

EFFECT OF DEFECTS OF A STRUCTURE  
ON PHASE TRANSITION TEMPERATURE

*A. I. Dmitriev*

Institute for Problems of Materials Science,  
Nat. Acad. Sci. of Ukraine  
(3, Krzhyzhanivsky Str., Kyiv 03142, Ukraine;  
e-mail: [doktordai@mail.ru](mailto:doktordai@mail.ru))

S u m m a r y

Phenomenological ideas of changes in a phase transition temperature due to the defectiveness of structures in solids are developed, and their quantitative description is proposed. It is shown that a decrease in the phase transition temperature owing to the deterioration of the structural perfection of complex solids is proportional to the value of nonthermal spreading of Landau quantum levels, which is described by the Dingle temperature. The latter can be calculated theoretically and obtained from the experiments involving quantum oscillations.