专刊

High resolution X-ray diffraction investigation of epitaxially grown $SrTiO_3$ thin films by laser-MBE

翟章印[1,2],吴小山[1],贾全杰[3]

1 Lab of Solid State Microstructures and Department of Physics, Nanjing University, Nanjing 210093, China
2 Jiangsu Key Laboratory for Chemistry of Low-Dimensional Materials and Department of Physics, Huaiyin Normal University, Huaian 223300, China
3 BSRF, Institute of High Energy Physics, CAS, Beijing 100049, China

收稿日期 2008-12-17 修回日期 2009-4-2 网络版发布日期 2009-9-28 接受日期 2009-9-28

摘要

$SrTiO_3$ thin films are epitaxially grown on $DyScO_3$, $LaAlO_3$ substrates with/without buffer layers of $DyScO_3$ and $SrRuO_3$ using laser-MBE. X-ray diffraction methods, such as high resolution X-ray diffraction, grazing incident X-ray diffraction, and reciprocal space mapping are used to investigate the lattice structure, dislocation density, in-plane lattice strain distribution along film thickness. From the measurement results, the effects of substrate on film lattice quality and microstructure are discussed.

关键词 laser-MBE, grazing incident X-ray diffraction, reciprocal space mapping

分类号

DOI:

扩展功能

本文信息

- Supporting info
- PDF(2428KB)
- [HTML全文](0KB)
- 参考文献[PDF]
- 参考文献

服务与反馈

- 把本文推荐给朋友
- 加入我的书架
- 加入引用管理器
- 引用本文
- Email Alert

相关信息

- 本刊中 包含“laser-MBE, grazing incident X-ray diffraction, reciprocal space mapping”的 相关文章
- 本文作者相关文章
  - 翟章印
  - 吴小山
  - 贾全杰

通讯作者:
吴小山 xswu@nju.edu.cn
作者个人主页:

翟章印[1;2];吴小山[1];贾全杰[3]