INTERATOMIC AND ELECTRONIC CORRELATIONS IN SYSTEMS WITH NARROW ENERGY BANDS

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S u m m a r y

In the many-band Hubbard model by using the correlated random field approximation, the method of calculation of the electron energy spectrum, free energy, parameters of atomic and magnetic ordering for binary substitutional 3*d*-metal alloys is developed. The method is based on the cluster expansion for the Green's function of the disordered system. It allows one to consider the electron scattering by the potentials of various ions and fluctuations of the spin and electron dnsities in magnetic alloys with narrow *d*-bands. The numerical results for equiatomic FeTi alloy are presented.