

# Analysis of the Control Action of the Epitaxial Layers Growing in the Automatic System with PID Controller

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**Abstract**—It is reported an investigation of control action (CA) of the energy source in the automatic control system of thermal process' parameters in the technology of the epitaxial growing of the compound layers  $A_3B_5$  by the reaction transport method in the quasi-rapidity conditions. These conditions superpose more rigid requirements of dynamic error over the minimum value of static error in the modern technological equipment. In the conditions of the optimal rapidity it is studied the quality of the control action, which is formed in the control device according to the control algorithm of the object, in the given case, it is investigated - the thermal object, and its correlation with the quality of the energy source of the system.

**Keywords**— $A_3B_5$  compounds; hydride vapor phase epitaxy; automatic control system; control action

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