

Effect of Compaction Pressure of Green Body and Heating Current on Photoluminescence Property of ZnO Crystal Grown by Electric Current Heating Method

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Abstract. In this study, we reported the effect of applied compaction pressure on green body and electric current heating on ceramic bar on the ZnO crystal growth and its photoluminescence characteristic. Crystals grown on ZnO bar sintered by 1100 °C were mostly on (1 0 1) orientation. Sample with 3.0 ton and 3.0 A for applied pressure and current, respectively revealed the shortest photoluminescence (PL) wavelength of 409.5 nm with highest emission energy of 3.03 eV.