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ADVENTURES WITH AZIDES OF THE FLUOROCARBON CLASS

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Mechanistic and synthetic highlights of our studies during the past twenty years on azides derived from fluorocarbon systems {alkenes (e.g. $CF_3CF{=}CFN_3$), aza-alkenes and -cycloalkenes [e.g. $\overline{CF_2(CF_2)_2C(CF_3){=}NC}(CF_3)N_3$], arenes (e.g. $C_6F_5N_3$), and heteroarenes (e.g. $4\text{-}N_3.C_5F_4N$)} will be discussed with emphasis on recent results bearing on the synthesis of novel seven-membered N-heterocycles.

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FLUOROMONOMERS AND OTHER COMPOUNDS FROM FLUOROOLEFINS

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Three basic fluoroolefins, tetrafluoroethylene, hexafluoropropene and octafluoroisobutene are available from difluorocarbene (pyrolysis of chlorodifluoromethane). They have been used to prepare a wide variety of materials with unusual properties and chemistry. These include polymerizable monomers and other compounds containing various functional groups. Discussion will include the chemistry of some epoxides, perfluoro-2-methylene-4-methyl-1,3-dioxolane, perfluoroacrylonitrile, 2,3,3-trifluorocyclobutene-1-carbonitrile, perfluoroallyl fluorosulfate, fluorosultones and fluorosulfides.