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Opto-electronic and thermo-electric properties of Materials based on amorphous thin films

Maryama Hammi

Doctor of Philosophy in materials sciences, Morocco

In this study, undoped lead phosphate glass (PbO-P2O5) and doped with Cr, Co, Ni and Zn were synthesized by low cost sol gel technique and deposited on silica glass substrate. To investigate the effect of doping elements on glass properties, fillers doping concentrations were diversified in the range of 0 wt % - 16wt %, the absorption coefficient was determined using transmittance data recorded at room temperature, the optical band gap has also been estimated. Electrical resistivity of the semiconducting thin films were measured as function of fillers concentrations and versus temperature subsequently. Taking into account the dc resistivity depending on the concentration of free carriers and the absorption coefficient, the figure of merit was calculated using Iles and Soclof approach, it showed a significant improvement at certain dopant concentrations. All results were described in detail and they indicated that the films prepared in this study can be used in many nanotechnological applications

Biography

I studied Mohammed V University of Rabat | um5a • Department of Chemistry. During this time I have worked in various areas including acute Philosophy in materials.

I have completed Doctor of Philosophy in materials sciences after having the opportunity to travel to France and complete research looking at the satisfaction of staff in lab facilities. I have delivered various topics at Conferences

mar.hammi@yahoo.com