

FEATURES OF ACOUSTIC
PROPERTIES OF CERAMICS $\text{BaLa}_2\text{Ti}_4\text{O}_{12}$
IN THE TEMPERATURE RANGE 100–300 K

V.I. Butko, Yu.P. Gololobov¹, Yu.I. Yakymenko

National Technical University of Ukraine
“Kyiv Polytechnic Institute”
(37, *Peremogy Prosp., Kyiv 03056, Ukraine*),
¹National Transport University
(42, *Kikvidze Str., Kyiv 01010, Ukraine*;
e-mail: gololobov@ua.fm)

S u m m a r y

For samples of $\text{BaLa}_2\text{Ti}_4\text{O}_{12}$ ceramics, the results of investigations of the temperature dependences of the propagation velocity and absorption coefficient of longitudinal ultrasonic waves in the temperature range $T = 100\text{--}300$ K are reported. The discovered anomalies of acoustic properties are explained by the existence of a “bearing”-type phase transition at the temperature $T \approx 205$ K. Structural aspects of the $\text{BaLa}_2\text{Ti}_4\text{O}_{12}$ lattice rearrangement that can cause such a transition are analyzed.