LATTICE MODEL OF INTERCALATION

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S u m m a r y

The thermodynamics of a lattice model of intercalation of ions in crystals is considered in the mean-field approximation (MFA). The pseudospin formalism is used for the description of the interaction of electrons with ions, and the possibility of the hopping of intercalated ions between different positions is taken into account. Phase diagrams are built. It is shown that the effective interaction between intercalated ions can lead to the phase separation or the appearance of a modulated phase (it depends on the filling of the electron energy band). At high values of the parameter of ion transfer, the ionic subsystem can pass to the superfluid-like state.