



بسم الله الرحمن الرحيم



Sudan University of Science and Technology  
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Synthesis of some dihydropyrimidinone derivatives

تخليق بعض مشتقات الدايهيدروبيريميدينون

By

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# **Dedication**

To

My parent

My brother and sister

My family

My friend

## **Acknowledgment**

First of all, praise is to Almighty Allah benevolent blessing enabled me to accomplish this work.

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### **Abstract:**

In the present work, some new functionalized dihydropyrimidinones were prepared, this include a three component cyclocondensation reaction of benzoylacetone, an aldehyde and urea, in the presence of catalytic amount of Zinc chloride in ethanol. The yield percentage is (35, 47, 49, 84 %).

The reaction progress was followed by TLC. The reaction products were recrystallized from appropriate solvents and pure samples were subjected for m. p, IR, UV and mass spectroscopic analysis.

Possible mechanistic explanation of the synthetic routes together with retro synthetic analysis discussed.

## المستخلص

في هذا العمل خلقت بعض مشتقات الداياهايديروبيريميدينيون و ذلك بتكاثف ثلاثه مكونات للتفاعل هي بنزوايل استون مع انواع مختلفه من الادهيدات الحلقية واليوريا باستخدام الزنك كلورايد كمحفز في الايثانول. النسب المتحصل عليها ( 35, 47, 49, 84).

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نوقشت الميكانيكيه المحتمله لمسار التفاعل والتخليق العكسي.

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dihydropyrimidinone derivatives

## List of abbreviation

UV	Ultra violet
DHPM	Dihydropyrimidinone
gm	gram
hr.	hour
IR	Infrared spectroscopy
mL	milliliter
mmol	millimole
mp	melting point
R <sub>f</sub>	Retention factor
α	alpha
β	beta