

REGULARLY ALTERNATING SPIN- $\frac{1}{2}$  ISING  
CHAIN IN A TRANSVERSE FIELD.  
THERMODYNAMICAL PROPERTIES

*O. Derzhko, O. Zaburannyi*

Institute for Condensed Matter Physics,  
Nat. Acad. Sci. of Ukraine  
(1, Svientsitskii Str., Lviv 79011, Ukraine)

S u m m a r y

Using the Jordan – Wigner fermionization, Green function approach, and continued fractions, the thermodynamic functions of a regularly alternating spin- $\frac{1}{2}$  Ising chain in a transverse field are calculated. The influence of regular nonuniformity on the zero-temperature magnetic properties of the chain and on the temperature dependence of its specific heat is examined.