3. Effect Of Sr-Doping On The Mechanoluminescence Of γ Irradiated NaCl and KCl Crystals

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ABSTRACT

Mechanoluminescence is a type of luminescence induced during any mechanical action on solids. It can be excited by grinding, rubbing, cutting cleaving, and shaking scratching compressing or by crushing of solids. ML can also be excited by thermal schokes caused by drastic cooling or heating of materials or by the shock-wave production during the deformation caused by the phase transition or growth of certain crystals is as well as material in contact During the impulsive excitation of ML in γ-irradiated Sr-doped NaCl and KClcrystals,two peaks occur in the ML intensity versus time curve. The ML intensity of the second peak .i.e. Im2 is always less then the first peak. The value of Im1 and Im2 and the total ML intensity It. During the impulsive excitation of ML, it is seen that both tm1 and tm2 decrease with increasing strain rate of the crystals and I_T initially increase with increasing strain rate and then it attains a saturation value for higher values of the strain rate.

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