URN etd-0407109-183723-1933
Author Li-Ming Chuang
Author's Email Address No Public.
Statistics This thesis had been viewed 36 times. Download 14 times.
Department
Year 2005
Semester 2
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title The fabrication and characteristics of SrBi4Ti4O15 ferroelectric thin film by RF sputtering method
Date of Defense 0000-00-00
Page Count 84
Keyword
SrBi4Ti4O15
RF sputtering method
Ferroelectric thin film

Abstract
In the developed non-volatile random access memory materials, the SrBi4Ti4O15 ceramics had attracted many attentions because of its good dielectric characteristics. In this study, SrBi4Ti4O15 + 4wt% Bi2O3 ceramics is used as the source material of sputtering method for depositing the SrBi4Ti4O15 thin films. The excess 4wt% Bi2O3 is used to compensate the evaporation of Bi2O3 during thermal treatment.
The SrBi4Ti4O15 thin films are deposited on Pt/Ti/SiO2/Si (p-100) substrate by RF magnetron sputtering. Two different depositing conditions, keeping the Si substrate room temperature and at 300oC, are used in the depositing process of SrBi4Ti4O15 + 4wt% Bi2O3 thin films. The deposited SrBi4Ti4O15 thin films are annealed in a RTA furnace at 540~700oC for 10 minutes. The influences of substrate temperature and annealing temperature on the crystal structure and micrograph of SrBi4Ti4O15 + 4wt% Bi2O3 thin films are developed in this study. The dielectric characteristics and the I-V characteristics are also developed.
Advisory Committee Chien-Min Cheng - advisor

Files etd-0407109-183723-1933-001.pdf

indicate access worldwide
Date of Submission 2006-06-21