

Using the Transient Plane Source Method for Measuring Thermal Parameters of Electroceramics

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Abstract : Transient plane source method has been used to measure the thermal diffusivity and thermal conductivity of a compact isostatic electro-ceramics at room temperature. The samples were fired at temperatures from 100 up to 1320 degrees Celsius in steps of 50. Bulk density and specific heat capacity were also measured with their corresponding standard uncertainties. The results were compared with further thermal analysis (dilatometry and thermogravimetry). Structural processes during firing were discussed.

Keywords : TPS method, thermal conductivity, thermal diffusivity, thermal analysis, electro-ceramics, firing

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