

One-pot synthesis of 2, 3-bis-(4-hydroxy-2-oxo-1, 2-dihydroquinolin-3-yl) succinates and arylmethylene-bis-3, 3'-quinoline-2-ones

Abstract

In this investigation an efficient synthesis of 2,3-bis-(4-hydroxy-2-oxo-1,2-dihydroquinolin-3-yl)succinic acid derivatives was achieved by one-pot reaction of one equivalent of aromatic amines with two equivalents of diethyl malonate in diphenyl ether and catalyzed with triethylamine. In case of applying the previous condition with aromatic amines and diethyl malonate in a ratio of 2:1, no quinolone structure was obtained, whereas N^1, N^3 -bis(4-bromophenyl)malonamide, as an example, was obtained in 95% yield. Under the same previous condition, arylmethylene-bis-3,3'-quinoline-2-ones were in one pot synthesized via the reaction of equal equivalents of aromatic amines and diethyl malonate together with half equivalent of the corresponding aromatic aldehydes. The structure of the obtained compounds was proved by IR, NMR and mass spectra and X-ray structure analyses