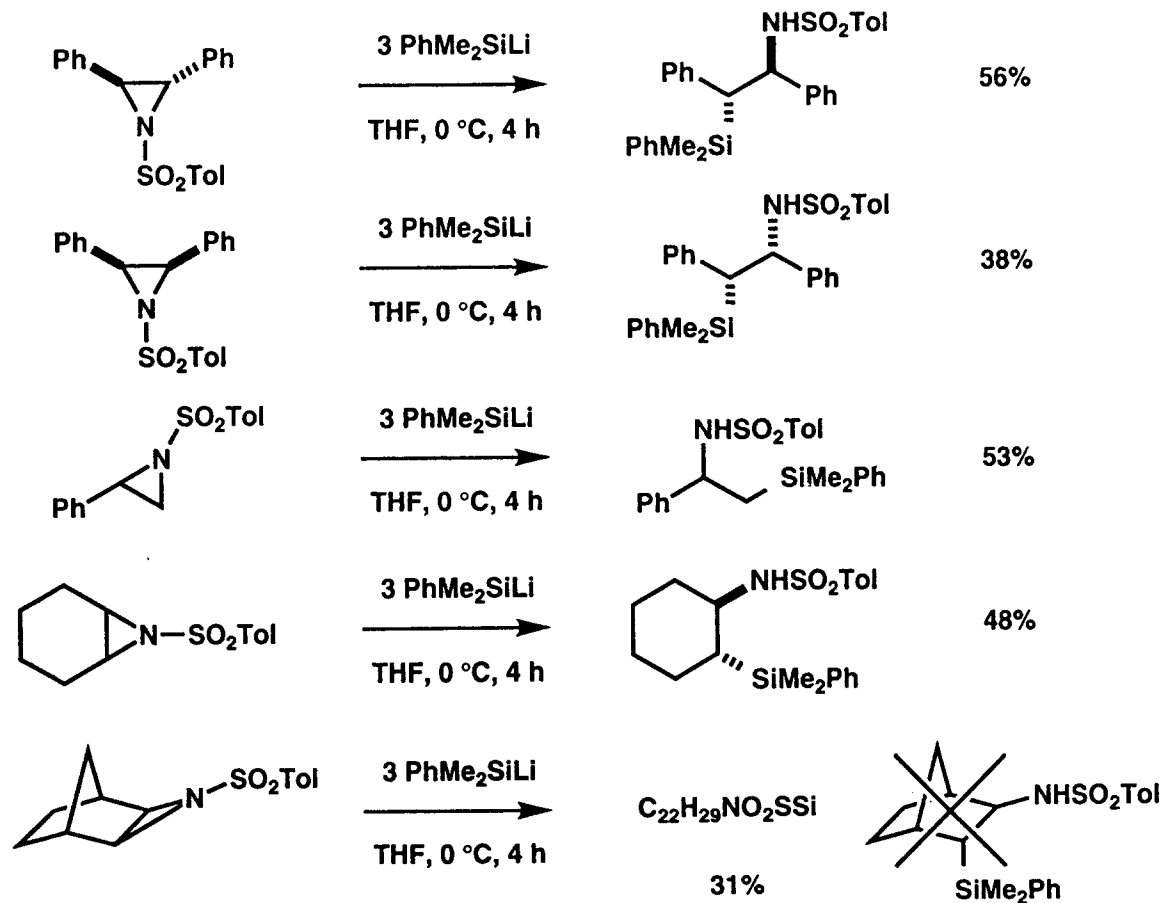


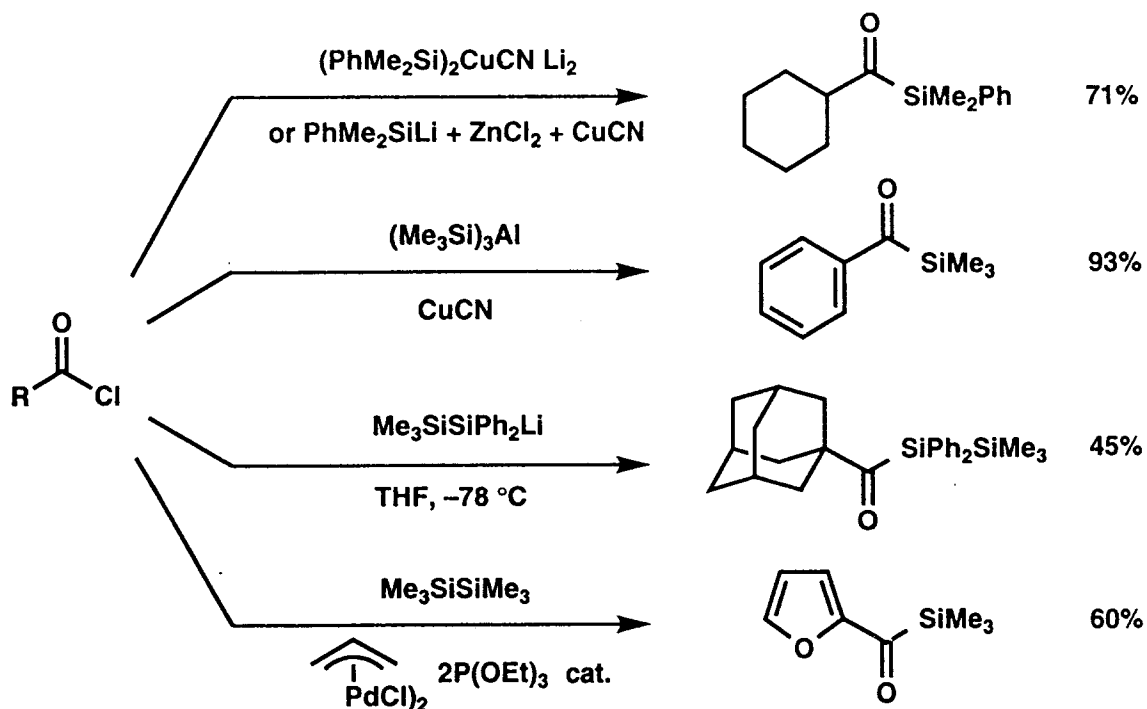
G. Stork and P. F. Hudrlik, *J. Am. Chem. Soc.*, 1968, 90, 4464.



Sarah Horswell, Anand Ranganathan and Michael Woodrow, final-year projects, Cambridge, 1994





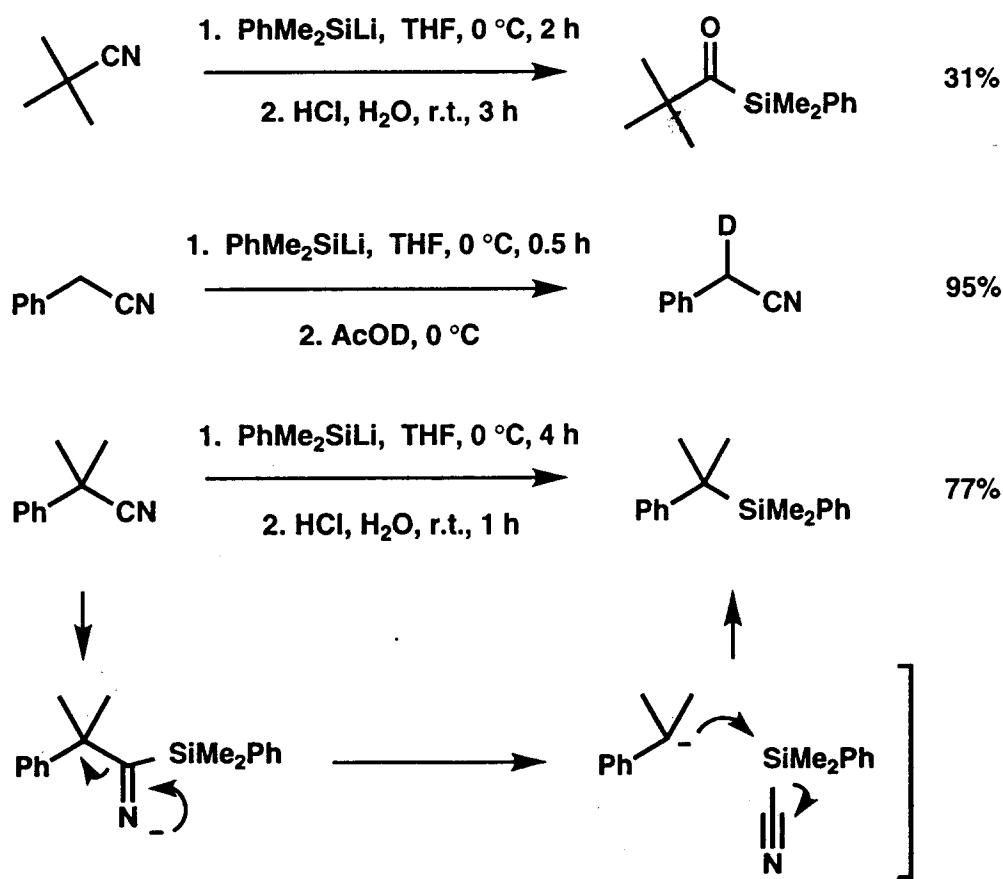


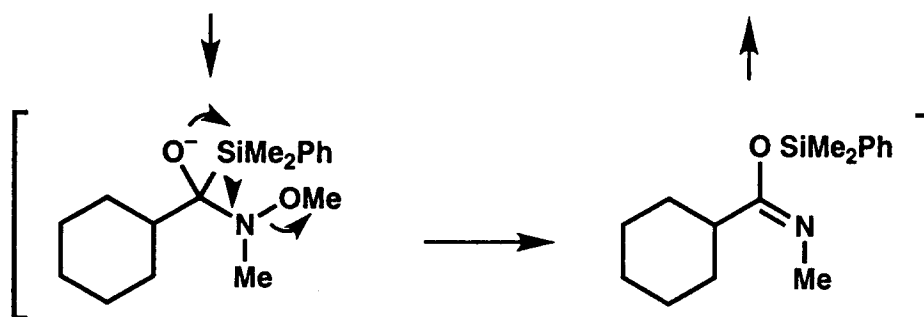
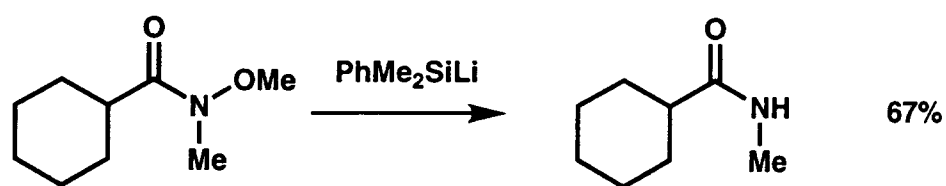
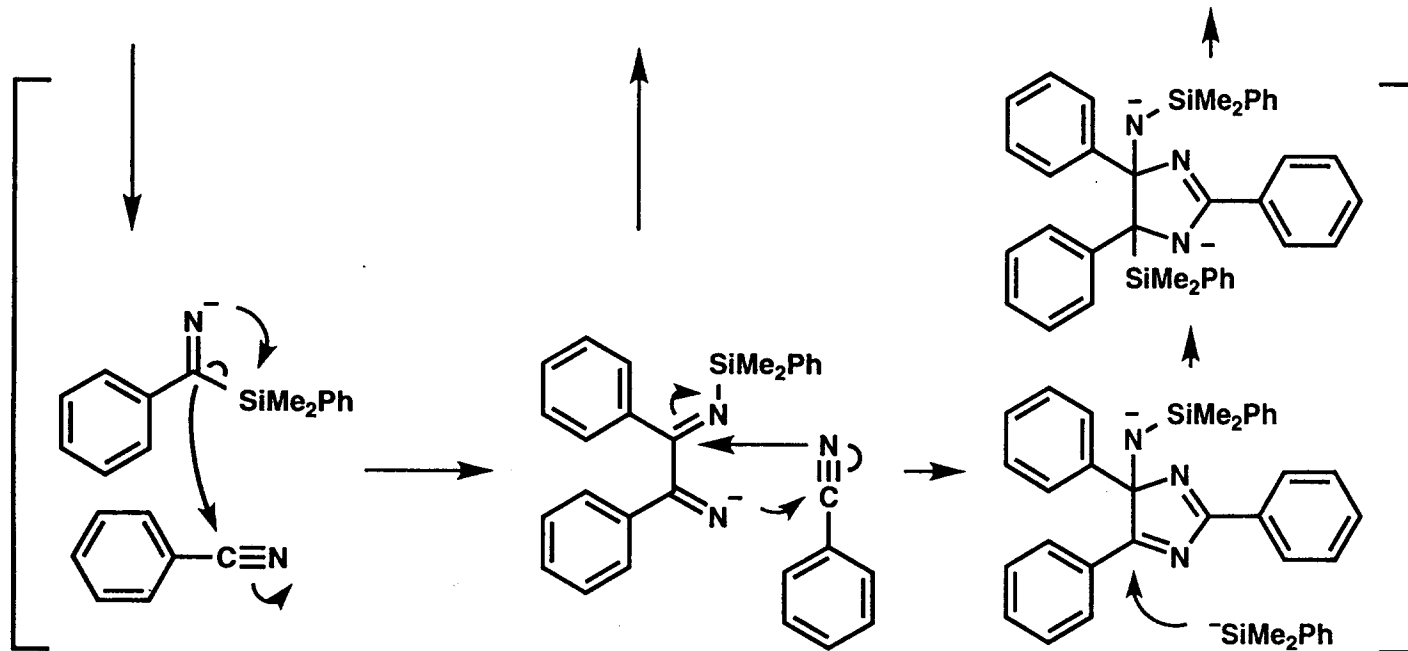
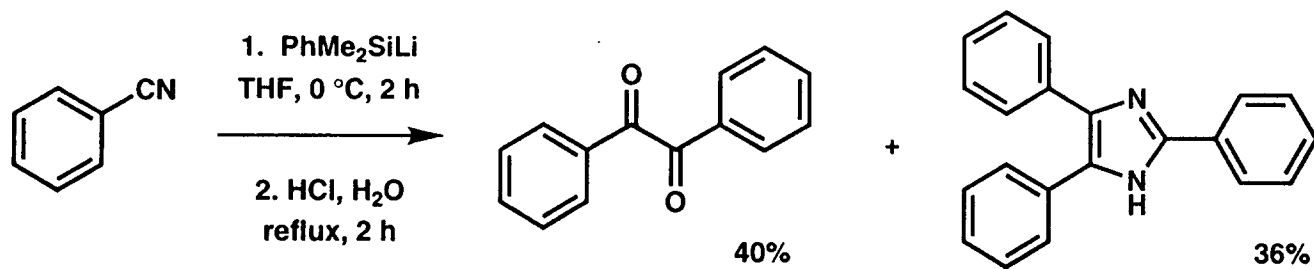
B. F. Bonini, F. Busi, R. C. de Laet, G. Mazzanti, J.-W. J. F. Thuring, P. Zani and B. Zwanenburg, *J. Chem. Soc., Perkin Trans. 1*, 1993, 1011. B. F. Bonini, M. Comes-Franchini, G. Mazzanti, U. Passamonti, A. Ricci and P. Zani, *Synthesis*, 1995, 92.

J. Kang, J. H. Lee, K. S. Kim, J. U. Jeong and C. Pyun, *Tetrahedron Lett.*, 1987, 28, 3261.

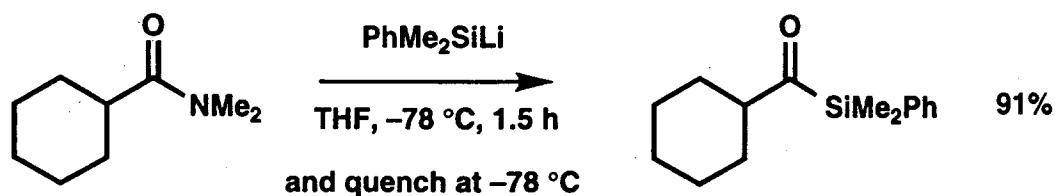
A. G. Brook, A. Baumegger and A. J. Lough, *Organometallics*, 1992, 11, 310.

K. Yamamoto, A. Hayashi, S. Suzuki and J. Tsuji, *Organometallics*, 1987, 6, 974. A. Ricci, A. Degl'Innocenti, S. Chimichi, M. Fiorenza, G. Rossini and H. J. Bestmann, *J. Org. Chem.*, 1985, 50, 130.

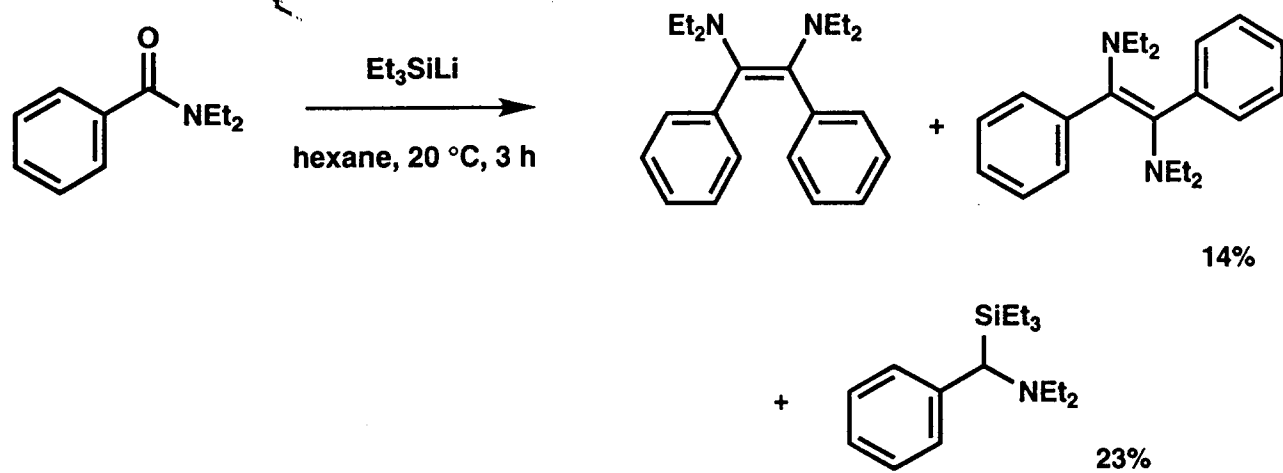
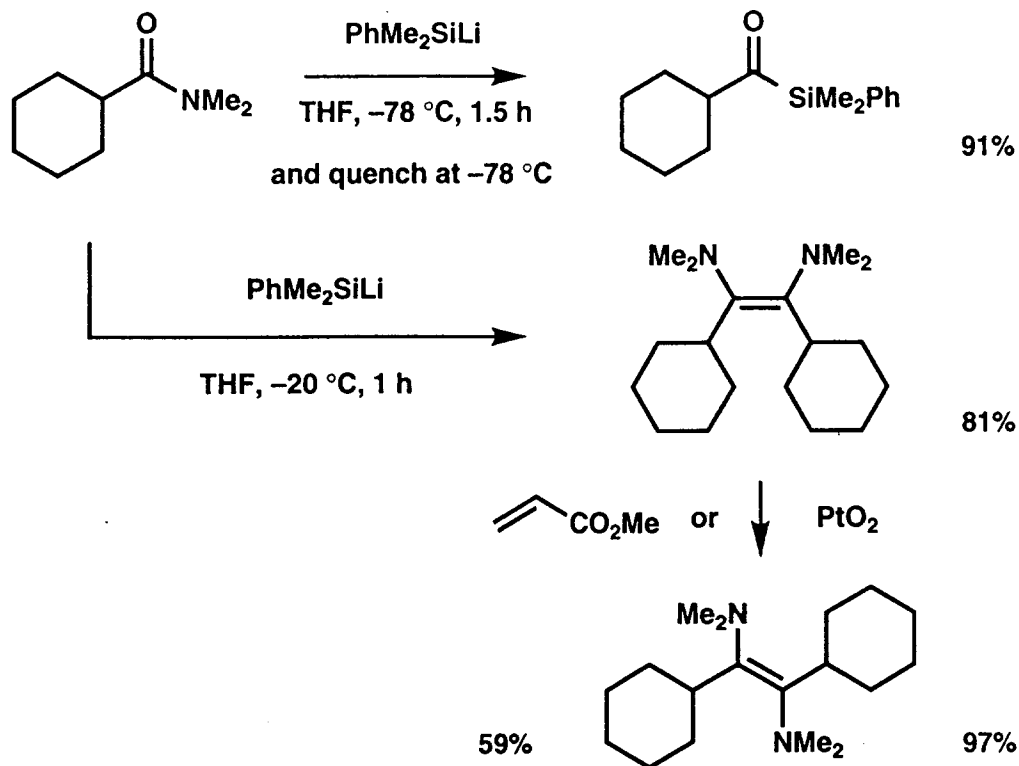


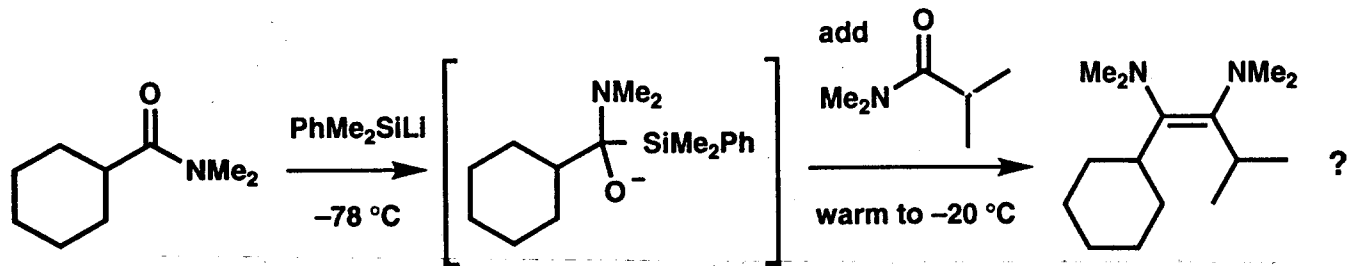
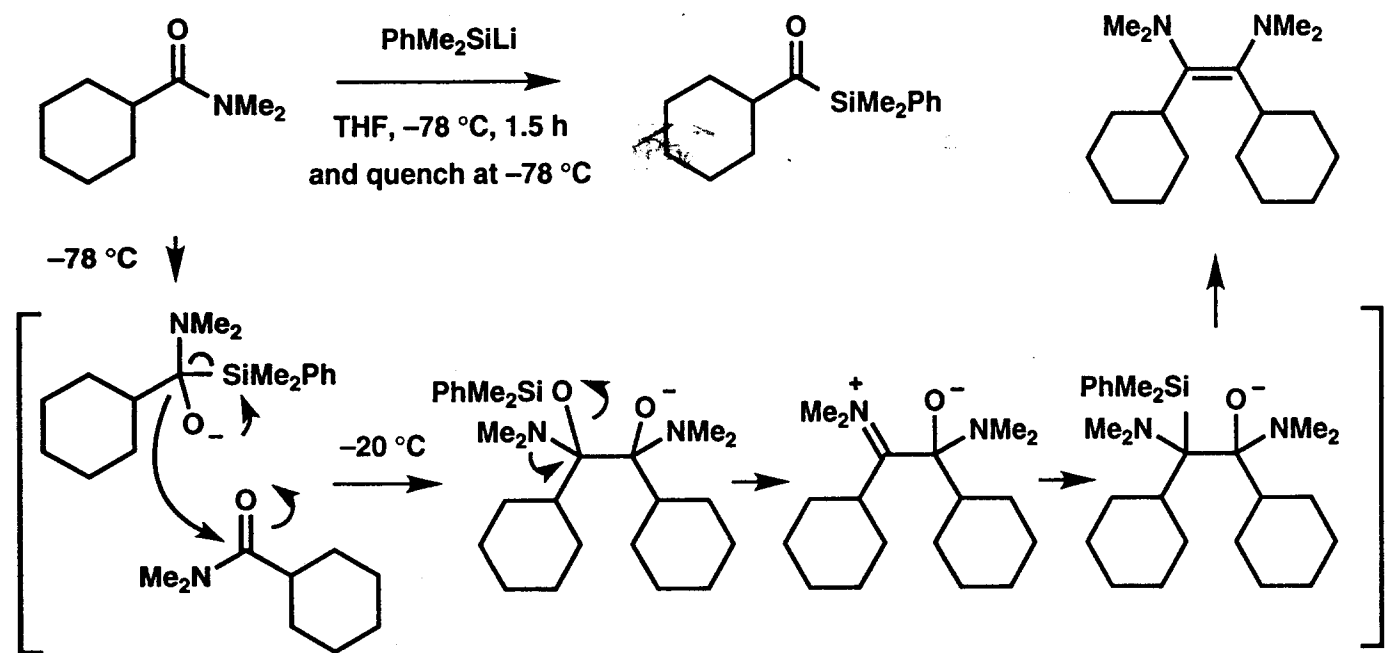
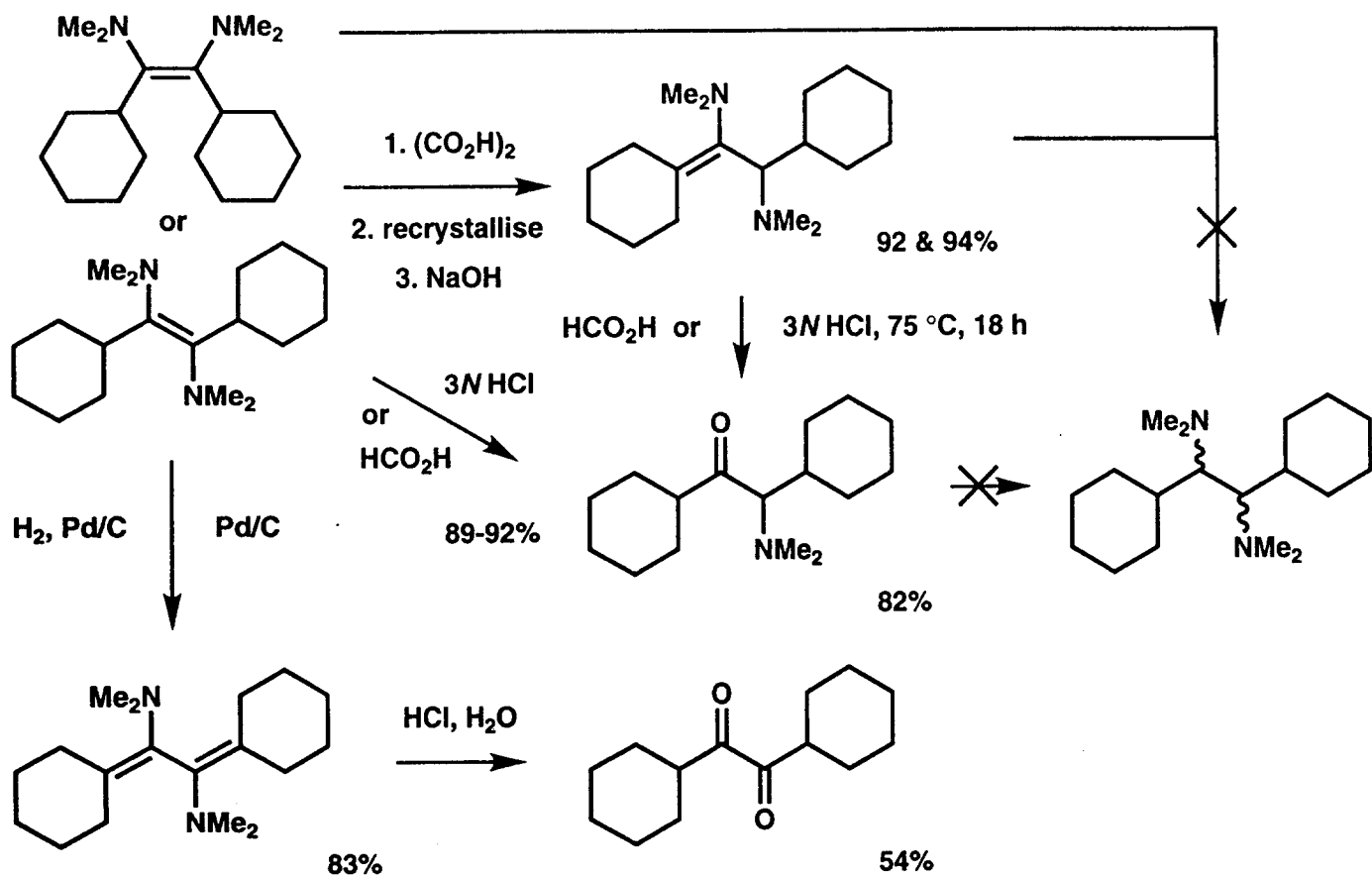


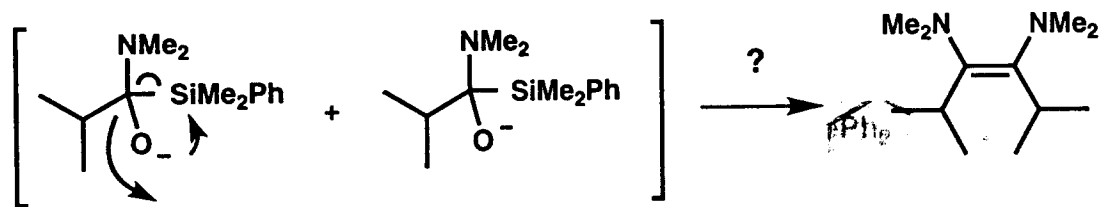
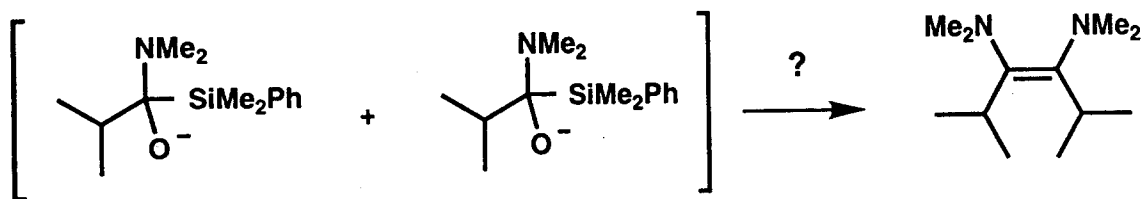
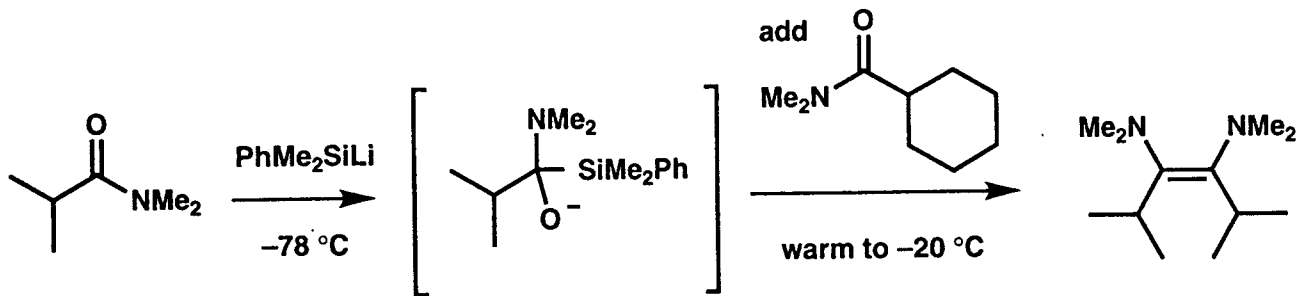
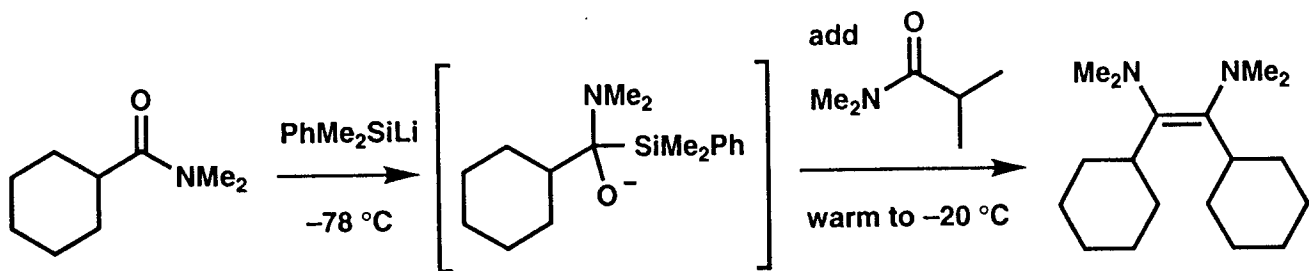
Duckhee Lee, 1996



I. Fleming and U. Ghosh, *J. Chem. Soc., Perkin Trans. 1*, 1994, 257.







the nucleophile

the electrophile ?

