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Poster Presentation

Synthesis of Substituted 1,3-Tropolones on the Basis of Sterically Hindered 1,2-Benzoquinones

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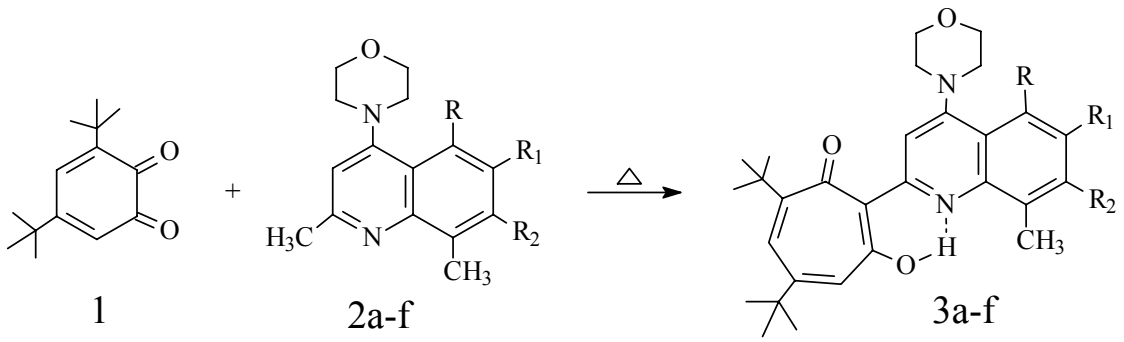
A novel unusual one-step method of the synthesis of 2-(quinolil-2')-substituted 1,3-tropolones on the basis of 3,5-di(*tret*-butyl)-1,2-benzoquinone **1** and 2-methyl-substituted quinolines **2** has been developed (Scheme 1).

Scheme 1.



1 2a-f 3a-f

a: R=R_1=R_2=H, **b:** R=R_2=H, R_1=CH_3, **c:** R=R_1=H, R_2=CH_3, **d:** R=NO_2, R_1=R_2=H, **e:** R=NO_2, R_1=CH_3, R_2=H, **f:** R=NO_2, R_1=H, R_2=CH_3

Compounds **3a-f** were characterized by 'H NMR and IR spectroscopy and mass spectrometry. The hydroxyl group of the seven-membered ring is H-bonded to the quinoline nitrogen, which explains the unusually high downfield chemical shifts (18-19 ppm) of the chelated hydroxyl protons of **3a-f**.

The above reactions are expected to open a way to the preparation of a wide variety of 2-substituted 1,3-tropolones.

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