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## **Physics and Technology of Materials**



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## **REDUCTION OF THE SPECIFIC SURFACE AREA OF POROUS ZnO DURING SINTERING**

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In this paper reduction of the specific surface area of porous ZnO during sintering was analyzed. ZnO was sintered at temperatures from 673K to 1173K. Reduction of the specific surface area was observed as a function of the temperature and time of sintering. Analysis of sintering kinetics was done by observing reduction of the specific surface area. We used three different models, defined the appropriate parameters, and also the activation energy of sintering using the Arrhenius equation. The LSE method was applied for determining optimum parameter values.

## **PHOTOACOUSTIC AND DIELECTRIC PROPERTIES OF COMPOSITE MATERIALS MADE FROM POLYESTER AND EPOXY RESIN WITH GLASS FIBERS**

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Two types of composite materials of various thicknesses were prepared from polyester and epoxy resin strengthened with glass fibers. Samples of the same type but without glass fibers were also prepared for comparison. For all these samples dielectric and electrical properties were measured and for some of them the ageing effect was also measured. Thermal diffusivity was investigated using the photoacoustic method with a transmission detection configuration, where a light source was a semiconductive red laser of 80 mW. Thermal diffusivity and the coefficients of thermal and optical absorption were calculated using numerical analysis