

Zinc Oxide Nanowires: Device Fabrication and Optical Properties

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Abstract : Zinc oxide (ZnO) nanowires with hexagonal structure were successfully synthesized by the chemical bath deposition technique. The obtained nanowires were characterized by scanning electron microscope (SEM) and energy dispersive X-ray analysis (EDX). The SEM micrographs revealed the morphology of ZnO nanowires with the diameter between 170.3 and 481nm and showed that the normal pH of the bath solution, 8.1 is the optimized value to form ZnO nanowires with the hexagonal shape. The compositional (EDX) analysis revealed the elemental compositions of samples and confirmed the presence of Zn and O.

Keywords : crystallite, chemical bath deposition technique, hexagonal, morphology, nanowire

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