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Reaction of Phenylhydrazines with Arenes in the Presence of Aluminium Trichloride

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Phenylnitrenium ions were generated from phenylhydrazines by treatment with AlCl_3 . Reaction of a phenylnitrenium ion with arenes results in both aromatic *N*-substitution and *C*-substitution. In contrast, an *N*-methylphenylnitrenium ion undergoes exclusively aromatic *C*-substitution. Reaction of a phenylnitrenium ion with arenes present only in slight excess produced phenylaminated products in moderate to good yields.

