

**Structural study of Heterostructure PZT/YBCO
by (XRD) and (AES)**

Zomorrodian, A. R.

University of Ferdowsi in Mashhad

Faculty of Sciences

Department of Physics 91735-654

Abstract Thin films of superconductor YBaCuO(YBCO) and Pb(ZrTi)O(PZT) is grown by laser ablation technique to make an electronic device. The quality and the structure of the films is studied by X-ray diffraction (XRD) and Auger Electron Spectroscopy (AES). A quantitative analysis of the films is also deduced from AES study. Analysis of the films show that the YBCO is grown in (001) and PZT in (100) direction. From this study we also conclude that laser ablation technique is a proper method for thin film production.

Keywords : *Thin films, Diffraction, Ferroelectric*