RADIATION-INDUCED CHANGE OF POLARIZATION OF TERAHERTZ RADIATION IN n-Ge

V.M. Bondar, B.O. Danilchenko, A.M. Kraichins'kyi

Institute of Physics, Nat. Acad. of Sci. of Ukraine (46, Nauky Prosp., Kyiv 03028; e-mail: vbondar@iop.kiev.ua)

Summary

We investigated the angular dependence of the polarization of terahertz (THZ) radiation of hot electrons in weakly doped $(10^{14} \text{ cm}^{-3})$ *n*-Ge at 5 K, as well as its change due to the irradiation with 1-MeV electrons. It is established that, at the expense of irradiation, the THZ radiation phase changes by 90°. That is, if the radiation polarization is directed along the electric field in the initial samples, then the direction of the polarization vector becomes normal to the direction of the electric field after the introduction of radiation defects.