hossam maghraby

شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

Ain Shams University Information Network

جامعة عين شمس

شبكة المعلومات الجامعية

@ ASUNET

hossam maghraby

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

hossam maghraby

شبكة المعلومات الجامعية

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

hossam maghraby

شبكة المعلومات الجامعية

بعض الوثائق الأصلية تالفة

hossam maghraby

شبكة المعلومات الجامعية

بالرسالة صفحات

لم ترد بالأصل

Menoufiya University
Faculty of Science
Chemistry Department

SOME THIAZOLE DERIVATIVES AS INHIBITORS FOR CORROSION OF C-STEEL IN ACIDIC SOLUTIONS

BY

Chemist: WALEED AZMY MOHAMED SHEHAB EL-DEIN
Water Technology and Chemical Analysis Unit
Faculty of Engineering – Mansoura University

A Thesis

Submitted for partial fulfillment of the Requirements for the Master Degree of Science in Chemistry
(Physical Chemistry)

SUPERVISED BY

Prof. Dr. A. S. Fouda
Prof. of Physical Chemistry &
Head of Chemistry Department
Faculty of Science
Mansoura University

Prof. Dr. R. M. El-Bahnasawy
Prof. of Inorganic and Analytical Chemistry
Chemistry Department
Faculty of Science
Menoufiya University

Dr. A. A. Al-Sarawy
Associate Prof. of Chemical Engineering
Mathematics & Physical Science Department
Faculty of Engineering
Mansoura University

REFEREES :

1. Prof. Dr. M. Abdallah – Benha University
2. Prof. Dr. S. A. Salih – Cairo University
3. Prof. Dr. A. S. Fouda – Mansoura University
4. Prof. Dr. R. M. El-Bahnasawy – Menoufiya University

August 2005

Menoufiya University
Faculty of Science
Chemistry Department

THE START STUDIES

The present thesis is submitted to the faculty of Science, Menoufiya University in partial fulfillment for the requirements of Master Degree of Science in Chemistry.

Besides the work carried out in this thesis, the candidate Waleed Azmy Mohamed Shehab El-dein, has pursued the following postgraduate courses for on academic year 2003-2004 ;

1- Advanced Analytical Chemistry.
2- Solid State Chemistry.
3- Advanced Physical Chemistry.
4- Surface Chemistry.
5- Advanced Inorganic Chemistry.
6- Advanced Thermodynamic.
7- Kinetic of Reactions Chemistry.
8- Applied Chemistry for Spectroscopy.
9- Quantum Chemistry.
10- Choices in the Physical Chemistry.
11- Electrochemistry.
12- English Language.
13- Statistical.
14-Computer.

He has successfully passed the final examination of these courses in January 2004.

Head of Chemistry Department

ACKNOWLEDGEMENT

Praise be to Allah, who guided us to this; and in no way could we have been guided, unless Allah has guided us.

I owe a well-deserved debt of deep gratitude to Prof. Dr. ***A. S. FOUDA****, Professor of Physical Chemistry, and the Head of Chemistry Department , Faculty of Science, Mansoura University, for suggestion point of the research, continuous supervision and guidance in all stages of performing this thesis, without his help, this work can not be done .*

I owe a well- deserved debt of deep gratitude to Prof. Dr. ***R. M. El-BAHNASAWY*** *Professor of Analytical Chemistry, Faculty of Science Menoufiya University, for his facilities, support and kind encouragement during this work.*

I am deeply grateful to Dr. ***A. A. Al- SARAWY****, Associate Professor of Physical Chemistry and the Manager of the Water Technology and Chemical Analysis Unit, Faculty of Engineering, Mansoura University, for his kind encouragement, his sincerely help and invaluable advice in this work.*

I would like to express my deepest gratitude and appreciation to Prof. Dr. ***I.G. RASHED*** *, Professor of Chemical Engineering and the Dean of the Faculty of Engineering, Mansoura University who is setting up and institute the Water Technology and Chemical Analysis Unit where I learn the chemistry and I had proceeded all the experimental techniques and used all the instruments in that unit*

It is from my pleasure to thank both of Prof. Dr. ***S. EL-SHERIFY*** *Professor of Physical Chemistry, Faculty of Science, Menoufiya university and Dr.* ***M. F. EL-SHERBINY*** *Associate Professor of Chemical Engineering, Faculty of Engineering, Menoufiya University for their great help and the continued encouragement .*

Waleed Azmy Mohamed

With all my love

This work is dedicated to my Family, my Colleagues in Water Technology & Chemical analysis Unit and finally to everyone helped me in this work.

W. A. Mohamed

CONTENTS

(CHAPTER I)
INTRODUCTION

(CHAPTER II)
EXPERIMENTAL AND TECHNIQUES

(CHAPTER III)
RESULTS AND DISCISSION

SECTION(A)
STUDYING THE CORROSION INHIBITION OF C-STEEL IN HYDROCHLORIC ACID BYUSING THE CHEMICAL TECHNIQUE