OLIGOMERIZATION OF FLUORINATED 2-BUTENAMIDES AND 2-BUTENOATES BY SODIUM TETRAHYDROBORATE

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Fluorinated N,N-dialkyl-2-butenamides (I) are selectively reduced at 3-position by means of the sodium tetrahydroborate in 1,2-dimethoxyethane giving butenamides II that are further reduced forming both butanamides III and corresponding diamides of pentanedioic acid (IV).

Ethyl-2-alkenoates (V) react similarly with sodium tetrahydroborate in aprotic solvents (DME, DG, THF) forming alkanoates VI, dimers VII and oligomers VIII.