

SELECTIVE FLUORODENITRATION OF NITROAROMATICS

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The reactions of a number of nitro and chloronitroaromatics with F^- have been studied under various conditions. Generally fluorodenitration can be a viable route to fluoroaromatics and the nucleophilic fluorination of chloronitrobenzenes shows a strong bias towards fluorodenitration rather than halogen exchange. Fluoro-desulphonylation, in the case of $ArSO_2CF_3$ substrates, and other side-reactions can prove to be a problem especially at higher temperatures. Generally the use of KF in DMSO with $Ph_4P^+Br^-$ as the phase transfer catalyst gives good results although more forcing conditions, with the associated risk of side-product formation, may be necessary for less active substrates. The synthesis of some especially important fluoroaromatic intermediates using fluorodenitration will be described.