

## **Density and Mobility of Carriers in AlGaSb and InGaAsSb Alloys Obtained by LPE**

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The density of carriers and its mobility of AlGaSb and InGaAsSb alloys have been obtained by simulation. The Berreman technique was used in this work, which allows simulating the spectra of reflectivity in the far-infrared region. Liquid Phase Epitaxy (LPE) technique was used to growth several AlGaSb thin layers in the range of temperatures of 250 to 450 °C. The reflectivity spectra in the far infrared region show two bands, the first one near to 230 cm<sup>-1</sup> which corresponds to TO and LO GaSb-like modes and other one near to 318 cm<sup>-1</sup> which corresponds to TO AlSb-like mode and it confirms the presence of the ternary alloy. In the quaternary alloy case, the temperature of growth was 410 °C. The reflectivity spectra show the TO and LO modes in the region of 180 to 250 cm<sup>-1</sup> and correspond to the binary combinations of the four present elements.

**Keywords:** liquid phase epitaxy, reflectivity spectra, ternary alloy