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SOME REACTIONS OF TRIFLUOROVINYLSULPHONYL FLUORIDE

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Trifluorovinylsulphonyl fluoride ($\text{CF}_2\text{:CF.SO}_2\text{F}$, 1) is a useful reactive intermediate for the synthesis of a range of compounds. It reacts with primary aromatic amines to give a variety of acyclic nitrogen compounds, whereas 2-amino-N-heterocyclic compounds react with (1) to give thiadiazine 2,2-dioxides. Trifluorovinylsulphonyl fluoride also provides a route to the disulphonyldifluoride $\text{CHF(SO}_2\text{F)}_2$, and its sensitivity to nucleophilic attack is demonstrated with fluoride ion, ethyl carbazate, phenol, 2-thiopyridine, pyridine-N-oxide, etc.

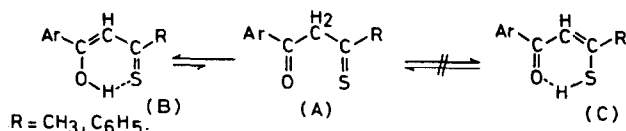
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SYNTHETIC AND SPECTROSCOPIC STUDIES OF SOME NEW POLYFLUORINATED MONOTHIO-1,3-DIKETONES

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In view of the growing interest in the chemistry of fluorinated 1,3-thioxoketones in recent years due to their superior chelating behaviour, some new polyfluorinated monothio-1,3-diketones have been synthesized from the corresponding polyfluorinated acetophenones and appropriate thionic esters in the presence of sodamide.



Ar = 3,4-Di-F, 2,4,6-Tri-F, 2,3,4,5,6-Pento-F.

These compounds exist entirely in the hydrogen bonded enol form, $\text{ArC}(\text{OH})=\text{CHCSR}$ (B) as evidenced by i.r. spectra which will be discussed in detail. ^1H n.m.r. data support these observations. There are no methylene proton signals (in the region δ 7.5-6.8 ppm and $=\text{COH} \cdots \text{S}=\text{C}$ signals in the δ 15.0-13.0 ppm region. The mass spectra of these compounds exhibited weakly populated M^+ ion and in all cases, base peak is due to the $\text{Ar}-\text{C}\equiv\text{O}^+$ ion.