REACTION OF PERFLUOROALKYLCARBANIONS WITH THIOCYANATES

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A nucleophile can attack a thiocyanate either on the sulfur atom or on the cyanide group. In the former case the product is a sulfide, in the later one a nitrile.

Our goal was to study this reaction with perfluoroalkyl carbanions. Linear, ramified and cyclic magnesium or potassium anions were examined. It appears that, independently of the nature of the R group (CH_3 , $C_6H_5CH_2$, C_6H_5), attack occurs on the sulfur atom leading only to the formation of sulfides.



In the case of $R=C_6H_5CH_2$, cleavage of the sulfide by chlorine gives mainly the corresponding perfluoroalkylsulfenyl chloride.