



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكرو فيلم





شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأفلام قد أعدت دون أية تغيرات



## يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of  
15 – 25c and relative humidity 20-40 %



شبكة المعلومات الجامعية



بالرسالة صفحات

لم ترد بالأصل





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بعض الوثائق

الأصلية تالفة

**Synthesis of New Heterocyclic Compounds  
with More Than One Heteroatom with  
Anticipated Biological Activity**

**THESIS**

**Presented by**

**Mohamed Fathy EL-Sayed EL-Shehry**

**(National Research Center)**

**(B . SC.)**

**Chemistry**

**For The Degree Of**

**M. Sc.**

**Chemistry**

**Faculty of Science**

**Ain Shams University**

**1998**

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20-2



# **Synthesis of New Heterocyclic Compounds with More Than One Heteroatom with Anticipated Biological Activity**

**By**

**Mohamed Fathy EL-Sayed EL-Shehry**

**(National Research Center)**

## **THESIS ADVISORS**

**Prof. Dr. Mohamed Fekry Ismail**

**Prof. Dr. Souad Abd El-Mageed Osman**

## **THESIS APPROVED**

.....*M. F. Ismail*.....

.....*S. A. M. Osman*.....

**Head of Chemistry Department**

.....*A. F. M. Fahmy*.....

**Prof. Dr. A.F.M.Fahmy**







To

My

family

2000 01

2000 01

2000 01

2000 01

2000 01



## *Post-graduate Courses*

Besides the work described in this thesis, the candidate has attended post-graduate courses for one year in organic chemistry including the following topics :-

- 1-     **Reaction Mechanism :**
  - \* Ionic reaction mechanism
  - \* Pericyclic reaction mechanism
- 2-     **Free Radicals and Aromatic Heterocyclic compounds**
- 3-     **Spectroscopy of organic molecules :**
  - \* I.R.
  - \* U.V.
  - \* N.M.R.
  - \* MASS
- 4-     **Organic Reactions and Aromaticity.**
- 5-     **Organic Polymers, Organic Silicon compounds and Natural Products.**

**Prof. Dr. A.F.M.Fahmy**

**Head of Chemistry Department**

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much too



