

Abstract Submitted  
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**Investigation of the thickness of titanium dioxide by x-ray photoelectron spectroscopy**<sup>1</sup> A. CHOURASIA, Texas A&M University-Commerce — About 100 Å of elemental titanium were deposited on silicon substrates using the e-beam technique. The films were exposed to a partial pressure of oxygen at  $5 \times 10^{-7}$  Torr. The substrate temperature was maintained at 600°C and the time of exposure was varied between 30 min and 3 hours. The oxidation of titanium as a function of the exposure time has been studied using the x-ray photoelectron spectroscopy technique. The magnesium x-radiation (energy = 1253.6 eV) has been used for this purpose. The titanium 2p and oxygen 1s regions have been investigated. The spectral data have been recorded at 45° take-off angle. The spectral data have been analyzed to estimate the thickness of the titanium dioxide formed on the substrate as a function of the exposure time.

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