

## A SIMPLE AND GREEN PROCEDURE FOR THE SYNTHESIS OF (1H-BENZODIMIDAZOL-2-YL)-2-ONE UNDER MICROWAVE IRRADIATION

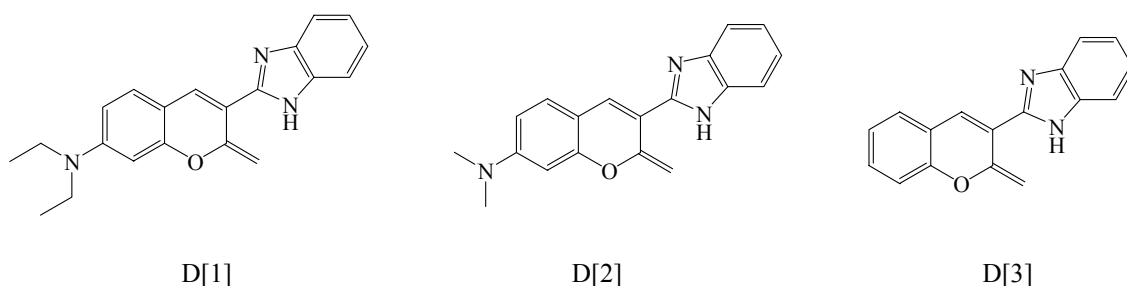
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Green chemistry is the design of chemical products and processes that reduce or eliminate the use and generation of hazardous substances. The reaction speed is generally recognized as an important factor in high-throughput solid-phase and combinatorial synthesis. Here we report of high-speed solid-phase organic synthesis under microwave irradiation, which is emerging as a powerful new technology.

We want to achieve the synthesis of three derivation of (1H-benzodimidazol-2-yl) coumarine-2-one with a new method and microwave irradiation. These dyes are very important in industriars. At first we synthesis three derivatives of coumarines; 7(diethylamino)coumarin-2-one [1], 7(dimethylamino)coumarin-2-one [2] and coumarin-2-one [3] in solid phase and solvent base method with high yields. After purification of each derivatives react with phenylene diamin in solid phase under microwave irradiation.

The reaction and product are shown at the below, the result relate to spectra explanation, reaction mechanism, results of reaction's yield and product purification and separation and discussing about using catalysts in this method will be presented and discussed later.



- [1]. 3-(1H-benzo[d]imidazol-2-yl)-N,N-diethyl-2-methylene-2H-chromen-7-amine  
 [2]. 3-(1H-benzo[d]imidazol-2-yl)-N,N-dimethyl-2-methylene-2H-chromen-7-amine  
 [3]. 2-(2-methylene-2H-chromen-3-yl)-1H-benzo[d]imidazole