

Influence of a magnetic field on electrical effects in LiF crystals. / M. V. Galustashvili, M. G. Abramishvili, F. Kh. Akopov, D. G. Driaev, V. G. Kvatchadze, S. D. Tsakadze. / Nano Studies. – 2015. – # 12. – pp. 139-146. – eng.

The study belongs to a new direction in the physics of plasticity, namely, spin micromechanics that studies microscopic spin-dependent processes which influence the mechanical properties of solids. There is studied the effect of a weak magnetic field ($B = 0.9$ T) on the processes related to the existence of charges on point and linear defects in alkali halide crystals, namely, on the polarization and depolarization of a LiF crystal upon local deformation (indentation). The phenomena observed, namely, the increase in the dislocation mobility and dislocation charge and high degree of polarization, which are dependent on the state of magnetically sensitive impurity, show that magnetic field causes the decomposition of impurity–vacancy complexes slowing-down a dislocation. Fig. 7, Tab. 1, Ref. 11.

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