1.2 Synthesis of 2-chloro-3-formylquinolines and its utilities

2-Chloro-3-formylquinolines have gained a prominent position as they are the key intermediates for further [b]annelation of a wide variety of rings and for various functional group interconversions. They are used to derive some important nitrogen heterocycles on various occasions. A fair review of its synthesis, appeared recently, and its utilities towards the construction of various heterocyclic systems portrayed proves its importance in the field of nitrogen heterocycles.

Cohn et al. first reported the synthesis of 2-chloro-3-formylquinolines (39). The reaction sequence involves the addition of acetanilide to the solution of N,N-dimethylformamide and phosphorus oxychloride at 0 °C and after 5 minutes the solution was heated under reflux for 17 hours. The reaction mixture was then poured into crushed ice and the solid 2-chloro-3-formylquinoline (39) was filtered and dried.

Recently, Rajanna et al. synthesized 2-chloro-3-formylquinolines (39) using micellar media by Vilsmeier-Haack cyclization.

Microwave assisted synthesis and biological activity studies of some 7/9-substituted-4-(3-alkyl/aryl)-5,6-dihydro-s-triazolo[3,4-b][1,3,4]thiazol-6-yl-tetrazolo[1,5-a]quinolines (125) was proposed by Gupta et al.
Rajendran et al\textsuperscript{144} synthesized 1,2,3,4-tetrahydrodibenzo[6,\textgreek{g}][1,8]naphthyridines (127) from 2-chloro-3-formylquinolines (39a).

Rajendran et al\textsuperscript{144} synthesized 1,2,3,4-tetrahydrodibenzo[6,\textgreek{g}][1,8]naphthyridines (127) from 2-chloro-3-formylquinolines (39a).

3-Aryl-2-(2-chloro-7-methoxyquinolin-3-yl)-4-thiazolidinones (129) was synthesized and biologically evaluated by Khunt et al\textsuperscript{145}