

شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلو

# بسم الله الرحمن الرحيم





MONA MAGHRABY



شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلو



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



MONA MAGHRABY



شبكة المعلومات الجامعية التوثيق الإلكترونى والميكروفيلم

## جامعة عين شمس التوثيق الإلكتروني والميكروفيلم قسم

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



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



MONA MAGHRABY



Ain Shams University
Faculty of Education
Department of Chemistry

## Synthesis, Spectral Characterization and Biological Evaluation of Some Novel Phosphorus Compounds Containing Pyranopyrazole Moiety

A thesis submitted

By

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Department of Chemistry, Faculty of Education, Ain shams university **B.Sc. & Ed. 2013 M.Sc. 2018** 

For in partial fulfillment for requirements of Ph.D. Degree of Teacher's Preparation in Science (Organic Chemistry)

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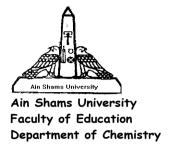
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2021



### Approval Sheet

Synthesis, Spectral Characterization and Biological Evaluation of Some Novel Phosphorus Compounds Containing Pyranopyrazole Moiety

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Approved by Council of Faculty	Approved by Council of University
Date / /	Date / /

## بسم الله الرحمن الرحيم

" قَالُوْ اسُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَمْ تَنَا إِلَّا مَا عَلَمْتَنَا إِنَّكَ أَنْتَ العَلِيْمُ الحَكِيْمُ "

سورة البقرة 32

# Dedication

To my parents
To my husband
To my children
And
To my lovers

#### **ACKNOWLEDGEMENTS**

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Noha M. Hassanin

The candidate has successfully passed examinations in the following topics in the post graduate studies

I) Topics of General Diploma for Teacher's Preparation in Science (Chemistry):

#### **Organic Chemistry 1**

- (A) Natural Products
- (B) Polymer Chemistry

#### **Organic Chemistry 2**

- (A) Reaction Mechanism
- (B) Stereochemistry

#### **Physical Chemistry 1**

- (A) Catalysis Chemistry
- (B) Electrochemistry

#### **Physical Chemistry 2**

**Quantum Chemistry** 

#### **Inorganic Chemistry 1**

Polarography

#### **Inorganic Chemistry 2**

Organometallic Compounds

#### **Inorganic Chemistry 3**

Solutions

#### **Inorganic Chemistry 4**

**Metal Chelates** 

مقرر تربوي 1

مقرر تربوي 2

**English Language** 

## II) Topics of Special Diploma for Teacher's Preparation in Science (Organic Chemistry)

#### **Organic Chemistry 1**

Spectroscopy I: IR, UV, and Mass Spectrometry

#### **Organic Chemistry 2**

Spectroscopy II: NMR Spectrometry

#### **Organic Chemistry 3**

Heterocyclic Chemistry

#### **Organic Chemistry 4**

Selected Topics: Aromaticity, Delocalized Chemical bonding, and Aromatic Nucleophilic Substitution

#### **Organic Chemistry 5**

Stereochemistry

#### **Organic Chemistry 6**

**Organic Reactions** 

#### **Organic Chemistry 7**

Free Radicals Reactions

#### **Organic Chemistry 8**

- (A) Sulfur and Phosphorous Compounds
- (B) Organic Analytical Chemistry

#### **Organic Chemistry 9**

Review Article

مقرر تربوی 1

مقرر تربوي 2

**English Language**