GROWTH SCENARIO OF ALN THIN FILM ON Si (100)

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ABSTRACT.: Analysis of AlN thin films grown on Si (100) substrates, by DC magnetron sputtering, were made with XRD, SEM for structural and morphology properties. An examination of the evolution of c-axis preferential orientation and residual stress of the elaborated films was made as a function of thickness. Thanks to a structural study by HRTEM a growth scenario correlating film texture, crystallographic orientations with the residual stress is performed.

KEYWORDS: *AlN, DC Reactive Sputtering, High Resolution Transmission Electron Microscopy, Stress Profile, X-ray Diffraction.*