Abstract:

Pyrimidine and pyridopyrimidine derivatives belong to two significant heterocyclic building blocks which have been found abundantly in the structure of natural products. Besides, many biological characteristics have been reported for these derivatives, amongst them, antibacterial, antifungal, antituberculosis, antioxidant and anticonvulsant features can be briefly referred herein. Introducing novel synthetic protocols based on green chemistry fundamentals is one of the very active areas of research in recent years. Substituted solvents such as ionic liquids and deep eutectic solvents have been widely used as replacement media in place of hazardous organic solvents to provide an efficient route for the synthesis of organic chemicals. In this research project, more facile and efficient methodologies were introduced for the preparation of some new pyrimidine and pyridopyrimidine derivatives according to applying deep eutectic solvents as media and promoters. The antibacterial and antifungal features of some these derivatives were also studied.

Key words: heterocyclic, Pyrimidine, pyridopyrimidine, green chemistry, deep eutectic solvents.

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An efficient green one-pot three-component synthesis of pyrimidine and pyridopyrimidine derivatives in the presence of natural deep eutectic solvents

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