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SYNTHESIS OF FLUOROALKENIL COMPOUNDS VIA PERFLUOROALKEN-2-YL FLUOROSULFATES

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Perfluoroalken-2-yl fluorosulfates possess dual reactivity towards nucleophilic agents: 'mild' nucleophiles, e.g. potassium iodide or potassium perfluoroalkoxides attack carbon atom yielding corresponding unsaturated compounds:

Perfluorobenzyl fluorosulfates react in the same way.

The attack of 'hard' nuclephiles, e.g. alkali metals fluorides is directed at sulfur atom, that leads to carbonyl compounds:

The salts of perfluoroalkencarboxylic asids obtained by hydrolysis of acyl fluorides were decarboxylated to form various types of unsaturated compounds:

$$(R_f^{-CF=CF-COO-})_2^{Hg} \xrightarrow{\Delta} (R_f^{-CF=CF-})_2^{Hg}$$