

WEAK LO-PHONON DISPERSION EFFECT
ON THE EXCITON RELAXATION IN CRYSTAL

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S u m m a r y

The effect of weak LO-phonon dispersion on the frequency and temperature dependences of exciton attenuation in polar crystals containing excitons of large and small radii is studied theoretically. The influence of dispersion on a shift of the intensity maximum in processes with phonon absorption and emission is discussed. It is demonstrated that, depending on frequency, the dispersion causes both an increase and a reduction of exciton attenuation. Thus, the intensity of relaxation processes close to the peaks with phonon absorption or emission behaves contrariwise. The exciton scattering at temperatures $T \rightarrow 0$ is discussed. A change of the dispersion effect on exciton attenuation with temperature for some fixed frequency is revealed. The case of the scattering of an exciton with finite quasiimpulses is considered. TlCl and AgBr crystals are chosen as the models for illustration.