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ELECTROPHILIC FLUORINATING AGENTS OF THE N–F CLASS

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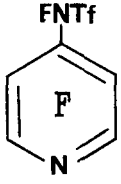
Electrophilic fluorinating agents of the N-fluorosulphonamide, N-fluoroquinuclidinium, and perfluoro-N-fluoroamine classes (e.g. **1**, **2**, and **3** respectively) have been subjected to investigation.

Perfluoro-[N-fluoro-N-(4-pyridyl)methanesulphonamide] (**1**) synthesised via direct fluorination of the sodium salt 4-(CF_3SO_2NNa)-C_5F_4N, efficiently converts benzene to fluorobenzene at 60 °C and anisole at 20 °C to o-/p-fluoroanisole.

Several N-fluoroquinuclidinium salts (**2**, $X^- = F^-$, $CF_3SO_3^-$, BF_4^-, $CF_3CO_2^-$) have been synthesised, and their efficiencies for the fluorination of carbanion sources compared. Salts other than the fluoride are non-hygroscopic and therefore much easier to handle.

New fluorinations, e.g. $PhSO_2Na \rightarrow PhSO_2F$, involving perfluoro-N-fluoropiperidine (**3**) will be reported.



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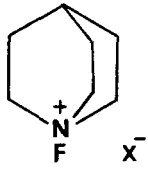

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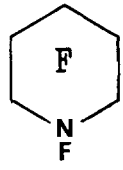

(3)