



products reported previously in the dehalogenation of 1,2-dihalocyclopentenes<sup>1</sup>, the excellent yields of 2 and 3 from 1 imply that the ring cleavage is perhaps the major path of the reaction and that the intermediates would lead to intractable material if not trapped by suitable reagents such as chlorotrimethylsilane used here.

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#### Notes and References

1. Reviews: A Krebs in 'Chemistry of Acetylenes' ed. H. Viehe, Marcel Dekker, N.Y., 1969; M. Nakagawa in 'Chemistry of Carbon-Carbon Triple Bond' ed. S.Patai, Wiley, N.Y., 1978.
2. N.A. Domnin and L.I. Ukhova, Zhur. Obshchei. Khim., **21** (1951) 522; Chem. Abstr., **45** (1951) 8461; M. Mousseron and R. Jacquier, Bull Soc. Chim. France, (1950) 648; F. Moller, "Die Ozonolyse von 1,2-Dichlorcyclopenten-1", Dissertation, Karlsruhe University, F.R.G., 1974-75, p.33.
3. For such Wurtz-type coupling reactions see, G. Nagendrappa, Synthesis, (1980) 704; P. F. Hudrlik, A.K. Kulkarni, S. Jain and A. M. Hudrlik, Tetrahedron, **39** (1983) 877.
4. Typical procedure: To 1.09 g (47.4 mmol) of tiny pieces of sodium in 30 mL dry ether were added 2.98 g (27.4 mmol) of  $\text{ClSiMe}_3$  and 1.22 g (8.9 mmol) of 1. The mixture was stirred and refluxed at 50-55° (oil bath) until 1 disappeared (GC) and worked up<sup>3</sup>.
5. The compounds 2, 3 and 4 were isolated by preparative GC and identified by their IR, NMR (<sup>1</sup>H and <sup>13</sup>C), MS and C-H analysis data. Further structural evidence for 2 and 3 was derived by hydrogenating them to their saturated analogues and by an independent synthesis from 5-chloro-1-pentyne.
6. For relevant examples see, R.B. Bates and C.A. Ogle, 'Carbanion Chemistry', Springer Verlag, 1983, pp 69.
7. Similar anions have been characterised. See for example, ref.1, and F. Wudl and E. Aharon-Shalom, J.Amer.Chem.Soc., **104** (1982) 1154, and references cited therein.
8. The anion 5 or its radical precursor or cyclopentyne could be an intermediate that undergoes ring-opening. There is some circumstantial evidence for the last route but we have not yet been able to prove it.

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