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## InAs<sub>0.96</sub>Sb<sub>0.04</sub>红外薄膜的光学性质研究

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**中文摘要:**采用水平滑移石墨舟液相外延生长技术在n型(100)InAs衬底上生长了InAs<sub>0.96</sub>Sb<sub>0.04</sub>薄膜.在1.5~5.5 eV光子能量范下测试了其介电函数谱 $\epsilon(E)$ .基于电子带间跃迁和联合态密度理论,采用S. Adachi的MDF模型对 $\epsilon(E)$ 进行了拟合,并计算了各种临界数据与模型吻合得非常好,E1和E1  $\Delta$ 1跃迁发生在布里渊区(BZ)的 $\Lambda$ 轴或L点,分别对应于M1型临界点 $\Lambda_{v5} \rightarrow \Lambda_{c6}$ (或 $L_{v4.5} \rightarrow L_{c6}$ )和 $\Lambda_{v1}$ 型和M2型鞍点能量简并引起的,沿着BZ的 $\Sigma$ 和 $\Delta$ 轴方向.

**中文关键词:**[InAsSb](#) [光学常数](#) [椭圆光谱](#) [液相外延](#) [红外](#) [薄膜的光学性质](#) [研究](#) [OPTICAL PROPERTIES](#) [THIN FILMS](#) [方向](#) [子跃迁](#) [实验数据](#) [结果](#) [临界点](#) [计算](#) [拟合](#) [模型](#) [度理论](#) [子带间跃迁](#)

## INVESTIGATIONS ON OPTICAL PROPERTIES OF InAs<sub>0.96</sub>Sb<sub>0.04</sub> INFRAREI

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**keywords:**[InAsSb](#) [optical constants](#) [ellipsometric spectra](#) [liquid phase epitaxy](#)

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