

USE OF CHROMONE-3-CARBOXYLIC ACID AND ITS DERIVATIVES IN THE SYNTHESIS OF HETEROCYCLES

Mikhail Yu. Korney, Denis S. Tishin, Dmitrii L. Obydenov,
and Vyacheslav Ya. Sosnovskikh

Institute of Natural Sciences and Mathematics, Ural Federal University,
620000 Ekaterinburg, Russian Federation

Chromones are heterocyclic compounds widely distributed in nature and easily accessible through chemical synthesis. Along with high chemical reactivity, this makes chromones, particularly 3-EWG-substituted ones, a valuable source material for the synthesis of various heterocyclic compounds. In this study we have investigated the action of triacetic acid lactone, cyano(thio)acetamides, cyanoacetic acid hydrazide, and indoles on chromone-3-carboxylic acid and its derivatives. We have found that under basic conditions a number of structurally diverse heterocycles can be obtained in good yields. It can be explained by the polyelectrophilic nature of the chromones and presence of several nucleophilic centers in the reagents, which lead to the possibility to undergo intramolecular nucleophilic attack in the initially formed intermediates.

