

## s-파 무반사 조건을 사용한 단결정 실리콘과 이산화 규소의 계면구조 결정

### Determination of the interface structure between a silicon dioxide layer and its crystalline silicon substrate by the s-wave antireflection

조용재, 조현모, 이윤우, 이인원, 방현용\*, 김상렬\*  
한국표준과학연구원 양자연구부 영상그룹, \*아주대학교 물리학과

The ellipsometric functions ( $\Psi$  and  $\Delta$ ) of the silicon dioxide layers were measured by using variable-angle spectroscopic ellipsometry (VASE). The effective refractive index of the silicon dioxide layer decreases from 1.544 to 1.458 as the layer thickness increases from 12 nm to 150 nm. The critical behavior of the s- and the p-wave antireflection condition has been observed from the experimental VASE data in accordance with the predicted sensitivity graphs based on an interface layer between the crystalline silicon substrate and the oxide. The important informations of the interface layer were determined by using the s-wave antireflection condition.

