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The invention relates to the field of planar technology for obtaining semiconductor layers of the type  $A^4B^6$ , particularly to a process for obtaining the substrate of  $BaF_2$  with perfect surface.

The process includes spalling and cutting of the initial substrate along the chosen crystallographic directions, mechanochemical polishing of the surface, vacuum annealing of substrate at the temperature of  $973^{\circ}K$ , during 30 min, then deposition of an additional layer of  $BaF_2$  in superhigh vacuum at the substrate temperature of  $1023^{\circ}K$ , during 3...5 min, with continuous control of the surface quality by the fast electron diffraction method.

Claims: 1

Fig.: 3