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**BOOK OF ABSTRACTS**



## **CALCULATION OF ACTIVATION ENERGY USING VHR METHOD FOR LOW TEMPERATURE PEAK OF GYPSUM MINERAL**

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Gypsum ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ) is a common mineral obtained from surface and underground deposits. This natural mineral occurs in sedimentary deposits consist of limestone, dolomite, shales, marls and clays, massive anhydrite beds and such environments. Using natural minerals as dosimeters, it is important to characterize them with respect to general properties such as dose response, heating rate according to its mineral structure. In this study, activation energy of natural gypsum mineral was calculated using the various heating rate (VHR) method. In the VHR method, natural gypsum sample was irradiated with  $\beta$ -irradiation of 50 Gy and thermoluminescence (TL) glow curves were obtained with four heating rates of 2, 7 and 10  $^\circ\text{C s}^{-1}$ . In TL theory, the TL glow peaks are affected by heating rate and shifted to high temperatures. It was seen that the results of the heating rate experiment were consistent with the TL theory.

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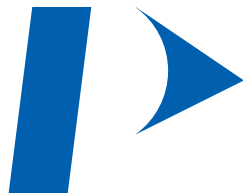
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