$SF_5CF=CF_2$ AND $CF_3CF=CF_2$ IN PHOSPHORUS CHEMISTRY: A COMPARISON

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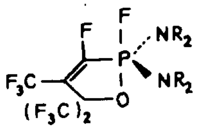
Silylated phosphites, $(R^1O)_2POSiMe_3$ and the title olefins react to give phosphonates which may furnish the respective acids upon hydrolysis. The phosphonium salt $[SF_5CF=CFPMe_3]^+BF_4^-$ can be used as precursor for (E)-$SF_5CF=CFI$. The CF_3-analogue (Z)-$CF_3CF=CFI$ is easily converted to the Grignard reagent which gives the possibility to bind the $CF_3CF=CF$ unit to phosphorus, e.g. resulting in the formation of (Z)-$CF_3CF=CFP(OR^2)_2$and (Z)-$CF_3CF=CFP(NR^2{}_2)_2$. The latter diamides add hexafluoracetone in a 1:1 fashion to form monocyclic fluorophosphoranes **1** via a 1,3 fluoride shift reaction. By modification of **1** other phosphoranes and phosphonates may be obtained. The reactions of $SF_5CH=CF_2$ and $CF_3CH=CF_2$ are discussed, too.



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