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Effect of concentration on the optical and solid state properties of ZnO thin films deposited by Aqueous Chemical Growth (ACG) method

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Abstract content
 (Max 300 words)

Thin films of Zinc Oxide (ZnO) having different concentrations were deposited using the Aqueous Chemical Growth (ACG) method. The films were characterized using Rutherford Back Scattering (RBS) spectroscopy for chemical composition and thickness, X-Ray Diffraction (XRD) for crystallographic structure, a UV-VIS spectrophotometer for the analysis of the optical and solid state properties. The average deposited film thickness was 100nm. The results indicate that the values of all the optical and solid state properties investigated vary directly with concentration. Thus, the optical and solid state properties can be turned for various optoelectronic applications including its use as absorber layer in solar cells by deliberately controlling the concentration of the precursors.

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