Abstracts

Submillimeter Absorption Spectra and Phase Transition of Indirect Excitons in Germanium

V.L. Kononenko, T.S. Mandel'stam, V.N. Murzin, V.S. Vavilov and V.A. Zayats. "Submillimeter Absorption Spectra and Phase Transition of Indirect Excitons in Germanium." 1974 Transactions on Microwave Theory and Techniques 22.12 (Dec. 1974, Part I [T-MTT] (Special Issue on the Proceedings of the First International Conference on Submillimeter Waves and Their Applications)): 1086-1089.

The results are presented of the detailed studies on the exciton absorption spectra in ultrapure Ge in the spectrum regions 0.67-1.1 and 1.7-3.7 meV with a backward-wave tube radiation. It is shown that the measured spectrum corresponds to the exciton's transitions from the ground to excited states. As a result of temperature measurements at 1.6-4.2 K the phase transition of excitons into the condensed state has been observed without the formation of excitonic molecules.

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