

## 文献

Ahn, H.<sup>a</sup>, Shen, C.-H.<sup>b</sup>, Wu, C.-L.<sup>b</sup>, Gwo, S.<sup>b</sup>

### Carrier concentration dependent optical properties of wurzite InN epitaxial films on Si(111) studied by spectroscopic ellipsometry

(2006) *Thin Solid Films*, 494 (1-2), pp. 69-73. 被引用数 7 回.

<sup>a</sup> Center for Measurement Standards, Bldg. 16, 321 Kuang Fu Rd. Sec. 2, Hsinchu 300, Taiwan

<sup>b</sup> Department of Physics, National Tsing-Hua University, Hsinchu 300, Taiwan

#### 抄録 (Abstract)

The refractive index and optical absorption of wurzite InN epilayers grown on Si(111) substrates with a  $\beta$ -Si<sub>3</sub>N<sub>4</sub>/AlN(0001) double-buffer by nitrogen-plasma-assisted molecular-beam epitaxy were studied by employing spectroscopic ellipsometry (SE). The crystalline quality of the InN epilayers were investigated by cross-sectional transmission electron microscopy, X-ray diffraction, and scanning electron microscopy. SE results analyzed by the Adachi's model for the dielectric function show that the optical absorption edge of InN varies in the range of 0.76-0.83 eV depending on the carrier concentration, which in turn can be adjusted by the thickness of the AlN buffer layer. © 2005 Elsevier B.V. All rights reserved.

#### 著者キーワード

Buffer layer; Energy bandgap; InN; Refractive index; Spectroscopic ellipsometry (SE)

文献タイプ: Conference Paper

情報源: Scopus

#### Scopusについて

[製品情報](#)  
[収録コンテンツ](#)  
[ユーザーの声](#)  
[ニュース](#)  
[チュートリアル](#)

#### お問い合わせとサポート

[お問い合わせとサポート](#)  
[Live Chat](#)

#### Elsevierについて

[Elsevierについて](#)  
[SciVerseについて](#)  
[SciValについて](#)  
[Terms and Conditions](#)  
[プライバシーポリシー](#)

