



*Ain Shams University  
Faculty of Education  
Physics Department*

*Study of some physical properties of  
 $Ge_{15}Te_{81}Bi_4$  thin films*

*Thesis*

Submitted for the Degree of master of Teacher's Preparation in  
Science (physics).

*By*

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*To*

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Ain Shams University*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا

إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ

الْعَلِيمُ الْحَكِيمُ.

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