Synthetic Methods of 1H-Pyrazolo[1,2- b]Phthalazine Derivatives

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Abstract:

This review deals with the synthetic methods of pyrazolo[1,2- b]phthalazine derivatives using one-pot multi-component reactions via modern and traditional methods. The synthetic methods are subdivided into groups according to the type of reactants e.g. (1) one-pot three-component reaction of 2,3-dihydrophthalazine-1,4-dione, aldehydes and acetonitriles; (2) one-pot three-component reaction of 2,3-dihydrophthalazine-1,4-dione, aldehydes and aroyl acetonitriles; (3) one-pot three-component reaction of 2,3-dihydrophthalazine-1,4-dione, aldehydes and acetylacetone or 4-hydroxy-2H-chromen-2-one or acetylene derivatives; (4) one-pot four-component condensation reaction of phthalimide, hydrazine hydrate, aldehydes and acetonitriles; (5) one-pot four-component reaction of phthalic acid, hydrazine hydrate, indole-3- carbaldehyde and acetonitriles; and (6) one-pot three-component condensation reaction of 2,3- dihydrophthalazine-1,4-dione, aldehyde, and dimedone derivatives. Moreover, the various methods were reported.