

Effect of Thermal Annealing on the Optical Band Gap of NiO Thin Film

P MALLICK

Department of Physics, North Orissa University, Baripada 757003, India

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Abstract. NiO thin films grown on Si(100) substrate by low cost sol-gel spin coating method were subjected to thermal annealing at different temperature. All the annealed films were characterized by UV-Visible spectrophotometer in order to effect of thermal annealing on the optical band gap of NiO. NiO film annealed at 400 °C showed the optical band gap of 3.52eV and the films annealed at and above 600 °C showed the optical band gap of 3.62 eV. The increased optical band for the films annealed at higher temperature may be due to better crystallization of NiO films.

Keywords: Thin film; sol-gel; optical band gap; NiO

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