

Ba_xSr_{1-x}TiO₃ different thickness analysis using sol gel approach

Abstract

Barium Strontium Titanate (BST) a common topic in the microelectronic field for many devices which is mainly on dynamic random access memories (DRAM). There are many methods of preparing Ba_xSr_{1-x}TiO₃; barium strontium titanate. In this work, sol-gel method was used as it has some advantages like better homogeneity, lower cost, lower processing temperature and easier fabrication. Ba_xSr_{1-x}TiO₃ solution was deposited on the silicon substrate of 4 different thicknesses with different ratio of the concentration of Barium (Ba). The thickness of the thin film has a linear increase as the Ba content increases.

Keywords; Barium Strontium Titanate (BST), Film Thickness