

Investigation of Optical Properties of Nickel Oxide Thin Films Deposited on Different Substrates

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Abstract

Nickel oxide has been investigated for several potential applications, namely, ultraviolet detectors, electro chromic devices, displays, diodes for light emitting, transparent conductive electrode and opto-electronic devices. These applications requires an in depth analysis of Nickel oxide prior to its exploration in aforementioned devices. Optical properties of materials were investigated by depositing thin film of nickel oxide on different substrates in order to understand if the choice substrate can have effect on deducing various optical parameters and can lead to wrong conclusions. In view of this, we have investigated optical properties of nickel oxide deposited on different substrates (glass, transparent plastic, sapphire, potassium bromide and calcium fluoride).

Keywords: Optical investigation, substrate for nickel oxide, bandgap of nickel oxide (NiO), ideal substrate for NiO bandgap analysis.

Abbreviations: Calcium fluoride - CaF; Potassium bromide – KBr.

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