Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Thickness measurement of interfacial layer between HfO_2 film and Si substrate by Fourier analysis of x-ray reflectivity Y. J. PARK, PAL and Dept. of Physics, POSTECH, KOREA, J.-S. LEE, B. H. SEUNG, S. JI, K.-B. LEE, Dept. of Physics, POSTECH, KOREA, H. S. HWANG, Dept. of MSE, GIST, KOREA, PAL, POSTECH, KOREA TEAM, ESSC AND DEPT. PHYSICS, POSTECH, KOREA TEAM, DEPT. OF MSE, GIST, KOREA TEAM — Thickness of interfacial layers between Si-substrates and HfO_2 films have been estimated by Fourier analysis of x-ray reflectivity. It is demonstrated that enhancement of the signals corresponding to the positions of low-density-contrast interfaces can be achieved through careful data processing in Fourier analysis. Details of the data processing procedures and comparison between results of the analysis and TEM measurements are presented.

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Date submitted: 05 Dec 2004 Electronic form version 1.4