

INVESTIGATION OF GaAs/AlAs
SHORT-PERIODIC SUPERLATTICES
BY HIGH-RESOLUTION X-RAY
DIFFRACTOMETRY

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S u m m a r y

Scattering of X-rays in GaAs/AlAs short-periodic superlattices (SL) is studied by high-resolution diffractometry. The diffraction parameters and characteristics of SL, i.e., the thickness of separate lattices and the level of their deformation, are determined by fitting the calculated diffraction curves to experimental ones. The semikinematic theory of X-ray scattering was used in calculations. Relatively high crystal coherence and structure perfection of the neighbor layers are established to occur despite the high level of elastic deformation in every layer.