
DEVELOPING THE GAALAS/GAAS HETEROSTRUCTURE BY MEANS OF THE MOLECULAR-BEAM EPITAXY METHOD USING THE INDIRECT CONTROL OF THE COATING GROWTH RATE

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Abstract

It is shown, that the heterostructure GaAlAs/GaAs developed with the use of coating growth rate controlling method by means of the verifying dependencies of the deposited material flow on the temperature in the effusion cells possesses clear-cut semiconducting properties and has two-dimension electron gas at the boundary of heterojunction, which is indicative of the manufactured sample high quality. The feasibility of this method application has been analyzed.

Keywords

Molecular-beam epitaxy, effusion cell, coating growth rate control, semiconducting heterostructures, heterojunction, two-dimension electron gas, Van der Pauw method, quantum Hall effect

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