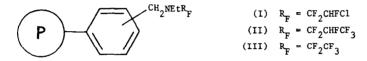
# DEVELOPMENT OF POLYMERIC ANALOGUES OF THE YAROVENKO REAGENT

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The Yarovenko reagent,  $\text{Et}_2\text{NCF}_2\text{CHFC1}$ , is used extensively to convert alcohols into monofluorides (ROH +  $\text{Et}_2\text{NCF}_2\text{CHFC1}$   $\longrightarrow$  RF +  $\text{Et}_2\text{NCOCHFC1}$  + HF), the procedure being 'one of the simplest, most convenient, and safest fluorination techniques'. Despite this,  $\text{Et}_2\text{NCF}_2\text{CHFC1}$  is not available commercially owing to its short shelf-life. We aim to circumnavigate this problem by developing an acceptable polymeric version of the reagent or of an analogous fluoroalkylamine (FAR). Work to-date on the synthesis and use of PFARS (I)-(III) will be described.



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#### ADDITION OF HALOGENS TO 3-FLUORO-1-HEXYNE

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A few years ago we reported on the addition of bromine chloride (BrCl) to 1-hexene and 1-hexyne. 1-hexyne reacts with BrCl to give Markownikoff and  $\underline{anti}$ -Markownikoff projects  $\underline{la}$  and  $\underline{2a}$  in a 90:10 ratio respectively.

Reaction of 3-fluoro-l-hexyne with bromine and chlorine give cis- and trans-l,2-dihalo-l-hexenes. Addition of BrCl to 3-fluoro-l-hexyne gives a major project which is tentatively assigned the structure 2b. Thus reaction of BrCl with l-hexyne and 3-fluoro-l-hexyne give intermediates 3 and 4 respectively. A possible free radical process or radical competing pathway for the reactions of halogens with 3-fluoro-l-hexyne is also considered.