T_CSUH/Physics Special Seminar

Texas Center for Superconductivity
University of Houston

Prof. Yanrong Li

School of Micro-electronics and Solid State Electronics
University of Electronic Science and Technology of China

Friday, April 15, 2005
Room 102, University of Houston Science Center
4:00 p.m. – 5:00 p.m.

"Studies of Growth for BST Ferroelectric Oxide Thin Films"

Abstract

We have systematically investigated the epitaxial behavior, microstructures, and dielectric properties of ferroelectric $(Ba,Sr)TiO_3$ thin films on various substrates grown by pulsed laser ablation and laser MBE. We have focused on the film growth mechanisms, low temperature crystallization, and buffer-layer-induced high oriented film growth as well as oxide superlattices. Microstructural studies from x-ray diffraction, rocking curve measurements, and electron microscopy reveal that the films have excellent epitaxial behavior with good single crystallinity and sharp interfacial structures and smooth surface morphology for the films grown on substrate surfaces.

Bio

Dr. Yanrong Li received his Ph.D. degree in 1992 from Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, and then began his postdoctoral research at the University of Electronic Science and Technology of China (UESTC). He is presently a professor and Dean of the School of Micro-electronics and Solid State Electronics, UESTC as well a chief scientist of the National Key Fundamental Program of China. He is a winner of the National Science Fund for Distinguished Young Scholars and a chief scientist of National Key Fundamental Program of China.

Dr. Li's recent work involves high-temperature superconductors and relative micro-wave devices, ferroelectric thin films, nano-size dielectric thin films, and epitaxial preparation of silicon carbide thin films. He has several patents and over 140 publications (including several books) in these and related fields.

Persons with disabilities who require special accommodations in attending this lecture should call (713) 743-8210 as soon as possible.

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