

## HOMOCHIRAL FLUORINATED TETRAHYDROFURANS BY RADICAL CYCLIZATION

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We have found that some fluoro-halomethyl *p*-tolylsulphinylmethyl ketones (1) can be generated from the lithium derivative of methyl *p*-tolylsulphoxide and esters of polyhalogenated acetic acids. Stereospecific transformations of ketones 1 to the corresponding secondary alcohols, *p*-tolylsulphinyl substituted (2,3) and *p*-tolylsulphenyl substituted (4,5), by hydride reagents and sulphur deoxygenation, have been achieved with fair to high diastereoselection.

Single diastereoisomers obtained in pure form by chromatography or crystallization have been transformed into the allyl ethers. Intramolecular C-C bond formation through radicals generated by tributyltin hydride halogen abstraction led to chiral fluorinated tetrahydrofurans. (e.g. 6  $\rightarrow$  7, 8).

Asymmetric induction in the cyclization of the sulphinyl and sulphenyl substituted allyl ethers 6 will be discussed.

