DEPARTMENT OF PHYSICS, THE UNIVERSITY OF THE WEST INDIES, ST. AUGUSTINE

ABSTRACT: **585**

TITLE: **Topographical characteristics and electrical conductivity of some thin films deposited on polymeric and steel substrates**

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The project investigation involved the topographical characterization and the measurement of the electrical conductivity of aluminum, titanium and copper thin films deposited by sputtering on a polymeric substrate and TiN film coated on steel. The topography was investigated using atomic force microscopy (AFM) while the electrical conductivity was determined using impedance spectroscopy. The surface of the aluminum and titanium films was smooth, within only a few nanometer (nm) in variation where as it was less so for copper. The surface roughness/smoothness of the TiN film deposited on the steel varied to within a few micrometer (μm). Compared with the conductivity of bulk aluminum, copper, and titanium the conductivity of the films was low.