PIEZO-OPTICAL RELAXATION IN FERROELECTRIC CRYSTALS OF DEUTERATED TRIGLYCINE SELENATE

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S u m m a r y

In the crystals of deuterated triglicine selenate, the effect of photoelastic relaxation is investigated. Relaxation times and relative relaxation amplitude of mechanical tension induced propagation differences for different experiment geometries in the temperature range 10 – 50 ℃, including the phase transition temperature T_C. Features of the anomalous behaviour of relaxation amplitudes in the neighborhood of T_C are discussed. Features of the methodology are noted, which allows one to observe the photoelastic relaxation effect. A considerable attention is paid to the thermo-optical and piezo-optical effects in the neighborhood of T_C. In particular, uncommonly big values of piezo-optical coefficients (POC) at T_C are discussed in the framework of the mechanism developed before to explain the POF anomalies in ferroelectric crystals.