

Synthesis and Characterization of ZnO nanorods by Acrylamide Gel Method (AGM)

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Abstract

Zinc oxide nanorods with average particles size diameter of about 20x100 nm were readily synthesized at room temperature using polyacrylamide-gel method, starting by zink sulfate as source material, acrylamide as monomer and N, N-methylene bisacrylamide as lattice reagent. The samples were characterized by X-ray diffraction (XRD). Scanning and Transmission Electron Microscopy (SEM, TEM, UV and photoluminescence (PL) spectroscopy. The average crystal size of the as prepared ZnO nanorods determined by TEM analysis was about 20x100 nm and the UV absorption spectra revealed absorption at wavelength< 270 nm indicating the smaller size of ZnO nanoparticles.

[ZnO nanoparticles](#) [Acrylamide](#) [Optical materials](#) [Acrylamide gel method](#)