

TEMPERATURE STUDY OF THE RESONANCE
INTERMOLECULAR INTERACTION IN THE
CRYSTALLINE *n*-PARAFFINS AND α -OLEFINS

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S u m m a r y

We propose a mechanism which explains the temperature dependence of the magnitude of the Davydov splitting of the frequencies $\Delta \nu_{1,2}$ of rocking vibrations of methylene groups of long-chain molecules of crystalline *n*-paraffins and α -olefins. This mechanism is connected with a damping of the vibrational excitons in crystals due to their interaction with orientational defects of the lattice which emerge as a result of the temperature excitation of the librational-rotational degrees of freedom of organic molecules in the region of the phase transition "order - orientational disorder". A good agreement is observed between the theoretical and experimental results.