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Poster Presentation

Synthesis of 3-Arylisocoumarins

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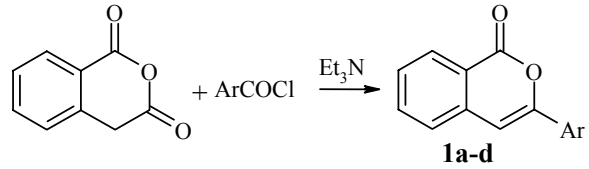
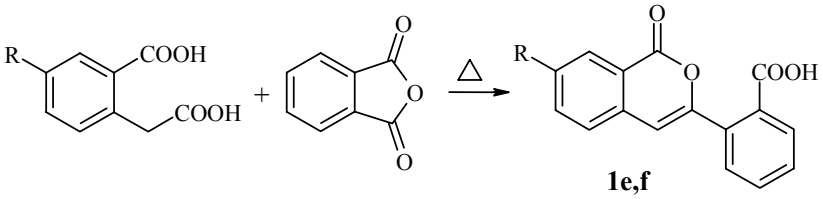
Isocoumarins, according to literature dates, are a class of naturally occurring lactones which display a wide range of biologycal activity. But there are no convenient methods for synthesis of substituted isocoumarins, and studing of their chemical, spectral and biological properties is not sufficient. 3-Arylisocoumarins were choosed by us as model compounds for elaboration of preparation methods and for studing properties of isocoumarin system with aromatic substituents.

3-Arylisocoumarins **1a-d** were prepared by cyclization of homophtalic anhydride and chloroanhydride of aromatic acids. 3-(2-Carboxyphenyl)isocoumarins **1e,f** were prepared by cyclization of homophtalic acids and phtalic anhydride at fusion.



1a-d

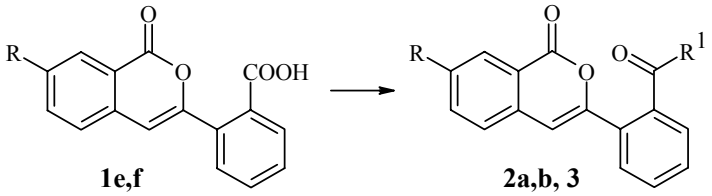
1a Ar = 3-$NO_2C_6H_4$, **1b** Ar = 4-$NO_2C_6H_4$,
1c Ar = 4-$MeOC_6H_4$, **1d** = 2-NO_2-4-ClC_6H_3



1e,f

1e R = H, **1f** R = NO_2

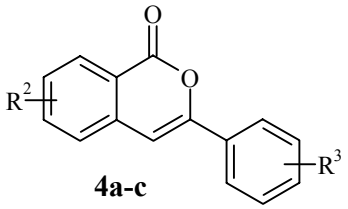
Some derivatives of compounds with an active COOH-group were synthesized.



1e,f **2a,b, 3**

2a R = H, R^1 = OMe,
2b R = NO_2, R^1 = OMe,
3 R = H, R^1 = $NHCH_2CH_2OCH_3$

By reduction of NO_2-group containing substanses **1a,b,f** 3-arylisocoumarins with amino group were synthesized.



4a-c

4a R^2 = 7-NH_2, R^3 = 2-COOH,
4b R^2 = H, R^3 = 3-NH_2,
4c R^2 = H, R^3 = 4-NH_2