

A Theoretical Overview of Thermoluminescence

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Abstract : The magnificently accentuating phenomenon of luminescence has gathered a lot of attentions from last few decades. Probably defined as the one involving emission of light from certain kinds of substances on absorbing various energies in the form of external stimulus, the phenomenon claims a versatile pertinence. First observed and reported in an extract of Ligrium Nephriticum by Monards, the phenomenon involves turning of crystal clear water into colorful fluid when comes in contact with the special wood. In words of Sir G.G. Stokes, the phenomenon actually involves three different techniques - absorption, excitation and emission. With variance in external stimulus, the corresponding luminescence phenomenon is obtained. Here, this paper gives a concise discussion of thermoluminescence which is one of the types of luminescence obtained when the external stimulus is given in form of heat energy. A deep insight of thermoluminescence put forward a qualitative analysis of various parameters such as glow curves peaks, trap depth, frequency factors and order of kinetics.

Keywords : frequency factor, glow curve peaks, thermoluminescence, trap depth

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