LumiDoz-10

10th International Conference on Luminescence and ESR Dosimetry

Book of Abstracts

5-7 September 2016
Çukurova University, Adana, TURKEY

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Calculation of Trap Parameters on Metamorphic Quartz

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Abstract

In this study, kinetic parameters related to the TL glow peaks in metamorphic quartz from Adıyaman in Turkey were determined with Peak Shape (PS) method. The TL glow curves were recorded from 20 Gy to 200 Gy doses at heating rate 1 ºC/s. This sample exhibits one strong TL glow peak at around 185ºC and two shoulder peaks at the high temperature side about 298 ºC and 387 ºC. The main peak 185ºC TL glow peak was investigated with peak shape method (PS). This method was used to determine the kinetic parameters (activation energy (E_a), frequency factor (s)) related to the TL glow peaks in natural quartz. It was also calculated geometrical shape parameters (T_m, T_1, T_2, τ, δ and ω) of natural quartz with the help of the TL glow curves readings for all beta radiation doses.

Keywords: *Metamorphic quartz, Trap parameters, Thermoluminescence (TL)*

Acknowledgement: *This work was supported by Scientific Research Projects Coordinator office of Çukurova University.*

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