Synthesis of new derivatives of pyrimido[4,5-c] pyridazine

Ayla Hazrathseyni*, Mohammad Rahimizadeh, Seyed Mohammad Seyyedi, Hossein Ezghi, Ali Shiri
Department of Chemistry, Faculty of Science, Ferdowsi University of Mashhad, Mashhad, Iran;
Email: hazrathseyni@gmail.com

Pyridazines and pyrimidine derivatives are important class of heterocyclic compounds in medicinal chemistry especially in the treatment of diseases like the central nervous system and the cardiovascular system [1].
In continuation of our previous work on these heterocyclic systems we decided to synthesis new derivatives of pyrimido[4,5-c] pyridazine[2].

For this purpose initially, the phenyl hydrazone derivative (1) was reacted with 2-benzylidenemalononitrile(2) in EtOH to give compound (3). The treatment of compound (3) with CS₂ in boiling solution of NaOH in EtOH yielded quantitatively the desired compound (4) which was further alkylated with various alkylhalides to obtain the corresponding new derivatives of pyrimido[4,5-c] pyridazine (a-e) in good to excellent yields. (Scheme 1)

**Scheme 1**

References: