



***Studies on the Use of Gamma  
Radiation-Induced for Preparation of  
Some Modified Resins for the  
Separation of Some Metal Ions***

*A Thesis*

*Submitted By*

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*Hot Laboratories Centre - Atomic Energy Authority*

*B. Sc. of Science (Chemistry)*

*M. Sc. of Science (Chemistry)*

*To*

***Chemistry Department***

***Faculty of Science***

***Ain Shams University***

*For the Degree of Doctor of Philosophy of Science  
(Chemistry)*

***Cairo 2012***



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***Cairo 2012***



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿ قَالُوا سُبْحَانَكَ لَا عِلْمَ  
لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ  
الْعَلِيمُ الْحَكِيمُ ﴾

صدق الله العظيم

سورة البقرة الآية (٣٢)



**To**

***My father and my mother***

**To**

***My husband and my sons***

**To**

***My brother***



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***Shereen Fathy Abo-Zahra***



## Approval Sheet

### ***Studies on the Use of Gamma Radiation-Induced for Preparation of Some Modified Resins for the Separation of Some Metal Ions***

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## ***Published Work***

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*SAAD, E. A.<sup>(1)</sup>, ABDEL-AZIZ, H. M.<sup>(2)</sup>, ABO-ZAHRA, SH. F.<sup>(2)</sup>, SIYAM, T.<sup>(2)</sup> and EL-SWEIFY, F. H.<sup>(2)</sup>*

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