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Synthesis and chemical transformations of tertiary aminoanthraquinones

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Abstract

Aminoanthraquinones with tertiary amino group in α-position of the nucleus can be obtained by nucleophilic substitution of halogen atom (preferably fluorine atom) in the α-galogenoantra-quinones to an acyclic or cyclic dialkylamino group. Obtaining these compounds by *N*-alkylation of α-amino or mono-alkylaminoanthraquinones is unpromising. Influenced by her neighbor-carbonyl group the tertiary amine group in α-position of anthraquinone nucleus acquires an increased chemical activity (*peri*-effect), which manifests itself in the propensity to dezalkilation with the formation of monoalkylamine derivative, as well as the ability to intramolecular cyclization with the closure of peri-condensed nitrogen-containing heterocycle (1,3-oxazine, pyrrole).