ألاية

قال تعالي:

﴿يَٰبُنَيَّ إِنَّهَآ إِن تَكُ مِثۡقَالَ حَبَّةٖ مِّنۡ خَرۡدَلٖ فَتَكُن فِي صَخۡرَةٍ أَوۡ فِي ٱلسَّمَٰوَٰتِ أَوۡ فِي ٱلۡأَرۡضِ يَأۡتِ بِهَا ٱللَّهُۚ إِنَّ ٱللَّهَ لَطِيفٌ خَبِيرٞ ١٦﴾

صدق الله العظيم [لقمان:16].

Dedication

I dedicate to my dear mother, stirit dear father , convicted you for all this, all my brothers, I dedicate this research, my teachers, my colleagues comrades the trail, and all those who loved me honestly, and I love them equally.

Acknowledgements

Thanks first to Allah, and especially thank supervisor of this research Dr. mahmuoh hamid,. and thanks go to the family that did not skimp me something to complete this work, and thank Dr. gamer alanbia bilal .Thanks to the family college of Science, represented to in sections of physics and chemistry, and also Thanks to the teacher Ramadan from the family of college laboratories and medical sciences, Thanks also to the family of Elslah eltibee Hospital represented to in sections of chemistry, And thanks also to my colleagues comrades the trail and especially thank my friend safa , Thanks also for each of the financially or cognitively contributed to the completion of this research modest.

Abstract

In this work prepared the ZnO nano-structure by the the method up-down approach. And investigated of the sample ,studied the chemical structure synthesized and annealed ZnO nano-belts by using ultra volute(UV), found that the band gap value of synthesized ZnO nano-belts equal (4.1eV), and also we found that the wavelength of ZnO as synthesized nano-particles equal (300 nm) at the transmition equal (6.9 %) .

المستخلص

في هـذا البحـث تـم تحضـير اكسـيد الزنـك ذو الـتركيب النـانوي بطريقة من الاعلى إلى الاسفل. وتم التحقق من العينة وايضاً تم دراسة الخصائص الالكترونية كتكوين وتصليد حزمة اكسيد الزنــك بواسطة الاشعة فوق البنفسجية .ووجد فيه فجوة الطاقة لتكوين حزمة اكسيد الزنك النانوي تساوي(4.1 الكـترون فـولت) وايضـاً وجد الطول الموجي لاكسيد الزنـك المكـون للجسـيمات النانويـة يساوي 300نانومتر عند الانتقال 6.9 %.

List of Figures

Contents