ELASTIC, DIELECTRIC AND PIEZOELECTRIC COEFFICIENTS OF LANGASITE-TYPE CRYSTALS

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The complete set of linear elastic, dielectric and piezoelectric coefficients of some langasite-type crystals was determined at room temperature. The compounds lanthanum gallium silicate (langasite, \(La_3Ga_2SiO_{14}\)), lanthanum gallium niobate (langanite, \(La_3Ga_5.5Nb_{0.5}O_{14}\)), and lanthanum gallium tantalate (langataite, \(La_3Ga_{5.5}Ta_{0.5}O_{14}\)) belong to the trigonal acentric crystal class 32. The ultrasound pulse overlap technique was used to get the direction dependent sound velocities.