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INFLUENCE OF ZnO SPECIFIC SURFACE AREA ON ITS SINTERING KINETICS

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Abstract

The aim of this work was an investigation of sintering kinetics by observing the reduction of the specific surface area of ZnO. ZnO powder was sintered isothermally in air for 5 to 120 min at temperatures from 400 °C to 900 °C. The decrease in the specific surface area was observed as a function of temperature and sintering time. Models of Ristic-Jovanovic and German were applied in order to define the appropriate parameters. Information on the activation energy of sintering was obtained by the Arrhenius equation. The LSE method was applied for determining optimum parameter values.

Keywords: Sintering, Kinetics, Specific surface area, ZnO