

REACTIONS OF CARBENES WITH DIAZOCOMPOUNDS, V\*  
 A NEW CUMULENE SYNTHESIS

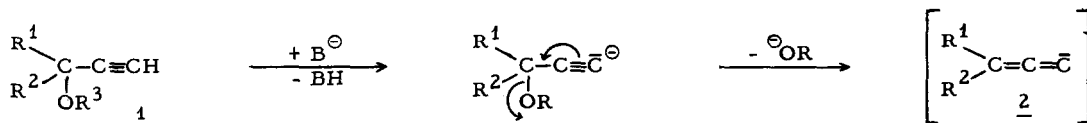
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Some years ago we found that halocarbenes react with diazoalkanes to form 1,1-dihaloethylenes (1). In the meantime this reaction has been applied to other carbenes and several diazo-compounds for the preparation of 1,1-dihaloethylenes (2), 1-halo-1-aryl-ethylenes (2), unsymmetrical azines (3), thiovinyl ethers (4), 1-halo-1-arylmercapto-ethylenes (4), bis [phenylmercapto]cyclopropanes (4), haloacetylenes (5) or dichlorovinyl dialkyl phosphates (6). Other 1,3-dipoles have so far been used only in one case (7) for the preparation of N-(dichloromethylene)-amines from azides and dichlorocarbene.

We have now extended this type of reaction to vinylidene carbenes 2 (8) which are formed from derivatives of ethynylcarbinols 1 in the presence of a base and which have been trapped by olefins to give ethylidene cyclopropanes (8).



The formation of carbene 2 in the presence of a diazocompound in an inert solvent gives rise to the synthesis of the corresponding cumulenes 3a - e.



- \* For the previous paper in this series, see ref. 4.
- \*\* In part fulfilment of the requirements for the degree of Docteur en Science Chimique of the University of Liège.

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