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New manufacturing technology for InP epitaxial layers and properties of Schottky diodes made on their basis

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Abstract

A new technological approach to production of structurally perfect epitaxial films LPE-grown on "soft" porous n/sup +/-InP substrates is considered. We studied surface morphology, boundary between phases in TiB/sub x/-n-InP contact and I-V curves of Au-TiB/sub x/-n-InP Schottky diodes made on "soft" and "rigid" (standard) n/sup +/-InP substrates. The advantages of epitaxial layers grown on porous n/sup +/-InP substrates and barrier structures on their basis are demonstrated.