Ain Shams University
Faculty of Education
Physics Department

Study the effect of Ga addition on some physical properties of Se-Te thin films

Thesis

Submitted for the Degree of Master of Teacher's Preparation in Science (Physics).

By

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B.Sc. and Education, Gen. Diploma (Physics) and Spec. Diploma (Physics).

To

Physics Department
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جامعة عين شمس
كليـــة التربيـــــة
قســـــم الفيزيـــاء

دراسة تأثير إضافة الجاليوم علي بعض الخواص الفيزيائية للأغشية الرقيقة من سيلينيوم- تليريوم

رسالـــــة مقدمة
للحصول علي درجة الماجستير في إعداد المعلم في العلوم (فيزياء).

مقدمة من
أحمدمحمدعبده الرباطي

إلى

قســـم الفيزياء – كليـــة التربيـــة . جامعة عين شمس

٢٠١١

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ABSTRACT

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Study the effect of Ga addition on some physical properties of Se–Te thin films

Submitted to:

Physics Department, Faculty of Education,
Ain Shams University.

This study is devoted to investigate the effect of Ga addition on the electrical and thermal properties of Se- Te films.

Thermal measurement includes temperature and heating rate dependence of T_g , T_p, glass transition activation energy E_g and crystallization activation energy E_c by different approximations for the investigated compositions.

The dc electrical measurements include the temperature and thickness dependence of dc electrical conductivity σ_{dc} for the investigated compositions.

The switching measurements include the static I-V characteristic curves, the temperature and thickness dependences of the switching voltage and determination of the switching voltage activation energy (ε_{th}) and specifying the switching mechanism for the investigated compositions.

Ac measurements include ac electrical conductivty, dielectric constant and the dielectric loss as a function of frequency and temperature for the investigated compositions.

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