الآيـــــة

قـــال الله تعالـــى:

(وَقُلِ اعْمَلُواْ فَسَيَرَى اللّهُ عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ وَسَتُرَدُّونَ إِلَى عَالِمِ الْغَيْبِ وَالشَّهَادَةِ فَيُنَبِّئُكُم بِمَا كُنتُمْ تَعْمَلُون) (103)

سورة التوبة

صدق الله العظيم

Dedication

I dedicate this research to, my mother, my father, my Family, my brothers and sisters and all my friends.

Acknowledgment

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Abstract

In this research the carbon Nanotubes were doped by TiO_2, MgO, CuO and ZnO, such that four samples from each metal oxide were prepared at different annealing temperatures (450,500,550 and 600)C^0. The optical properties like absorption coefficient and refractive index were studied using ultra violet spectrometer. The electrical properties like conductivity and dielectric constant were also investigated by using software program. The temperature increase decrease the absorption coefficient TiO_2 and CuO and for ZnO and MgO while it increase with temperature decrease the conductivity and the dielectric constant for TiO_2, CuO and ZnO, while it increase them for MgO to briefed. These results were explained theoretically.

المستخلص

في هذا البحث شُوبت الانابيب الكاربونانوية المطعمة بــ Tio_2,Mgo,Cuo,Zno بحيثُ حضرت اربعة عينات من كل اوكسيد معدن عند درجات حرارة مختلفة هي .(450,500,550,and600)C°

دُرست الخواص الضوئية مثل معامل الامتصاص والانكسار باستخدام مطياف الاشعة فوق البنفسجية ودُرست الخواص الكهربية ايضا" مثل الموصلية وثابت العزل باستخدام برمجيات حاسوبية حيث اتضح ان زيادة درجة الحرارة تقلل معامل الامتصاص لTio_2,Cuoوتزيده لــ .Zno, Mgo

اما معامل الانكسار فينقص بزيادة درجة الحرارة لــ Tio_2,Cuo,Zno في حين تزيد مع درجة الحرارة مع Mgo وتؤدي زيادة درجة الحرارة الي نقصان الموصلية وثابت العزل لــ Tio_2,Cuo,Zno في حين تزيد لــMgo . وقد تم تفسير هذه النتائج نظريا".

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