REACTIONS OF PERFLUOROALKANE CARBOXYLIC ACID HYDRAZIDES WITH IMINOCOMPOUNDS

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When investigating the interaction between perfluoroacylhydrazines (Ia) and 1-perfluoroacyl-2-alkyl(phenyl)hydrazines (Ib-d) on one hand and amidines on the other hand a difference in the reaction course was found.

 $R_{F}CONHNHR + R'CNH_{2} - R_{F}CON=CR' (II)$ NH - NH $R_{F}CONHNHCR' - R_{F}-C_{N}-C-R'$ $(Ia-d) (III) - R_{F}-C_{N}-C-R'$ (IV)

R_F = CF₃, C₂F₅, C₃F₇, C₄F₉, C₆F₁₃; R = H (a), CH₃(b), i-CH₇(c), C₆H₅(d); R' = CH₃, C₆H₅. The reaction of (Ib-d) with acetamidine and benzamidine leads to N-perfluoroacylamidines (II) in 80-95% yield, whereas (Ia) react with amidines to give N-perfluoroacylamiderazones (III) which transform to the corresponding 3(5)-perfluoroalkyl-5(3)-methyl(phenyl)-1,2,4-triazoles (IV). Compounds (Ib) interact with S-methylisothiourea to afford N-methyl-N'-perfluoroacylaminoguanidines which, when heated in vacuum, undergo cyclization and form 1-methyl-3-perfluoroalkyl-5-amino-1,2,4-triazoles.

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OLIGOMERS OF F-ALKENES, -CYCLOALKENES AND RELATED COMPOUNDS

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Some aspects of the chemistry of oligomers and related internal F-alkenes will be described, including:

(a) Effect of strain on reactivity, by comparing systems (1) and (2)



(b) Reactions with carbon nucleophiles, leading to heterocyclic compounds as products.