

GRUNEIZEN PARAMETER AND VOLUME
STRAIN OF A LATTICE IN SUPERINTENSE
GLASSES OF THE Ge-As-S AND Cd-As
SYSTEMS IN THE FRAME OF THE FREE
VOLUME CONCEPTION

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S u m m a r y

The possibility to consider the anharmonicity of oscillations of quasilattice particles and the nonlinearity of internuclear interaction forces in glass halcogenides Ge-As-S and in glasses of the Cd-As system is regarded within the fluctuation free volume theory. The originality of the structure of a glass lattice frame in the Ge-As-S system causes other ratio, than that in silicate glasses, of the fluctuation free volume share and Gruneizen parameter: f_g increases with decrease in the anharmonicity of oscillations of the glass lattice. In glasses of the system Cd-As, symbatic changes of f_g and γ_L occur. A certain connection of the fluctuation free volume theory parameters with the average coordination number is observed. The results obtained agree with conclusions of the model of 'soft' configurations about a minor role 'of soft configurations' in noncrystalline materials with $Z_m = 4$.