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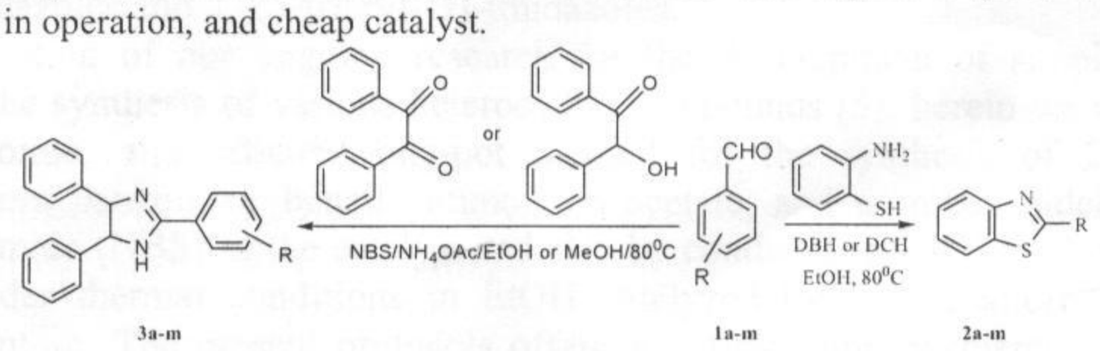
N-Bromosuccinimide or 1,3-di(chloro or bromo)-5,5-dimethylhydantoin: as a mild and efficient catalyst for the synthesis of 2-arylbenzothiazoles and 2,4,5-triaryl-1*H*-imidazoles from aromatic aldehydes

Behrooz Maleki,* Mohammad Vakili, Hafezeh Salehabadi, Hossein K. Shirvan

Department of Chemistry, Sabzevar Tarbiat Moallem University, Sabzevar, 397, Iran.
Corresponding Author E-mail: malekibehrooz@gmail.com

Over the century, imidazoles have received significant attention due to their reactions and biochemical properties. Even today, research in imidazole chemistry continues. Compounds with an imidazole moiety have biological and pharmaceutical importance [1]. Several substituted imidazoles are known as inhibitors of P 38 kinase [2]. 2-Arylbenzothiazoles have been investigated entensively by organic chemists due to their medicinal properties such as antitumour drugs and antiviral. Also, some benzotiazoles have been found in some organism [3-4]. Therefore, it has attracted continuous interested to develop methods for the synthesis of 2-arylbenzothiazoles and 2,4,5-triaryl-1H-imidazoles.

In continuation of our ongoing research for the development of simple and efficient methods for the synthesis of various heterocyclic compounds [5], herein we wish to report a simple, economic, and efficient one-pot method for the synthesis of 2,4,5-triaryl-1H-imidazoles from benzoin or benzil, ammonium acetate, and aromatic aldehydes using *N*-bromosuccinimide (NBS) as the catalyst and also by condensation of 2-aminithiophenol with aldehydes under thermal conditions in EtOH catalyzed by 1,3-Di(chloro or bromo)-5,5-dimethylhydantoin. The present protocols offers significant improvements for the synthesis of 2,4,5-triaryl-1H-imidazoles and 2-arylbenzothiazoles with regard to yield of products, simplicity in operation, and cheap catalyst.



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