ألاية

قال تعالي:(وَعِنْدَهُ مَفَاتِحُ الْغَيْبِ لا يَعْلَمُهَا إِلَّا هُوَ وَيَعْلَمُ مَا فِي الْبَرِّ وَالْبَحْرِ وَمَا تَسْقُطُ مِنْ وَرَقَةٍ إِلَّا يَعْلَمُهَا وَلا حَبَّةٍ فِي ظُلُمَاتِالأَرْض وَلا رَطْبٍ وَلايَابِسٍإِلَّا فِي كِتَابٍمُبِينٍ).

صدق الله العظيم [الأنعام:٥٩].

Dedication

To dear mother.

To dear father.

Especial Dedicate to my brother, Dr. Mubarak

To all my brothers, I dedicate this research

To my colleagues comrades the trail

To my teachers.

To all those who loved me honestly, and I love them equally.

Acknowledgements

Thanks first to Allah, and thanks go to the family that did not skimp me something to complete this work, and especially thank supervisor of this research Dr. Rasha Abdulhaiy, and Dr. Eissa Ismail, and Dr. Faiz Mohammed Badr. and also 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 Africa city of technological Represented the family of Nano science Laboratory,And thanks also to my colleagues comrades the trail, Thanks also for each of the financially or cognitively contributed to the completion of this research modest.

Abstract

In this study, the optical properties, in particular absorption coefficient and transparency of Linear Low Density Polyethylene (LLDPE) doped with Zinc Oxide nano particles were investigated within different weight percent namely (0, 5, 10, 15,20% wt) was prepared , using diode laser (915 nm ,80mW) and (820nm,200mW) with different power were used to investigate the absorption coefficient and transparency of LLDPE with each weight percent adding of ZnO nanoparticles, The results indicates that the ZnO / LLDPE nanocomposites after some improvement may be used as good mechanism to reduce the intensities of high power laser which using medical, industrial ,engineering ,and research fields (laser attenuator).

الخلاصة

في هذا البحث تمت دراست الخصائص الضوئية (النفاذية ومعامل الامتصاص) للبولي ايثلين من النوع منخفض الكثافة الخطي بعد ادخال اوكسيد الزنك في حجم النانو وبنسب مئوية مختلفة (0,5,10,15,20%) وقد تم التحقق من هذه الخصائص باستخدام ليزر الثنائي بطول موجي(915nm ،٨٠mW) و (٨٢٠ nm, 200mW) وبقدرات مختلفة وقد اشارت النتائج الي تغير واضح في كل من النفاذية ومعامل الامتصاص مع اضافة كل نسبة من اوكسيد الزنك ومن هذه النتائج يمكن اقتراح مزيج البولي اثلين من النوع منخفض الكثافة الخطي /اكسيد الزنك في حجم النانو كآلية فاعلة في تقليل شدة ليزرات القدره العالية المستخدمة في المجالات الطبية والصناعية والهندسية ومجالات البحوث.

List of Figures

List of Tables

Contents