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POLYFLUORINATED DIBENZ[b,f][1,4]OXAZEPINES – SYNTHESES AND PROPERTIES

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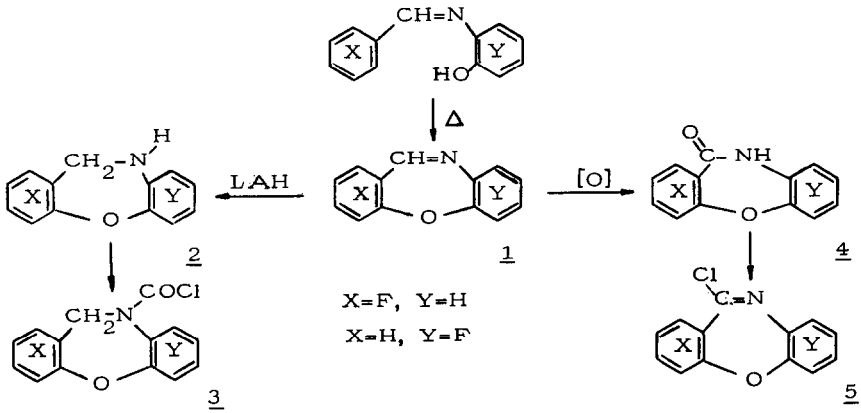
Dibenz [b,f][1,4]oxazepines exhibit a variety of biological activities most of them being on the central nervous system. An approach to their polyfluorinated analogues, based on the intramolecular dehydrofluorination of polyfluoro-o-hydroxybenzylidenanilines, is presented.



The interaction of polyfluorodibenz [b,f][1,4]oxazepines (1) with nucleophiles results in the substitution of para-fluorine. LAH reduction of (1) leads to 10,11-dihydrodibenzoxazepines (2) which can be converted to derivatives of the type (3). Dibenzoxazepinones (4) is obtained from compounds (1) and further transformed by the $POCl_3$ to 11-chlorodibenz [b,f][1,4]oxazepines (5).

Compounds (2-5) have been used as intermediates in the syntheses of polyfluorinated analogues of such psychotropic agents as Sintamil, loxapine and others.