

ASYMMETRIC DIAMOND ISING–HUBBARD
CHAIN WITH ATTRACTION

B.M. Lisnyi

Institute for Condensed Matter Physics,
Nat. Acad. of Sci. of Ukraine
(1, *Sviatsitskii Str.*, *Lviv 79011, Ukraine*;
e-mail: lisnyj@icmp.lviv.ua)

S u m m a r y

The ground state and thermodynamic properties of an asymmetric diamond Ising–Hubbard chain with the on-site electron-electron attraction has been considered. The problem can be solved exactly using the decoration-iteration transformation. In the case of the antiferromagnetic Ising interaction, the influence of this attraction on the ground state and the temperature dependences of the magnetization, magnetic susceptibility, and specific heat has been studied.