Ain Shams University
Faculty of Education
Department of Chemistry

Study the reactivity of α & γ-pyrano quinolinones towards some different reagents

Thesis Submitted
By

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For
The Degree of
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(Organic Chemistry)

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Cairo
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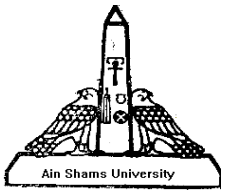

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Approval Sheet

Study the reactivity of α & γ-pyranoquinolinones towards some different reagents

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The thesis was approved Approval date / / 2014

Approved by Council of Faculty Approved by Council of University

Date / / 2014 Date / / 2014


بسم الله الرحمن الرحيم
اللَّهُ لَا إِلَٰهَ إِلَّا هُوَ الْحَيُّ الْقَيُّومُ لَا تَأْخُذُهُ سِنَةٌ وَلَا نَوْمٌ لَهُ مَا فِي السَّمَاوَاتِ
وَمَا فِي الْأَرْضِ مَنْ ذَا الَّذِي يَشْفَعُ عِنْدَهُ إِلَّا بِإِذْنِهِ يَعْلَمُ مَا بَيْنَ أَيْدِيهِمْ
وَمَا خَلْفَهُمْ وَلَا يُحِيطُونَ بِشَيْءٍ مِنْ عِلْمِهِ إِلَّا بِمَا شَاءَ وَسِعَ كُرْسِيُّهُ
السَّمَاوَاتِ وَالْأَرْضَ وَلَا يَئُودُهُ حِفْظُهُمَا وَهُوَ الْعَلِيُّ الْعَظِيمُ

First of all, my deep and grateful thanks go to Allah

I am extremely indebted to my family, to whom I owe and dedicate my successes, which are only a pure product of their answered prayers.

Last but not least I would like to express my deep thanks to my husband who offered me a great help and support all over the time of this work.

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Marwa Mohmed Ahmed

The Student had successfully studied the following Programs and courses:

1. General Diploma for Teacher's Preparation in Science (Chemistry):

i. Organic Chemistry 1: Natural Products and Polymer Chemistry

ii. Organic Chemistry 2: Reaction Mechanism and Stereochemistry

iii. Physical Chemistry 1: Catalysis Chemistry and Electrochemistry

iv. Physical Chemistry 2: Quantum Chemistry

v. Inorganic Chemistry 1: Polarography

vi. Inorganic Chemistry 2: Organometallic Compounds

vii. Inorganic Chemistry 3: Chemistry of Solutions

viii. Inorganic Chemistry 4: Metal Chelates

ix. Educational Course I

x. Educational Course II

xi. English Language

2. Special Diploma for Teacher's Preparation in Science (Organic Chemistry):

i. Organic Chemistry 1: Spectroscopy I: IR, UV and Mass Spectrometry

ii. Organic Chemistry 2: Spectroscopy II: NMR Spectrometry

iii. Organic Chemistry 3: Chemistry Heterocyclic Compounds

iv. Organic Chemistry 4: Selected Topics: Aromaticity, Tautomerism and, Delocalized Chemical bonding.

v. Organic Chemistry 5: Stereochemistry

vi. Organic Chemistry 6: Organic Reactions

vii. Organic Chemistry 7: Free Radicals Reactions

viii. Organic Chemistry 8: Sulfur and Phosphorus and Organic Analytical Chemistry

ix. Organic Chemistry 9: Review Article

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xi. Educational Course II

xii. English Language

3. Master Degree for Teacher's Preparation in Science (Organic Chemistry):

i. Organic Chemistry 1: Physico-Organic Chemistry

ii. Organic Chemistry 2: Microanalysis and Modern Organic Synthesis

iii. Organic Chemistry 3: Advanced Organic Spectroscopy

iv. Organic Chemistry 4: Pericyclic Reactions

v. Educational Course I

vi. Educational Course II

vii. English Language

Contents

Aim of the work

The present thesis aims to:

I. Synthesis of new derivatives of α- and γ-pyrano-quinolinones derivatives

II. Preparation of some novel 3-substituted quinolinones

III. Preparation of new heterocyclic derivatives as separated or fused to quinolinone nucleus

IV. Investigate the chemical behavior of the new quinolinone derivatives towards various reagents

V. Characterization of the newly synthesized compounds using different spectroscopic techniques.

VI. Expect theoretically the physical applications of the new quinolinone derivatives.