Advanced Materials Research, vol. 795, 2013, pages 419-423

The effect of sintering temperature to the properties of zinc oxide

Abstract

In this paper, different sintering temperature used to study the influence of temperature on the structural and thermal properties of zinc oxide (ZnO). On this research, the sample was prepared by solid-state method for zinc oxide (ZnO) at different sintering temperature which was 700°C, 800°C and 900°C. It was observed that the density of bulk ZnO that sintering at 900°C had the higher value of density 5.03 g/cm3. The microhardness of the bulk ZnO had a higher measurement 397.3 Hv after sintered at 900°C. ZnO that sintering at 900°C had been observed that had thermal conductivity 1.1611W/cm-K in the sintering temperature range 700°C to 900°C.

Keywords

Density; Microhardness; Sintering temperature; Thermal conductivity; Zinc oxide