

Liquid-phase epitaxy of AlGaAs heterostructures on profiled substrates

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Abstract

A method of fabrication of planar local structures using the selective epitaxial growth of GaAs and AlGaAs layers from liquid phase on profiled GaAs substrates was developed. The planar regrowth of the recesses formed in GaAs substrates by local etching was performed using the anisotropy of epitaxial growth rates and also by providing the uniformity of mass flow to the surface of local epilayer. The developed method of localized structures fabrication was used for improving the characteristics of discrete light emitting diodes — LED and for fabrication of DLE monolithic arrays.