

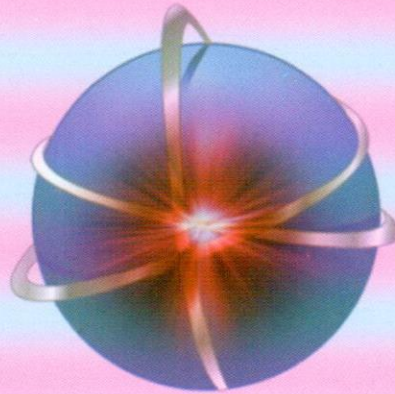
# TESNAT 2015



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on Theoretical and Experimental  
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## *Abstract Book*



**Editors**

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## **A Preliminary Thermoluminescence Study of CaSO<sub>4</sub>**

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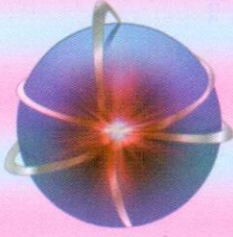
In this study, calcium sulphate (CaSO<sub>4</sub>) was synthesized using a solution reaction of CaCl<sub>2</sub> and Na<sub>2</sub>SO<sub>4</sub> in mixed solvent of deionized water in order to determine its thermoluminescence dosimetric properties. The produced powder CaSO<sub>4</sub> sample was characterized using X-ray diffraction (XRD) and scanning electron microscopy-energy dispersive X-ray spectroscopy (SEM-EDX) methods. XRD pattern shows a complete crystalline structures in a orthorhombic phase and SEM images shows the particles of sample are of different shapes with diameters in the range of ~5-20 µm. Thermoluminescence glow curves of samples were recorded from room temperature up to 500°C by using Risø TL-OSL DA-20 reader after 1 Gy of beta (β) irradiation. In TL measurements, preheat effect also was tested and the results were compared with each other.

**Keywords:** Thermoluminescence, CaSO<sub>4</sub>, SEM-EDX, CGCD, Preheat effect

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