

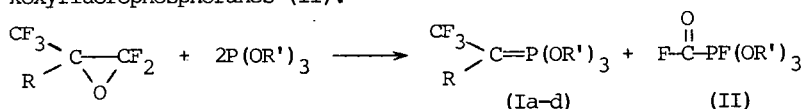
O3

NEW REACTIONS OF FLUOROEPOXIDES. CLEAVAGE BY P(III) COMPOUNDS

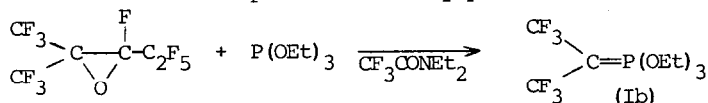
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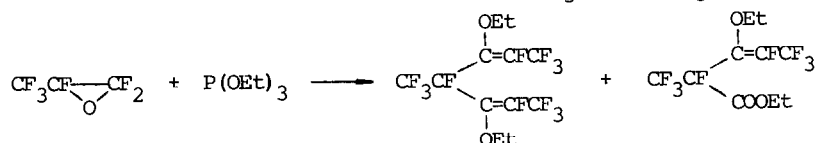
Unusual reaction of disubstituted fluoro-olefine oxides with trialkylphosphites yields trialkoxyphosphonium ylides (Ia-d) and fluorocarboniltrialkoxyluorophosphoranes (II):

Ia: R=CF₃, R'=Me. Ib: R=CF₃, R'=Et.Ic: R=COOEt, R'=Et. Id: R=PO(OMe)₂, R'=Et

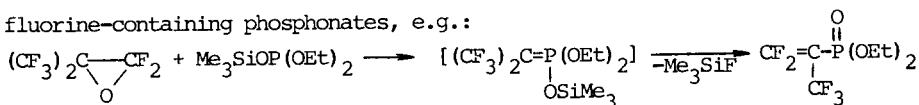
Trisubstituted perfluoro-2-methylpent-2-en oxide reacts similarly:



In the case of monosubstituted perfluoropropen oxide the products of reactions of intermediate phosphonium ylide CF₃CF=P(OEt)₃ are obtained:



Reaction of this kind can be used for the synthesis of α,β -unsaturated fluorine-containing phosphonates, e.g.:



The scope of this reaction and possible mechanism of the cleavage of fluoro-olefine oxides will be discussed.