

MICROPROCESSES AT SECOND-ORDER PHASE
TRANSITIONS IN CRYSTALS WITH STRONG
INTERBAND ELECTRON-PHONON INTERACTION

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S u m m a r y

A system of strongly interacting electrons and phonons in a crystal has been considered. If the temperature changes, the system undergoes changes equivalent to those occurring at the phase transition of the second kind, when the equilibrium positions of atoms become shifted. It has been demonstrated that the expansion of the thermodynamic potential in a series in the order parameter, which is a standard routine in the Landau phenomenological theory, can lead to equilibrium states that do not correspond to any real state of the crystal. It has also been shown that, in the course of phase transitions that occur with varying temperature, the deformation energy is released in the form of Barkhausen-like pulses.