

SYNTHESIS AND CHARACTERIZATION OF ZINC OXIDE (ZnO) NANOROD BY WET CHEMICAL METHOD

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ABSTRACT

Zinc Oxide (ZnO) nanorods have been successfully prepared in Polyethylene glycol (PEG Mw=4000) by wet chemical method. Zinc Oxide (ZnO) nanorods have been characterized by X-ray diffraction (XRD) , absorption spectra, Scanning Electron Microscope (SEM) with EDAX . X-ray diffraction (XRD) indicated that the crystalline size were 45.788 nm,40.508 nm ,40.7331 nm, 29.650 nm, 12.6346nm, 23.89671 nm, 24.57666nm and 22.30592nm of (100),(002),(101)(102),(110),(103),(112) and (201) plane respectively and the average particle size was obtained 52 nm of ZnO nanorods . Surface morphology has been investigated by using the Scanning Electron Microscope (SEM). EDAX confirm the chemical composition of zinc oxide.

KEYWORDS: Absorption Spectra, Nanorods, PEG, SEM, XRD ZnO