



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



شبكة المعلومات الجامعية  
@ ASUNET



# 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 بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of  
15-25- c and relative humidity 20-40%

# بعض الوثائق الأصلية تالفة

# بالرسالة صفحات لم ترد بالاصل

**Study on Radiation Polymerization of  
Some Monomers for Possible Use in  
Biomaterial Applications**

B5751  
P

**THESIS  
SUBMITTED TO  
FACULTY OF SCIENCE  
AIN SHAMS UNIVERSITY**

**FOR  
The DEGREE OF DOCTOR OF PHILOSOPHY  
IN CHEMISTRY**

**BY  
Amr El-Hag Ali Said Mohamed  
(B.Sc. 1988 & M. Sc. 1997)**

**2001**



# **Study on Radiation Polymerization of Some Monomers for Possible Use in Biomaterial Applications**

**THESIS ADVISORS:**

**APPROVED**

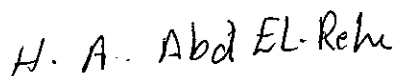
**ASSOC. PROF. DR. KAMAL A. KANDEEL**



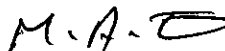
**PROF. DR. EL-SAYED A. HEGAZY**



**ASSOC. PROF. DR. H.A.EL-RAHIM**



**PROF. DR. M. A. EL-KASABY**



**HEAD OF CHEMISTRY**

**DEPARTMENT**



# **Study on Radiation Polymerization of Some Monomers for Possible Use in Biomaterial Applications**

**BY**

**Amr El-Hag Ali Said Mohamed**  
(B.Sc. 1988 & M. Sc. 1997)

**THIS THESIS FOR Ph.D. DEGREE HAS BEEN  
APPROVED BY:**

**PROF.DR . AHMED ABD ELREHIM TAHA**

**PROF.DR. MEDHAT M. ELMEBAYAD**

**ASSOC. PROF. DR. KAMAL A. KANDEEL**

**PROF.DR. EL-SAYED A. HEGAZY**

**DATE OF EXAMINATION:**



To my example

To my support

to

**My Father**

I dedicate this work



## **Acknowledgment**

I would like to express my deep gratitude and thanks to ***Associate Prof. Dr. Kamal Kandeel***, Faculty of Science, Ain Shams University, for his interest, and deep concern in this work.

Deepest thanks and sincere gratitude to ***Prof. Dr. El-Sayed A. Hegazy***, Deputy Chairman, Industrial Irradiation division, National Center for Radiation Research and Technology (NCRRT), for suggesting, planning the point of research, his eminent supervision and valuable discussions. Also, for his encouragement and support throughout this work.

Great thanks and gratitude due to ***Associate Prof. Dr. Hassan A. Abd El-Rehim***, Department of polymer chemistry, National Center for Radiation Research and Technology (NCRRT), for his eminent supervision, discussions and guidance.

Special regards for ***Prof. Dr. Masaru Yoshida***, Takasaki Radiation Chemistry Research Establishment, Japan Atomic Energy Research Institute (JAERI) for his cooperation, facilities provided and fruitful discussion.

The author wishes to thanks Chairman, National Center for Radiation Research and Technology (NCRRT) and Head, Department of Polymer Chemistry (NCRRT) for their interest and facilities provided during this work.

Many thanks are due to all colleagues and staff members of Polymer chemistry Department, National Center for Radiation Research and Technology (NCRRT) and Department of functional materials, Takasaki Radiation

Chemistry Research Establishment, for their help and facilities provided throughout this work.

Finally, I would like to express the deep thanks and gratitude to my wife and my lovely boys, this work would not be completed without their patient and support.