

Abstract

Pyrimidine derivatives belong to the group of nitrogen containing heterocycles for which numerous biological and therapeutic applications has been reported. So, the study toward finding novel and more efficient methodologies for the synthesis of this class of compounds has been a very important field of research in organic chemistry. In the present work, starting from benzylidene malononitrile derivative and various dinucleophiles, we report novel green methodologies for the synthesis of pyrimidine-5-carbonitrile derivatives. Aqueous glucose and hexadecyltrimethylammonium bromide were used as two different novel medium and promoter in the this study. Optimized reaction conditions were studied and the products were obtained with high purities and interesting yields. Short reaction times, simple work-up and good to excellent yields of the products were among the most important characteristics of the present methodologies.

Keywords: Nitrogen containing heterocycles, pyrimidines, benzylidene malononitrile, green chemistry.



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**Study of pyrimidines synthesis using various benzylidene malononitrile
derivatives as starting material under novel green conditions**

Supervisors

Dr. Reza Aryan

Dr. Hamid Beyzaei

By:

Fateme Sadeghi

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